MEMORANDUM

GLENN LUKOS ASSOCIATES

Regulatory Services

PROJECT NUMBER: 12960003REDO

TO: Steve Guzowski

FROM: Jason Fitzgibbon

DATE: November 8, 2023

SUBJECT: Updated Review of Jurisdictional Limits for California Department of Fish and Wildlife and U.S. Army Corps of Engineers and Biological Resources for Serrano Creek Southern/Eastern Bank for Great Scott Landscape Facility

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On June 21 and July 10, 2017, GLA conducted site visits to identify the limits of U.S. Army Corps of Engineers (Corps) and California Department of Fish and Wildlife (CDFW) jurisdictional boundaries for the edge of Serrano Creek within the Project site, which depending on the specific segment of Serrano Creek represents the southern or eastern bank of the stream. GLA conducted a site visit on April 16, 2020 and again on August 29, 2023 to confirm the limits of agency jurisdiction. Since conducting the 2017 jurisdictional delineation (JD), GLA obtained files showing the 100-year flood plain as mapped by the Project civil engineer[1], which in general is very similar to the 2017 JD regarding CDFW jurisdiction. While the limits of CDFW jurisdiction vary based on specific site conditions, CDFW typically considers the 100-year flood limit as the maximum extent of their jurisdiction. Therefore, in areas where the mapped 100-year flood plain was adjacent to the proposed development, the 100-year flood plain was used as the maximum extent of jurisdiction. In areas where CDFW jurisdiction extended beyond the 100-year flood plain due to the presence of riparian habitat, the edge of riparian habitat was utilized to depict the limits of CDFW jurisdiction. As such, the most expansive limits of potential CDFW jurisdiction were depicted and then provided to the Project planners for final modifications to the Project to ensure complete avoidance of CDFW jurisdiction, which also resulted in complete avoidance of Corps jurisdiction.

The site was also evaluated to determine whether any sensitive species and/or communities have the potential to occur onsite, and this assessment was updated during the April 16, 2020, and August 29, 2023, site visits. [Exhibit 1 – Regional Map, Exhibit 2 – Vicinity Map]. Exhibit 3 depicts the limits of Corps and CDFW jurisdiction. Site photos depicting current site conditions can be seen in Exhibit 4. Appendix A depicts the current site plan, showing full avoidance of Corps and CDFW jurisdiction. The 2017 Plan is superseded by the current plan which shows

[1] Huitt Zollars. December 9, 2019. *Preliminary Drainage Report: In Support of Great Scott Tree Service Improvements, 20865 Canada Road, Lake Forest, CA 92630 APN: 610-301-20, 610-301-07*. The December 9, 2019 Report was used to support this Technical Memorandum and has been updated as of December 16, 2020.

minimization of the development footprint, which was addressed during the August 29, 2023 site visit.

I. METHODOLOGY

A. Corps and CDFW Jurisdiction

GLA conducted a reconnaissance visit on June 21, 2017 to review the site and determine the most appropriate methodology for mapping the limits of jurisdiction. During the reconnaissance visit, it became apparent that CDFW jurisdiction exceeded Corps jurisdiction and thus, it was determined that mapping of CDFW jurisdiction would be prioritized for purposes of site planning and avoidance to eliminate the need for Section 1602 and Section 404 Authorizations. Specifically, Section 404 jurisdiction is defined by the presence of an Ordinary High Water Mark (OHWM), which is typically located on the lower terraces of streams; whereas CDFW typically takes jurisdiction to the top of bank, 100-year water elevation, or outer limit of riparian habitat (whichever is greater). As such, CDFW always exceeds Corps jurisdiction with the only exception being the presence of adjacent wetlands, which do not occur in areas adjacent to Serrano Creek. During the July 10, 2017 site visit, GLA mapped the extent of CDFW jurisdiction using either the top of bank or the drip-line of riparian habitat that extends beyond the top of bank [e.g., native trees such as willow (*Salix* sp.) and non-native vegetation such as giant reed (*Arundo donax*)]. Corps jurisdiction was also mapped for the areas between the western Project limits and Dimension Drive. As noted, and depicted on Exhibit 3, CDFW jurisdiction exceeds Corps jurisdiction in all areas of Serrano Creek. As discussed below, the delineation effort began at the western limits of the site and worked upstream.

GLA conducted subsequent site visits on April 16, 2020 and August 29, 2023. During the April 16, 2020 site visit, the limits of 2017 CDFW jurisdiction and 100-year flood plain limits were uploaded to a Trimble GPS device with submeter accuracy to verify the previous mapping and to also verify that the CDFW jurisdiction, which is often defined by the limits of the 100-year flood plain or the extent of the riparian canopy had not changed or where changes were observed, the updated limits were mapped. On October 12, 2023, an additional site visit was conducted to verify or to re-map the CDFW jurisdiction using a Trimble GPS device.

B. Special-Status Biological Resources

In addition to the jurisdictional limits for Corps and CDFW jurisdiction associated with Serrano Creek, GLA also evaluated the potential for the site to support special-status species and vegetation alliances.

1. Special-Status Plants

During the surveys conducted on June 21 and July 10, 2017, April 16, 2020, and August 29, 2023, GLA Biologists walked the entire development footprint and recorded all plant species present. Specifically, surveys were conducted by following meandering transects searching for areas of potentially suitable habitat for rare plants. The Project site was surveyed on multiple occasions between 2017 and 2023 at various times of the year to capture a wide variety of blooming periods. All plant species encountered during the field surveys were identified and recorded following the above-referenced guidelines, CNPS (2010) and CDFW by Nelson (1984).

2. Special-Status Animal Species Reviewed

A literature search was conducted to obtain a list of special-status wildlife species with the potential to occur within the Project site. Species were evaluated based on two factors: 1) species identified by the CNDDB as occurring (either currently or historically) on or in the vicinity of the Project site, and 2) any other special-status animals that are known to occur within the vicinity of the Project site, or for which potentially suitable habitat occurs on the Project site.

II. EXISTING CONDITIONS

A. Current Project Footprint

Since the site visits in 2017 and 2020 the site plan has been modified, and this memo addresses the current conditions within the area proposed for development under the modified plan. The entirety of the site now consists of the portion of the original boundary downstream of Dimension Drive. Overall, onsite conditions are generally consistent within the areas evaluated in 2017 and 2020. The Project site is depicted in Appendix A – Site Plan.

The northeastern portion of the Project site occurs along Linear Lane and includes a relatively flat, disturbed upland area that appears to be regularly maintained with mowing and vegetation removal. A few herbaceous species appeared to be reemerging following a recent mow such as white horehound (*Marrubium vulgare*), blue witch nightshade (*Solanum umbelliferum*), and castor bean (*Ricinus communis*). This area is scattered with a few trees such as coast live oak (*Quercus agrifolia*) and a stand of blue-gum eucalyptus (*Eucalyptus globulus*). Vegetation coverage increases with proximity to Serrano Creek and includes plants such as blue elderberry (*Sambucus mexicana*), western sycamore (*Platanus racemosa*), and Goodding's black willow (*Salix gooddingii*). Faunal species observed in this area included great basin fence lizard *(Sceloporus occidentalis longipes*), and granite spiny lizard (*Sceloporus orcutti*).

The central portion of the Project site includes several structures in various states of disrepair that support potential habitat for roosting bats. A dirt road bisects the middle of the site from the disturbed ruderal habitat and structures to the southeast and Serrano Creek to the northwest. A lone coast redwood (*Sequoia sempervirens*) occurs near one of the structures. A large stand of giant reed covers a large area on the downslope area adjacent to Serrano Creek. Faunal species observed include Nuttall's Woodpecker (*Dryobates nuttallii*), California Towhee (*Melozone crissalis*), and Baja California tree frog (*Pseudacris hypochondriaca hypochondriaca*).

The western corner of the Project site occurs immediately east of several large commercial buildings and consists of a large, relatively flat expanse of disturbed habitat. The majority of this area is covered with bark mulch and aside from a few lone trees - including avocado (*Persea americana*) and Canary Island date palm (*Phoenix canariensis*) - is generally devoid of vegetation. Vegetation within an along the margin of Serrano Creek includes species such as Goodding's black willow, coast live oak, tree tobacco (*Nicotiana glauca*), pampas grass (*Cortedaria selloana*), and Mexican fan palm (*Washingtonia robusta*). Faunal species observed in this area include Acorn Woodpecker (*Melanerpes formicivorus*), California Scrub-Jay (*Aphelocoma californica*), and Lesser Goldfinch (*Spinus psaltria*). The segment of Serrano Creek along this segment of the Project areas supports dense thickets of the non-native giant reed with blue-gum eucalyptus.

B. Soils

The following soils are mapped on the site; however, due to long-term equestrian disturbance, farming, and development, the upper surface profile is disturbed in many areas and does not exhibit typical characteristics.

Riverwash

Riverwash consists of areas of unconsolidated alluvium, generally stratified and varying widely in texture, recently deposited by intermittent streams, and subject to frequent changes through stream overflow. These are sandy, gravelly, cobbly, and boulder deposits that support little or no vegetation. Runoff is generally rapid, and the erosion hazard is high. Deposition and removal of fresh alluvium are common.

Sorrento Loam, 2 to 9 Percent Slopes

The Sorrento series consists of well drained soils on alluvial fans and flood plains. These soils formed in alluvium derived from sedimentary rocks. Slopes are 0 to 9 percent. In a typical profile, the surface layer is grayish brown loam, 12 inches thick. The underlying material is grayish brown, light brownish gray, and pale brown silty clay loam to a depth of 62 inches and light brownish gray sandy loam to a depth of 72 inches or more.

Sorrento loam soil is not identified as hydric in the SCS's publication, Hydric Soils of the United States[2]; however Riverwash, may include hydric inclusions. Nevertheless, to the extent that hydric inclusions may be present, the Project fully avoids Serrano Creek so there would be no impacts to hydric soils if present.

III. JURISDICTIONAL DELINEATION RESULTS

A. CDFW Jurisdiction

The limits of CDFW jurisdiction are depicted on Exhibit 3 and extend to one of three areas; 1) the top of the Serrano Creek bank; 2) the 100-year flood plain; or 3) to edge of the canopy of associated riparian vegetation that is rooted between the top of bank and the streambed. The riparian habitat typically consists of native trees such as willows and western sycamore but also includes non-native species such as giant reed. Portions of riparian habitat that would be subject to CDFW jurisdiction occur within the Project site.

B. Corps Jurisdiction

The limits of Corps jurisdiction are determined by the Ordinary High Water Mark (OHWM) which in all areas of Serrano Creek that were evaluated, occurs below the top of bank as depicted on Exhibit 3. All areas of Corps jurisdiction are fully avoided by the Project site.

IV. SPECIAL STATUS SPECIES

During the 2017, 2020, and 2023 site visits, GLA conducted habitat assessments and floristic surveys for special status plants, special-status animals, and for special-status vegetation alliances as addressed below.

A. Special-Status Plants

The current Project footprint was evaluated for the presence of special-status plants and/or habitat for special-status plants. Each of the areas, as observed during the 2017, 2020, and 2023 surveys exhibit land uses (e.g., equestrian uses and agricultural uses) which are not suitable for special-status plants and where areas support vegetation, they contain non-native species which

[2] United States Department of Agriculture, Soil Conservation Service. 1991. Hydric Soils of the United States, 3rd Edition, Miscellaneous Publication Number 1491. (In cooperation with the National Technical Committee for Hydric Soils.)

are indicators for high levels of disturbance as indicted by the diversity of non-native grasses and forbs reported in the existing conditions descriptions provided above. Because of the high level of disturbance exhibited by these areas, they do not support habitat, such as coastal sage scrub, chaparral, or native grasslands capable of supporting special-status plants and as such exhibit no potential for the presence of special-status plants. The area also lacks soil types (e.g., clay soils or lenses, alkaline soils, rock or sandstone outcrops, etc.). Similarly, Serrano Creek, including the banks and bottom do not contain suitable habitat for special-status plants. As noted, much of the tree canopy associated with Serrano Creek adjacent to the proposed Project area is also dominated by blue-gum eucalyptus which generate leaf litter that contains phytochemicals that limit understory plant growth, further rendering the area unsuitable for special-status plants. As such, there is no potential for impacts to special-status plants associated with the Project. Appendix A, Table 1 includes all special-status plant species recorded for the California Natural Diversity Database (CNDDB) for the El Toro 7.5 Minute Quadrangle Map and the surrounding Quadrangles: Orange, Black Star Canyon, Corona South, Tustin, Santiago Peak, Laguna Beach, San Juan Capistrano, and Canada Gobernadora.

B. Special-Status Animals

Appendix B, Table 2 includes all special-status animal species recorded for the California Natural Diversity Database (CNDDB) for the El Toro 7.5 Minute Quadrangle Map and the surrounding Quadrangles: Orange, Black Star Canyon, Corona South, Tustin, Santiago Peak, Laguna Beach, San Juan Capistrano, and Canada Gobernadora.

The Project Site was evaluated for the presence of special-status animals and/or habitat for special-status animals in 2017, 2020 and 2023. Serrano Creek is immediately adjacent to the Project site and supports suitable breeding habitat for both yellow warbler (*Setophaga petechia*), a California species of special concern, and least Bell's vireo (*Vireo bellii pusillus*), a federal- and California-listed endangered species. Yellow warbler and least Bell's vireo were not detected during the site visits, however, focused surveys were not conducted and therefore, absence cannot be determined at this time. The Project would impact small portions of potentially suitable riparian habitat that overhang the top of the bank of Serrano Creek. Indirect impacts associated with the Project, such as construction-related noise, could also have the potential to affect nesting success of species such as least Bell's vireo if they are nesting in riparian habitat in proximity to construction.

Following the August 29, 2023 survey, it was determined by GLA biologists that several species of bat have potential to roost on the Project site, including pallid bat (*Antrozous pallidus*), western red bat (*Lasiurus blossevillii*), and western yellow bat (*Lasiurus xanthinus*). The Project Site contains several existing structures, palm trees, and eucalyptus trees which have potential to support the species listed above. Project related disturbance to - or removal of - these structures and/or trees has the potential to result in impacts to roosting bats.

Portions of Serrano Creek downstream of Dimension Drive exhibit flowing and/or standing water and could support the southwestern pond turtle (*Actinemys pallida*), a California species of special concern. Groupings of rocks in sunny locations were observed along the banks of the creek that could provide suitable basking sites. Southwestern pond turtles were not detected during the site visits; however, the site visits did not include focused surveys for this species. Nevertheless, the Project would fully avoid impacts to Serrano Creek and areas of potential habitat for the southwestern pond turtle. As a result, the Project will not result in impacts to the species.

As noted in Appendix B, Table 2, a number of special-status fish species have been recorded from the above-referenced Quadrangle Maps including: Arroyo chub (*Gila orcutti*), Santa Ana speckled dace (*Rhinichthys osculus*), Santa Ana sucker *Catostomus santaanae*), Southern steelhead – southern California [DPS] (*Oncorhynchus mykiss irideus*), and Tidewater goby (*Eucyclogobius newberryi*). The segment of Serrano Creek adjacent to the Project site has potential to support arroyo chub. However, even if the species is present, the Project would not directly impact any suitable habitat within Serrano Creek.

C. Nesting Birds

The site supports trees, vegetation and structures that have the potential to support various nesting bird species. Impacts to nesting birds are prohibited under the Migratory Bird Treaty Act (MBTA), as well as California Fish and Game Code Sections 3503.5, 3503, and 3513. The Project has the potential to directly impact suitable nesting bird habitat.

D. Special-Status Vegetation Alliances

The following special-status vegetation alliances are reported from one or more of the Quadrangle Maps referenced above.

Vegetation Alliance	Rarity Ranking	Occurrence
California Walnut Woodland	G2 S2.1	Does not occur onsite
Canyon Live Oak Ravine Forest	G3 S3.3	Does not occur onsite
Riversidian Alluvial Fan Sage Scrub	G1 S1.1	Does not occur onsite
Southern California Arroyo Chub/Santa Ana Sucker Stream	GNR SNR	Does not occur onsite
Southern Coastal Salt Marsh	G2 S2.1	Does not occur onsite
Southern Cottonwood Willow Riparian Forest	G4 S3.2	Does not occur onsite
Southern Interior Cypress Forest	G2 S2.1	Does not occur onsite
Southern Mixed Riparian Forest	G2 S2.1	Occurs onsite (overhanging canopy)

Vegetation Alliance	Rarity Ranking	Occurrence
Southern Riparian Scrub	G3 S3.2	Does not occur onsite
Southern Willow Scrub	G3 S2.1	Does not occur onsite
Valley Needlegrass Grassland	G3 S3.1	Does not occur onsite

Global Ranking
The global rank (G-rank) is a reflection of the overall status of an element throughout its global range.

- **G1 = Critically Imperiled**—At very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors.
- **G2 = Imperiled**—At high risk of extinction due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors.
- **G3 = Vulnerable**—At moderate risk of extinction due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors.
- **G4 = Apparently Secure**—Uncommon but not rare; some cause for long-term concern due to declines or other factors.
- **G5 = Secure**—Common; widespread and abundant.
- **GNR = Unranked**—Global rank not yet assessed

State Ranking
The state rank (S-rank) is similar to the global rank, however the state ranks refer to the imperilment status only within California's state boundaries.

- **S1 = Critically Imperiled**—Critically imperiled in the state because of extreme rarity (often 5 or fewer populations) or because of factor(s) such as very steep declines making it especially vulnerable to extirpation from the state.
- **S2 = Imperiled**—Imperiled in the state because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the state.
- **S3 = Vulnerable**—Vulnerable in the state due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation from the state.
- **S4 = Apparently Secure**—Uncommon but not rare in the state; some cause for long-term concern due to declines or other factors.
- **S5 = Secure**—Common, widespread, and abundant in the state.
- **SNR = Unranked**—State rank not yet assessed

As described above, the majority of the Project site contains developed areas, such as vegetable gardens and structures, or areas that exhibit weedy, disturbed vegetation cover. As noted above in Section IV(A), Serrano Creek, supports coast live oak trees and Southern Mixed Riparian Forest immediately adjacent to the Project site. Southern Mixed Riparian Forest [Holland], is regarded as a special-status vegetation community. In four small areas along the Project site's perimeter, Southern Mixed Riparian Forest overhangs the top of bank and extends above the boundary of the Project site [see Exhibit 3]. Impacts to Southern Mixed Riparian Forest (such as limbing) would require a streambed alteration agreement through CDFW. A streambed alteration agreement will not be required if the overhanging CDFW riparian canopy can be avoided by the Project. Additionally, as noted in Section IV (B) above, these riparian areas have potential to

support the state and federally listed as endangered least Bell's vireo. Coordination with CDFW and USFWS would be required prior to directly or indirectly impacting occupied habitat for least Bell's vireo.

V. WILDLIFE CORRIDORS

Serrano Creek originates to the north of the site traversing portions of Whiting Ranch Regional Park and ultimately flows beneath Portola Parkway before entering a concrete channel that carries flows beneath State Route (SR)-241, Lake Forest Drive and Rancho Parkway. The Serrano Creek Park/Trail originates below the Lake Forest Drive and Rancho Parkway intersection and extends for just over three miles to Bake Parkway where the water is carried through a series of concrete boxes and channels to the Great Park at the intersection of Alton Parkway and Barranca Parkway, before flowing under the location where the Interstate (I)-405 and I-5 Freeways join.

The entire three-mile segment of Serrano Creek Park is fully urbanized on both sides including dense residential development, commercial and industrial development and other uses such as former nursery and equestrian areas. As noted, the entire segment is a park with paved and maintained trails. In some area such as to the north of the Project site, the park is very narrow, with widths ranging from 75 to 100 feet. Widths within the Project site range from approximately 100 to 150 feet and downstream of the site the park varies from approximately 100 to 300 feet before terminating at Bake Parkway within an area of dense commercial and industrial uses.

Although the Serrano Creek Park/Trail is surrounded by development, the creek and trail could allow for localized movement of small to medium-sized mammals and may be considered a wildlife movement corridor from the southern end at Bake Parkway north to the foothills of the Santa Ana Mountains near Whiting Regional Park. As previously stated, the site does not overlap Serrano Creek and thus this potential wildlife corridor would not be directly impacted.

VI. RECOMMENDATIONS

GLA recommends the avoidance and minimization measures below to further reduce the potential for impacts to least Bell's vireo, roosting bats and nesting birds.

A. Least Bell's Vireo

It is recommended that focused surveys for least Bell's vireo are conducted prior to impacting any areas of Southern Mixed Riparian Forest, or commencing construction activities (noise

disturbance) adjacent to Serrano Creek. Impacts to occupied habitat would require coordination with CDFW and USFWS.

Focused surveys for the LBV would be conducted in accordance with the 2001 USFWS survey guidelines and would encompass all areas of suitable habitat to be impacted within the Project site, as well as suitable habitat within 500 feet of the Project site. Survey guidelines stipulate that eight surveys should be conducted between April 10 and July 31, with a minimum of ten days separating each survey visit.

If no least Bell's vireo are detected during focused surveys, then no avoidance or mitigation measures will be warranted. If least Bell's vireo are detected during focused surveys, then coordination with CDFW and USFWS will be required prior to directly or indirectly impacting occupied habitat.

B. Bats

In order to avoid impacts to bats roosting on-site, it is recommended a qualified biologist conduct focused bat surveys within potentially suitable bat colony/roost habitat onsite, including trees, cavities, and abandoned buildings prior to any work being conducted onsite. Passive acoustic surveys may be conducted in order to determine the presence of bat species utilizing the site for foraging and/or roosting. Bat detection equipment would include sonic bat detectors (e.g. Anabat). Potential roosting habitat would be evaluated during the daytime to evaluate areas for bat sign (e.g. guano, urine staining, daytime roosts). It is recommended that a nighttime emergence (exit) survey be conducted at dusk to identify potential maternity roosts during the bat maternity season. A total of three (3) site visits during the maternity season (March 1 to September 30) would be needed to determine if a maternity roost is present. The surveys shall be conducted at dusk and after nightfall by a qualified biologist.

If special-status bats are detected, then removal of roosting habitat shall be delayed for the remainder of the maternity season until the young are sufficiently mature to leave the maternity roost, as determined by the biologist.

C. Nesting Birds

The following requirements under the MBTA and California Fish and Game Code Sections 3503.5, 3503, and 3513 are to be implemented to ensure that nesting birds are not harmed during Project construction:

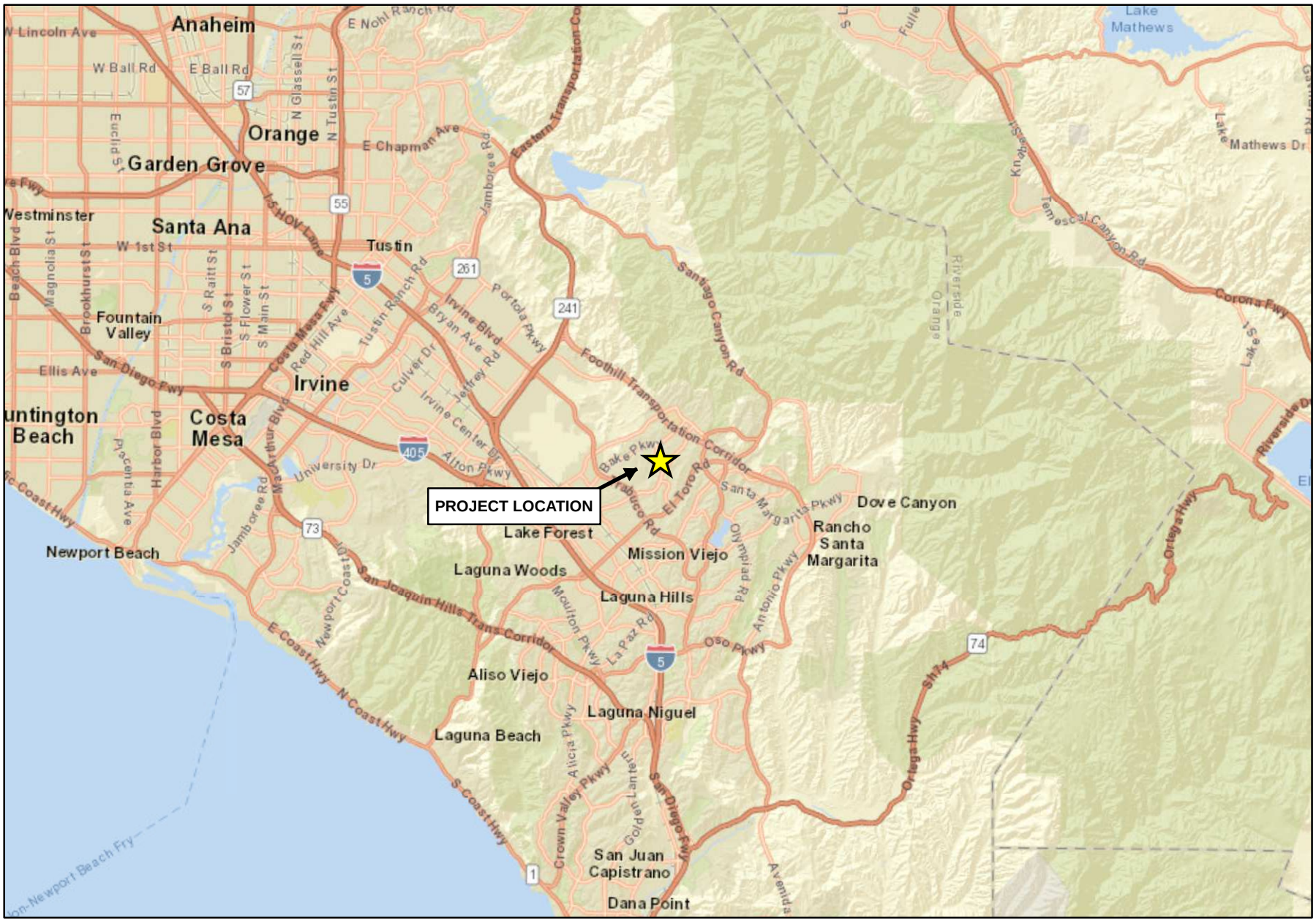
- If feasible, the removal of vegetation should occur outside of the nesting season, generally recognized as February 15 to September 15 (potentially earlier for raptors). If vegetation removal must occur during the nesting season, then a

qualified biologist shall conduct a nesting bird survey prior to any vegetation removal. If active nests are identified, the biologist shall flag vegetation containing active nests. The biologist shall establish appropriate buffers around active nests to be avoided until the nests are no longer active and the young have fledged. Buffers will be based on the species identified, but generally will consist of 50 feet for non-raptors and 300 feet for raptors/special-status species.

- If for some reason it is not possible to remove all vegetation during the non-nesting season, then vegetation to be removed during the nesting season must be surveyed by a qualified biologist no more than three days prior to removal. If no nesting birds are found, the vegetation can be removed. If nesting birds are detected, then removal must be postponed until the fledglings have vacated the nest or the biologist has determined that the nest has failed. Furthermore, the biologist shall establish an appropriate buffer zone where construction activity may not occur until the fledglings have vacated the nest or the biologist has determined that the nest has failed.

VI. PERMITTING REQUIREMENTS

Portions of riparian habitat associated with Serrano Creek, namely Southern Mixed Riparian Forest, extend into the Project site [Exhibit 3 – Approximate CDFW Jurisdictional Limits Map]. These areas would be subject to CDFW jurisdiction and impacts to them would require notification to CDFW pursuant the Notification Requirement under Section 1602; impacts to Southern Mixed Riparian Forest (such as limbing) would require a streambed alteration agreement through CDFW. A streambed alteration agreement will not be required if the overhanging CDFW riparian canopy can be avoided by the Project. Additionally, if the riparian habitat is found to support least Bell's vireo, impacts to occupied habitat would require coordination with CDFW and USFWS.



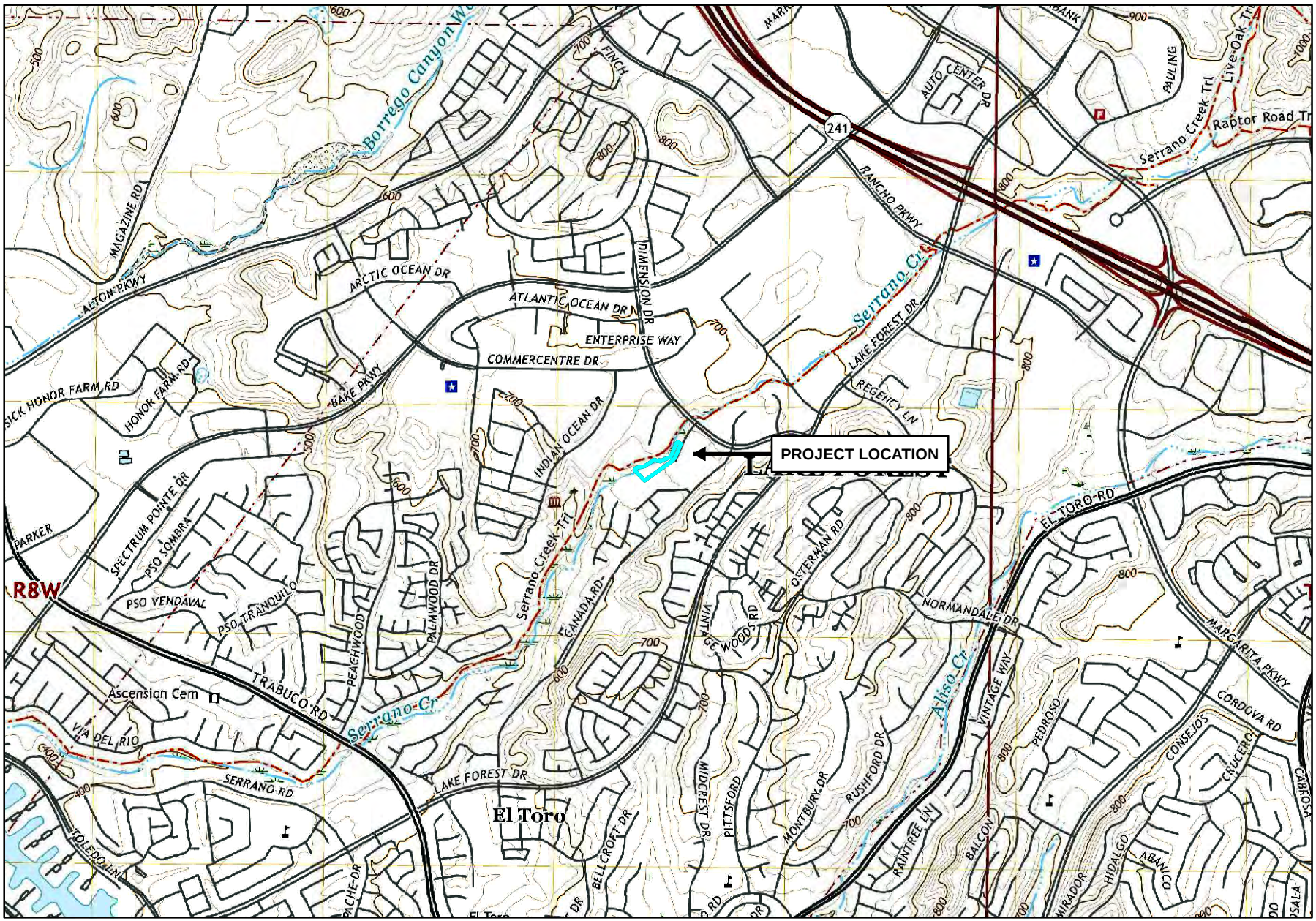
Source: ESRI World Street Map

SERRANO CREEK SOUTHERN/ EASTERN BANK PROJECT

Regional Map

GLENN LUKOS ASSOCIATES

Exhibit 1



SERRANO CREEK SOUTHERN/ EASTERN BANK PROJECT

Vicinity Map

GLENN LUKOS ASSOCIATES

Exhibit 2

Project Site

Approximate CDFW Jurisdictional Limits

Approximate CDFW Jurisdictional Limits within Project Site

Limits of Corps Jurisdiction

FEMA Flood Plain per Data Dated March 2019 (Huitt-Zollars 01/23/2020)

N

0 40 80 160

Feet

1 inch = 80 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD 1983 2011
Map Prepared by: K. Kartunen, GLA
Date Prepared: November 1, 2023

SERRANO CREEK SOUTHERN/ EASTERN BANK PROJECT

Approximate CDFW Jurisdictional Limits Map

GLENN LUKOS ASSOCIATES

Exhibit 3

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Photograph 1: Overview of the northern portion of the site facing south-southwest. Depicts disturbed and maintained uplands with coast live oaks and eucalyptus interspersed.

Photograph 2: Serrano Creek, facing west, flowing along the edge of the project boundary. Several sunny basking rocks and vegetation growing along the creek margins provide suitable habitat for southwestern pond turtle. Slow-moving water and sandy bottom also provide potential arroyo chub habitat.

Photograph 3: Overview of the southern portion of the site, facing southeast. This area is characterized by a relatively flat local relief and is maintained with a thick layer of mulch. Ornamental vegetation is present, including several avocado trees and Peruvian pepper trees, orange trees, and palms in box planters.

Photograph 4: Overview of the central portion of the site, facing east. There are several older buildings present that may provide roosting habitat for bats.

Great Scott Landscape Facility

Site Photographs

APPENDIX A

SITE PLAN: 8/8/23

PARKING COUNTS

1) Truck Parking - 21
2) Standard Car Parking - 8
3) EV ADA Parking - 2

APPENDIX B

Table 1. Special-Status Plants Evaluated for the Property.

Federal
FE – Federally Endangered
FT – Federally Threatened

State
SE – State Endangered
ST – State Threatened

CNPS Rare Plant Rank
Rank 1B – Plants rare, threatened, or endangered in California and elsewhere.
Rank 2 – Plants rare, threatened, or endangered in California, but more common elsewhere.
Rank 3 – Plants about which more information is needed.
Rank 4 – Plants of limited distribution (a watch list).

CNPS Threat Rank Extensions
.1 – Seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat)
.2 – Fairly endangered in California (20-80% occurrences threatened)
.3 – Not very endangered in California (<20% of occurrences threatened or no current threats known)

Species Name	Status	Habitat Requirements	Potential for Occurrence
Allen's pentachaeta *Pentachaeta aurea* ssp. *allenii*	Federal: None State: None CNPS: 1B.1	Grows in openings within coastal scrub habitat or in valley and foothill grasslands. Occurs at elevations between 245 and 1,705 feet.	Not expected to occur onsite due to a lack of suitable habitat.
Aphanisma *Aphanisma blitoides*	Federal: n/a State: n/a CNPS: 1B.2	Found within coastal scrub habitats with saline sand between 5 and 1,000 feet in elevation	Not expected to occur onsite due to a lack of suitable habitat.
Big-leaved crownbeard *Verbesina dissita*	Federal: FT State: ST CNPS: 1B.1	Occurs in coastal scrub and maritime chaparral habitats between 150 and 675 feet in elevation.	Does not occur onsite. Outside the known range of the species.
Braunton's milk-vetch *Astragalus brauntonii*	Federal: FE State: n/a CNPS: 1B.1	Grows in chaparral, coastal scrub, and valley and foothill grassland habitats between 15 and 2,100 feet in elevation. This species is typically associated with areas that have been recently burned or disturbed, usually in sandstone substrate with carbonate layers.	Not expected to occur onsite due to a lack of suitable habitat.
California beardtongue *Penstemon californicus*	Federal: n/a State: n/a CNPS: 1B.2	Found in sandy soils within chaparral, lower montane coniferous forests, and pinyon juniper woodland between 3,840 and 7,545 feet in elevation.	Not expected to occur onsite due to a lack of suitable habitat.

Species Name	Status	Habitat Requirements	Potential for Occurrence
California satintail *Imperata brevifolia*	Federal: n/a State: n/a CNPS: 2B.1	Occurs in chaparral, coastal scrub, Mojavean desert scrub, meadows and seeps, and riparian scrub habitats below 3,985 feet in elevation.	Not expected to occur onsite due to a lack of suitable habitat.
Chaparral nolina *Nolina cismontana*	Federal: n/a State: n/a CNPS: 1B.2	Grows in gabbroic or sandstone substrates within chaparral and coastal scrub habitats between 460 and 4,185 feet in elevation.	Does not occur onsite.
Chaparral ragwort *Senecio aphanactis*	Federal: n/a State: n/a CNPS: 2B.2	Occurs in alkaline flats and dry, open rocky areas between 50 and 2,625 feet in elevation.	Not expected to occur onsite due to a lack of suitable habitat.
Chaparral sand-verbena *Abronia villosa* var. *aurita*	Federal: n/a State: n/a CNPS: 1B.1	Occurs in chaparral, coastal scrub, and desert dune habitats with sandy soils between 245 and 5,250 feet in elevation.	Not expected to occur onsite due to a lack of suitable habitat.
Cliff spurge *Euphorbia misera*	Federal: n/a State: n/a CNPS: 2B.2	Grows in rocky soils within coastal bluff scrub, coastal scrub, and Mojavean desert scrub habitats between 35 and 1,640 feet in elevation.	Does not occur onsite.
Coulter's goldfields *Lasthenia glabrata* ssp. *coulteri*	Federal: n/a State: n/a CNPS: 1B.1	Occurs in coastal salt marshes, playas, and vernal pools between 5 and 4,005 feet in elevation.	Not expected to occur onsite due to a lack of suitable habitat.
Coulter's saltbush *Atriplex coulteri*	Federal: n/a State: n/a CNPS: 1B.2	Found on alkaline soils within coastal scrub, coastal bluff scrub, dune, and valley and foothill grassland habitats at elevations between 10 and 1,510 feet.	Does not occur onsite.
Davidson's saltscale *Atriplex serenana* var. *davidonii*	Federal: n/a State: n/a CNPS: 1B.2	Occurs in alkaline soils within coastal scrub and coastal bluff scrub habitats between 35 and 655 feet in elevation.	Does not occur onsite.
Decumbent goldenbush *Isocoma menziesii* var. *decumbens*	Federal: n/a State: n/a CNPS: 1B.2	Occurs within chaparral and coastal scrub vegetation between 35 and 820 feet in elevation. This species is typically found in disturbed areas.	Not expected to occur onsite due to a lack of suitable habitat.

Species Name	Status	Habitat Requirements	Potential for Occurrence
Estuary seablite *Suaeda esteroa*	Federal: n/a State: n/a CNPS: 1B.2	Found in coastal salt marsh habitat between 0 and 15 feet in elevation and is most commonly observed in the mid marsh and is inundated by salt water during high tides.	Does not occur onsite.
Hall's monardella *Monardella macrantha* ssp. *hallii*	Federal: n/a State: n/a CNPS: 1B.3	Occurs in broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest, and valley and foothill grassland habitats between 2,395 and 7,200 feet in elevation.	Does not occur onsite.
Heart-leaved pitcher sage *Lepechinia cardiophylla*	Federal: n/a State: n/a CNPS: 1B.2	Found in closed-cone coniferous forest, chaparral, and cismontane woodland habitats between 1,705 and 4,495 feet in elevation.	Does not occur onsite.
Intermediate mariposa-lily *Calochortus weedii* var. *intermedius*	Federal: n/a State: n/a CNPS: 1B.2	Grows in rocky, calcareous soils within chaparral, coastal scrub, and valley and foothill grassland habitats between 345 and 2,805 feet in elevation.	Not expected to occur onsite due to a lack of suitable habitat.
Intermediate monardella *Monardella hypoleuca* ssp. *intermedia*	Federal: n/a State: n/a CNPS: 1B.3	Occurs typically as an understory herb within chaparral, cismontane woodland, and lower montane coniferous forest habitats between 1,310 and 4,100 feet in elevation.	Not expected to occur onsite due to a lack of suitable habitat.
Laguna Beach dudleya *Dudleya stolonifera*	Federal: FT State: ST CNPS: 1B.1	Found in rocky soils within chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland habitats between 35 and 855 feet in elevation.	Does not occur onsite. Outside the known range of the species.
Long-spined spineflower *Chorizanthe polygonoides* var. *longispina*	Federal: n/a State: n/a CNPS: 1B.2	Occurs in chaparral, coastal scrub, meadows and seeps, valley and foothill grasslands, and vernal pools between 100 and 5,020 feet in elevation. This species is	Not expected to occur onsite due to a lack of suitable habitat.

Species Name	Status	Habitat Requirements	Potential for Occurrence
		most often found in clay soils.	
Los Angeles sunflower *Helianthus nuttallii* ssp. *parishii*	Federal: n/a State: n/a CNPS: 1A	Found in both freshwater and coastal salt marsh habitats between 35 and 5,005 feet in elevation.	Does not occur onsite.
Malibu baccharis *Baccharis malibuensis*	Federal: n/a State: n/a CNPS: 1B.1	Occurs in chaparral, cismontane woodland, coastal scrub, and riparian woodland habitats between 490 and 1,000 feet in elevation.	Does not occur onsite. Outside the known range of the species.
Many-stemmed dudleya *Dudleya multicaulis*	Federal: n/a State: n/a CNPS: 1B.2	Found in chaparral, coastal scrub, and valley and foothill grassland between 50 and 2,590 feet in elevation. This species is often found in clay soils.	Not expected to occur onsite due to a lack of suitable habitat.
Mesa horkelia *Horkelia cuneata* var. *puberula*	Federal: n/a State: n/a CNPS: 1B.1	Found in chaparral, coastal scrub, and cismontane woodland habitats between 230 and 2,660 feet in elevation, typically in gravelly or sandy soils.	Not expected to occur onsite due to a lack of suitable habitat.
Mud nama *Nama stenocarpa*	Federal: n/a State: n/a CNPS: 2B.2	Occurs in marsh and swamp habitats that are intermittently wet between 15 and 1,640 feet in elevation.	Does not occur onsite.
Nuttall's scrub oak *Quercus dumosa*	Federal: n/a State: n/a CNPS: 1B.1	Grows in closed cone coniferous forests, chaparral, and coastal scrub between 50 and 1,310 feet in elevation. It can grow in a wide range of soil types including clay, loam, and sand.	Does not occur onsite.
Orcutt's pincushion *Chaenactis glabriuscula* var. *orcuttiana*	Federal: n/a State: n/a CNPS: 1B.1	Found in sandy soils within coastal bluff scrub and coastal dunes below 330 feet in elevation.	Not expected to occur onsite due to a lack of suitable habitat.
Parish's brittlescale *Atriplex parishii*	Federal: n/a State: n/a CNPS: 1B.1	Occurs in alkaline soils within chenopod scrub, playas, and vernal pools between 80 and 6,235 feet in elevation.	Does not occur onsite.

Species Name	Status	Habitat Requirements	Potential for Occurrence
Plummer's mariposa-lily *Calochortus plummerae*	Federal: n/a State: n/a CNPS: 4.2	Grows in dry, rocky chaparral and yellow-pine forest habitats at elevations below 5,570 feet.	Not expected to occur onsite due to a lack of suitable habitat.
Prostrate vernal pool navarretia *Navarretia prostrata*	Federal: n/a State: n/a CNPS: 1B.2	Found in alkaline floodplains and vernal pools below 2,300 feet in elevation.	Does not occur onsite.
Robinson's pepper-grass *Lepidium virginicum* var. *robinsonii*	Federal: n/a State: n/a CNPS: 4.3	Found in chaparral and coastal scrub habitats between 5 and 2,905 feet in elevation.	Not expected to occur onsite due to a lack of suitable habitat.
Salt spring checkerbloom *Sidalcea neomexicana*	Federal: n/a State: n/a CNPS: 2B.2	Grows in alkaline springs and marshes between 50 and 5,020 feet in elevation.	Does not occur onsite.
San Bernardino aster *Symphyotrichum defoliatum*	Federal: n/a State: n/a CNPS: 1B.2	Grows in grasslands and disturbed habitats below 6,725 feet in elevation. Typically, this species can be found along streambanks, ditches, streams, and springs.	Not expected to occur onsite due to a lack of suitable habitat.
San Fernando Valley spineflower *Chorizanthe parryi* var. *fernandina*	Federal: n/a State: SE CNPS: 1B.1	Occurs in sandy substrates within coastal scrub and valley and foothill grassland between 490 and 4,005 feet in elevation.	Not expected to occur onsite due to a lack of suitable habitat.
San Miguel savory *Clinopodium chandleri*	Federal: n/a State: n/a CNPS: 1B.2	Found in gabbroic or rocky soils within chaparral, cismontane woodland, coastal scrub, riparian woodland, and valley and foothill grassland habitats between 395 and 3,525 feet in elevation.	Does not occur onsite.
Santa Ana River woollystar *Eriastrum densifolium* ssp. *sanctorum*	Federal: FE State: SE CNPS: 1B.1	Occurs in washes, floodplains, and dry riverbeds below 1,640 feet in elevation.	Not expected to occur onsite due to a lack of suitable habitat.
Santiago Peak phacelia *Phacelia keckii*	Federal: n/a State: n/a CNPS: 1B.3	Grows in closed-cone coniferous forest and chaparral habitats between 1,790 and 5,250 feet in elevation.	Does not occur onsite. Outside known range of the species.
South coast saltscale *Atriplex pacifica*	Federal: n/a State: n/a CNPS: 1B.2	Grows in coastal bluff scrub, coastal dunes, coastal scrub, and playas	Does not occur onsite.

Species Name	Status	Habitat Requirements	Potential for Occurrence
		below 460 feet in elevation.	
Southern tarplant *Centromadia parryi* ssp. *australis*	Federal: State: CNPS: 1B.1	Occurs in marsh and swamp, salt marsh, valley and foothill grassland, vernal pool, wetlands, and disturbed sites near the coast at marsh edges or lining roads and trails; also in alkaline soils or sometimes with saltgrass, at vernal pool margins at 0 to 3,199 feet in elevation.	Does not occur onsite.
Sticky dudleya *Dudleya viscida*	Federal: n/a State: n/a CNPS: 1B.2	Grows in rocky soils within coastal bluff scrub, chaparral, cismontane woodland, and coastal scrub between 35 and 1,805 feet in elevation.	Does not occur onsite.
Summer holly *Comarostaphylis diversifolia* ssp. *diversifolia*	Federal: n/a State: n/a CNPS: 1B.2	Occurs in chaparral and cismontane woodland between 100 and 2,590 feet in elevation.	Does not occur onsite.
Tecate cypress *Hesperocyparis forbesii*	Federal: n/a State: n/a CNPS: 1B.1	Grows in clay or gabbroic substrates within closed-cone coniferous forest and chaparral between 260 and 4,920 feet in elevation.	Does not occur onsite.
Thread-leaved brodiaea *Brodiaea filifolia*	Federal: FT State: SE CNPS: 1B.1	Found in clay soils within openings of chaparral, cismontane woodland, coastal scrub, playas, valley and foothill grassland, and vernal pools between 80 and 3,675 feet in elevation.	Not expected to occur onsite due to a lack of suitable habitat.
White rabbit-tobacco *Pseudognaphalium leucocephalum*	Federal: n/a State: n/a CNPS: 2B.2	Occurs in gravelly or sandy soils within chaparral, cismontane woodland, coastal scrub, and riparian woodland below 6,890 feet in elevation.	Not expected to occur onsite due to a lack of suitable habitat.
Yucaipa onion *Allium marvinii*	Federal: n/a State: n/a CNPS: 1B.2	Found in clay soils, within openings of chaparral habitat between 2,495 and 3,495 feet in elevation.	Does not occur onsite.

Table 2. Special-Status Animals Evaluated for the Property.

Federal
FE – Federally Endangered
FT – Federally Threatened
FPT – Federally Proposed Threatened
FSC – Federal Species of Concern

State
SE – State Endangered
ST – State Threatened
SSC – California Species of Special Concern
CFP – California Fully-Protected Species

Species Name	Status	Habitat Requirements	Potential for Occurrence
Invertebrates			
Riverside fairy shrimp *Streptocephalus woottoni*	Federal: FE State: n/a	Restricted to deep seasonal vernal pools, vernal pool-like ephemeral ponds, and stock ponds.	Does not occur onsite due to a lack of suitable habitat.
San Diego fairy shrimp *Brachinecta sandiegonensis*	Federal: FE State: n/a	Seasonal vernal pools	Does not occur onsite due to a lack of suitable habitat.
Fish			
Arroyo chub *Gila orcuttii*	Federal: n/a State: SSC	Slow-moving or backwater sections of warm to cool streams with substrates of sand or mud.	Has potential to occur within Serrano Creek. Does not have potential to occur within the Project site.
Santa Ana speckled dace *Rhinichthys osculus* ssp. 8	Federal: n/a State: SSC	Occurs in the headwaters of the Santa Ana and San Gabriel Rivers. May be extirpated from the Los Angeles River system. Requires permanent flowing streams with summer water temperatures of 17-20 C. Usually inhabits shallow cobble and gravel riffles.	Does not occur onsite. Project site is outside the known range of the species.
Santa Ana sucker *Catostomus santaanae*	Federal: FT State: n/a	Small, shallow streams, less than 7 meters in width, with currents ranging from swift in the canyons to sluggish in the bottom lands. Preferred substrates are generally coarse and consist of gravel, rubble, and boulders with growths of filamentous algae, but occasionally they are found on sand/mud substrates.	Has potential to occur within Serrano Creek. Does not have potential to occur within the Project site.
Steelhead – southern California DPS *Oncorhynchus mykiss irideus* pop. 10	Federal: FE State: n/a	Clear, swift moving streams with gravel for spawning. Federal listing refers to	Does not occur onsite due to a lack of suitable habitat.

Species Name	Status	Habitat Requirements	Potential for Occurrence
		populations from Santa Maria river south to southern extent of range (San Mateo Creek in San Diego county.)	
Tidewater goby *Eucyclogobius newberryi*	Federal: FE State: n/a	Occurs in shallow lagoons and lower stream reaches along the California coast from Agua Hedionda Lagoon, San Diego Co. to the mouth of the Smith River.	Does not occur onsite due to a lack of suitable habitat.
Amphibians			
Arroyo toad *Anaxyrus californicus*	Federal: FE State: SSC	Breed, forage, and/or aestivate in aquatic habitats, riparian, coastal sage scrub, oak, and chaparral habitats. Breeding pools must be open and shallow with minimal current, and with a sand or pea gravel substrate overlain with sand or flocculent silt. Adjacent banks with sandy or gravely terraces and very little herbaceous cover for adult and juvenile foraging areas, within a moderate riparian canopy of cottonwood, willow, or oak.	Not expected to occur onsite due to a lack of suitable habitat.
Coast Range newt *Taricha torosa*	Federal: n/a State: SSC	Found in wet forests, oak forests, chaparral, and rolling grasslands. In southern California, drier chaparral, oak woodland, and grasslands are used.	Not expected to occur onsite due to a lack of suitable habitat.
Western spadefoot *Spea hammondii*	Federal: n/a State: SSC	Seasonal pools in coastal sage scrub, chaparral, and grassland habitats.	Does not occur onsite due to a lack of suitable habitat.
Reptiles			
California glossy snake *Arizona elegans occidentalis*	Federal: n/a State: SSC	Inhabits arid scrub, rocky washes, grasslands, chaparral.	Not expected to occur onsite due to a lack of suitable habitat.
Coast horned lizard *Phrynosoma blainvillii*	Federal: n/a State: SSC	Occurs in a variety of vegetation types including coastal sage scrub, chaparral, annual grassland, oak woodland, and riparian woodlands.	Not expected to occur onsite due to a lack of suitable habitat.

Species Name	Status	Habitat Requirements	Potential for Occurrence
Coast patch-nosed snake *Salvadora hexalepis virgultea*	Federal: n/a State: SSC	Occurs in coastal chaparral, desert scrub, washes, sandy flats, and rocky areas.	Not expected to occur onsite due to a lack of suitable habitat.
Coastal whiptail *Aspidoscelis tigrus stejnegeri*	Federal: n/a State: SSC	Open, often rocky areas with little vegetation, or sunny microhabitats within shrub or grassland associations.	Not expected to occur onsite due to a lack of suitable habitat.
Red-diamond rattlesnake *Crotalus ruber*	Federal: n/a State: SSC	Habitats with heavy brush and rock outcrops, including coastal sage scrub and chaparral.	Not expected to occur onsite due to a lack of suitable habitat.
Southern California legless lizard *Anniella stebbinsi*	Federal: n/a State: SSC	Broadleaved upland forest, chaparral, coastal dunes, coastal scrub; found in a broader range of habitats that any of the other species in the genus. Often locally abundant, specimens are found in coastal sand dunes and a variety of interior habitats, including sandy washes and alluvial fans	Not expected to occur onsite due to a lack of suitable habitat.
Two-striped gartersnake *Thamnophis hammondii*	Federal: n/a State: SSC	Aquatic snake typically associated with wetland habitats such as streams, creeks, and pools.	Not expected to occur onsite due to a lack of suitable habitat.
Southwestern pond turtle *Actinemys pallida*	Federal: FPT State: SSC	Slow-moving permanent or intermittent streams, small ponds and lakes, reservoirs, abandoned gravel pits, permanent and ephemeral shallow wetlands, stock ponds, and treatment lagoons. Abundant basking sites and cover necessary, including logs, rocks, submerged vegetation, and undercut banks.	Has potential to occur within Serrano Creek. Does not have potential to occur within the Project site.
Birds			
Bald eagle (nesting and wintering) *Haliaeetus leucocephalus*	Federal: n/a State: SE; CFP	Primarily in or near seacoasts, rivers, swamps, and large lakes. Perching sites consist of large trees or	Not expected to occur onsite due to a lack of suitable habitat.

Species Name	Status	Habitat Requirements	Potential for Occurrence
		snags with heavy limbs or broken tops.	
Belding's savannah sparrow *Passerculus sandwichensis beldingi*	Federal: n/a State: SE	Coastal Marshes.	Does not occur onsite due to a lack of suitable habitat.
Burrowing owl *Athene cunicularia*	Federal: n/a State: SSC	Shortgrass prairies, grasslands, lowland scrub, agricultural lands (particularly rangelands), coastal dunes, desert floors, and some artificial, open areas as a year-long resident. Occupies abandoned ground squirrel burrows as well as artificial structures such as culverts and underpasses.	Not expected to occur onsite due to a lack of suitable habitat.
California black rail *Laterallus jamaicensis coturniculus*	Federal: n/a State: ST; CFP	Nests in high portions of salt marshes, shallow freshwater marshes, wet meadows, and flooded grassy vegetation.	Does not occur onsite due to a lack of suitable habitat.
California least tern (nesting colony) *Sternula antillarum browni*	Federal: FE State: SE; CFP	Flat, vegetated substrates near the coast. Occurs near estuaries, bays, or harbors where fish is abundant.	Does not occur onsite due to a lack of suitable habitat.
Coastal cactus wren *Campylorhynchus brunneicapillus sandiegensis*	Federal: n/a State: SSC	Occurs almost exclusively in cactus (cholla and prickly pear) dominated coastal sage scrub.	Not expected to occur onsite due to a lack of suitable habitat.
Coastal California gnatcatcher *Polioptila californica californica*	Federal: FT State: SSC	Low elevation coastal sage scrub and coastal bluff scrub.	Not expected to occur onsite due to a lack of suitable habitat.
Golden eagle *Aquila chrysaetos*	Federal: n/a State: CFP	In southern California, occupies grasslands, brushlands, deserts, oak savannas, open coniferous forests, and montane valleys. Nests on rock outcrops and ledges.	Not expected to occur onsite due to a lack of suitable habitat.
Grasshopper sparrow (nesting) *Ammodramus savannarum*	Federal: State: SSC	Open grassland and prairies with patches of bare ground.	Not expected to occur onsite due to a lack of suitable habitat.

Species Name	Status	Habitat Requirements	Potential for Occurrence
Least Bell's vireo *Vireo bellii pusillus*	Federal: FE State: SE	Dense riparian habitats with a stratified canopy, including southern willow scrub, mule fat scrub, and riparian forest.	Has potential to occur within riparian habitat adjacent to the Project site.
Light-footed Ridgway's rail *Rallus obsoletus levipes*	Federal: FE State: SE; CFP	Marsh vegetation of coastal wetlands.	Does not occur onsite due to a lack of suitable habitat.
Long-eared owl (nesting) *Asio otus*	Federal: n/a State: SSC	Riparian habitats are required by the long-eared owl, but it also uses live-oak thickets and other dense stands of trees.	Not expected to occur within riparian habitat associated with Serrano Creek due to narrowness of habitat.
Northern harrier (nesting) *Circus hudsonius*	Federal: n/a State: SSC	A variety of habitats, including open wetlands, grasslands, wet pasture, old fields, dry uplands, and croplands.	Not expected to nest onsite due to a lack of suitable habitat.
Southwestern willow flycatcher *Empidonax traillii extimus*	Federal: FE State: SE	Riparian woodlands along streams and rivers with mature dense thickets of trees and shrubs.	Not expected to occur within riparian habitat associated with Serrano Creek due to narrowness of habitat.
Tricolored blackbird (nesting colony) *Agelaius tricolor*	Federal: n/a State: ST; SSC	Breeding colonies require nearby water, a suitable nesting substrate, and open-range foraging habitat of natural grassland, woodland, or agricultural cropland.	Not expected to nest within riparian habitat associated with Serrano Creek due to lack of suitable nesting substrate.
White-tailed kite (nesting) *Elanus leucurus*	Federal: n/a State: CFP	Low elevation open grasslands, savannah-like habitats, agricultural areas, wetlands, and oak woodlands. Dense canopies used for nesting and cover.	Not expected to nest onsite due to lack of suitable adjacent foraging habitat.
Yellow rail *Coturnicops noveboracensis*	Federal: n/a State: SSC	Shallow marshes, and wet meadows; in winter, drier freshwater and brackish marshes, as well as dense, deep grass, and rice fields.	Does not occur onsite due to a lack of suitable habitat.
Yellow warbler (nesting) *Setophaga petechia*	Federal: n/a State: SSC	Breed in lowland and foothill riparian woodlands dominated by cottonwoods, alders, or willows and other small trees and shrubs typical of low, open-canopy riparian woodland. During migration, forages in woodland, forest, and shrub habitats.	Has potential to nest within riparian habitat adjacent to the Project site.

Species Name	Status	Habitat Requirements	Potential for Occurrence
Yellow-breasted chat *Icteria virens*	Federal: n/a State: SSC	Dense, relatively wide riparian woodlands and thickets of willows, vine tangles, and dense brush with well-developed understories.	Not expected to occur within riparian habitat associated with Serrano Creek due to narrowness of habitat.
Mammals			
American badger *Taxidea taxus*	Federal: n/a State: SSC	Most abundant in drier open stages of most scrub, forest, and herbaceous habitats, with friable soils.	Does not occur onsite due to a lack of suitable habitat.
Big free-tailed bat *Nyctinomops macrotis*	Federal: n/a State: SSC	Roost mainly in crevices and rocks in cliff situations; also utilize buildings, caves, and tree cavitites.	Not expected to occur onsite due to a lack of suitable habitat.
Mexican long-tongued bat *Choeronycteris mexicana*	Federal: State: SSC	Variety of habitats ranging from desert, montane, riparian, to pinyon-juniper habitats. Found roosting in desert canyons, deep caves, mines, or rock crevicies. Can use abandoned buildings.	Not expected to occur onsite due to a lack of suitable habitat.
Pacific pocket mouse *Perognathus longimembris pacificus*	Federal: FE State: SSC	Fine, alluvial soils along the coastal plain. Scarcely in rocky soils of scrub habitats.	Does not occur onsite due to a lack of suitable habitat.
Pallid bat *Antrozous pallidus*	Federal: n/a State: SSC	Deserts, grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting.	Has potential to occur onsite.
Pocketed free-tailed bat *Nyctinomops femorosaccus*	Federal: n/a State: SSC	Joshua tree, pinon and juniper woodlands. Riparian scrub and Sonoran desert scrub. Roost within rocky areas with high cliffs.	Does not occur onsite due to a lack of suitable habitat.
San Diego desert woodrat *Neotoma lepida intermedia*	Federal: n/a State: SSC	Occurs in a variety of shrub and desert habitats, primarily associated with rock outcrops, boulders, cacti, or areas of dense undergrowth.	Does not occur onsite due to a lack of suitable habitat.
Southern California saltmarsh shrew *Sorex ornatus salicornicus*	Federal: n/a State: SSC	Coastal marshes. Requires dense vegetation and woody debris for cover.	Does not occur onsite due to a lack of suitable habitat.
Southern grasshopper mouse *Onychomys torridus ramona*	Federal: n/a State: SSC	Desert areas, especially scrub habitats with friable soils for digging. Prefers low to moderate shrub cover.	Does not occur onsite due to a lack of suitable habitat.

Species Name	Status	Habitat Requirements	Potential for Occurrence
Stephens' kangaroo rat *Dipodomys stephensi*	Federal: FT State: ST	Open grasslands or sparse shrublands with less than 50% vegetation cover during the summer.	Does not occur onsite due to a lack of suitable habitat.
Western mastiff bat *Eumops perotis californicus*	Federal: n/a State: SSC	Occurs in many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, and chaparral. Roosts in crevices in cliff faces, high buildings, trees, and tunnels.	Not expected to occur onsite due to a lack of suitable habitat.
Western red bat *Lasiurus frantzii*	Federal: n/a State: SSC	Prefers riparian areas dominated by walnuts, oaks, willows, cottonwoods, and sycamores where they roost in broad-leafed trees.	Has potential to occur onsite.
Western yellow bat *Lasiurus xanthinus*	Federal: n/a State: SSC	Found in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. Roosts in trees, particularly palms. Forages over water and among trees.	Has potential to occur onsite.

CalEEMod Emission Summary

TO: Sam Juarez, EPDS
FROM: Vince Mirabella
DATE: September 26, 2023

SUBJECT: Summary of CalEEMod Model Runs and Output for the Great Scott Tree Care Project Orange County

SECTION 1: PROJECT INFORMATION

1.1 - Project Name

Great Scott Tree Care Project Orange County (Project – GSTC-OC)

1.2 - Project Location

The Project is located in the City of Lake Forest, west of Linear Lane, north of Canada Road, with Serrano Creek bordering the Project site to the south and east. Regional access to the Project site is provided by State Route 241 (SR-241), located approximately 0.5 miles northeast of the Project site, and Interstate I-5 (I-5), located about 3.45 miles southwest of the Project site. Local access to the Project site is provided by Linear Lane and Canada Road, accessed by Dimension Drive and Lake Forest Drive or Bake Parkway.

1.3 - Project Description

The Project proposes to rehabilitate one existing single-family residence as an office for the GSTC-OC administrative functions alongside the removal of a second residence converted for office use after receipt of a demolition permit from the City of Lake Forest. Furthermore, the undertaking encompasses establishing parking zones dedicated to the tree service vehicles, referred to as "Tree Trucks" and equipment. Although wood chipping is currently not planned, it is desired in the future as it necessitates the installation of robust concrete "backstops" to facilitate the maneuvering of tractor loaders during chipping. The operational configuration and flow of Tree Truck locations for chipping are anticipated to evolve for heightened efficiency over time. Additional considerations regarding the strategy, approach, and location for wood chipping are pending discussion in relation to the use permit. Most of the parking areas will have permeable gravel surfaces to encourage percolation into the soil rather than runoff, requiring substantial water quality features. Table 1 provides the Project's land-use assumptions in this assessment. The balance of the Project site, 4+ acres, is comprised of natural vegetation.

Table 1: Project Land-Use Assumptions

CalEEMod Land –Use Assumption	Size	Comment
General Light Industry	5,899 sqft	Office Building and Barn
Other Non-Asphalt Surfaces	35,000 sqft	Unpaved Permeable Gravel Area
Paved Parking	5,600 sqft	Parking Area
Landscaping	7,500 sqft	Landscaping
sqft = square feet Source: Project Description		

1.4 - Purpose of the Report

This report summarizes the results of the Project construction and operational criteria pollutant and greenhouse gas (GHG) emissions and energy usage estimates using the California Emissions Estimator Model (CalEEMod Version 2022.1) land use emission model. The analysis compared the estimated Project emissions to the numerical air quality and GHG significance thresholds recommended by the South Coast Air Quality Management District (SCAQMD).

1.5 - Conclusions

- The Project's construction and operation would not exceed any project-level criteria pollutant regional or localized emission significance thresholds recommended by the SCAQMD. No mitigation is required

- The Project's construction and operation would not result in a cumulatively significant impact on the region's air quality. No mitigation is required.

- The Project's construction and operation would neither exceed the greenhouse gas significance threshold adopted for this Project nor conflict with any applicable plan, policy or regulation adopted to reduce greenhouse gas emissions. No mitigation is required.

- The Project construction and operation would not result in the wasteful, inefficient, and unnecessary consumption of energy, especially fossil fuels such as natural gas and petroleum, associated with Project design, Project location, the use of electricity and natural gas, and the use of fuels by vehicles anticipated to travel to and from the Project. No mitigation is required.

SECTION 2: CALEEMOD EMISSION ESTIMATES – CRITERIA POLLUTANTS

This section quantifies the Project construction and operational criteria pollutant emissions[1] and compares the emissions to the regional and local emission significance thresholds recommended by the SCAQMD.

2.1 - Significance Thresholds-Criteria Pollutants

The City has adopted air quality significance thresholds as part of its 2020 CEQA Guidelines, specifically, *City of Lake Forest CEQA Significance Thresholds Guide, Appendix 1, Section 4*[2]. The City air quality thresholds are based on the regional and localized significance thresholds recommended by the SCAQMD. As a result, the SCAQMD air quality significance thresholds are incorporated herein by reference[3]. All air quality significance thresholds in this report will be referred to as the SCAQMD significance thresholds. These significance thresholds were applied in assessing the regulatory significance of the Project's emissions.

2.1.1 Regional Emission Significance Thresholds

An individual project's incremental regional air quality impacts are generally very small and difficult to measure. However, the SCAQMD's regional significance thresholds define maximum daily emissions whose exceedance by a Project's construction or operation may add to the overall emission burden within the SCAQMD and impact the attainment and maintenance of ambient air quality standards.

The regional thresholds apply to criteria pollutant emissions of carbon monoxide (CO), oxides of nitrogen (NO_x), oxides of sulfur (SO_x), particulate matter (PM_{10} and $PM_{2.5}$), and reactive organic gases (ROG). The quantification of regional emissions includes those project emissions generated from onsite emission sources (i.e., off-road construction equipment, fugitive dust) and offsite emission sources (vehicle travel to and away from the project). Table 2 shows the SCAQMD's regional significance thresholds.

Table 2: SSCAQMD Regional Emission Significance Thresholds

Air Pollutant	Maximum Daily Emissions (pounds/day)	
	Construction	Operation
Carbon Monoxide	550	550
Oxides of Nitrogen	100	55
Sulfur Oxides	150	150
PM_{10}	150	150
$PM_{2.5}$	55	55

[1] Criteria pollutants are the only air pollutants with national air quality standards that define allowable concentrations of these substances in the ambient air. Criteria pollutants include carbon monoxide (CO), oxides of nitrogen (NO_x), sulfur dioxide (SO_x), and particulate matter (PM_{10} and $PM_{2.5}$). Note that ozone is another criteria pollutant; however, in terms of defining significance thresholds, ozone is represented by its precursor components, oxides of nitrogen (NO_x) and reactive organic gases.

[2] City of Lake Forest CEQA Significance Thresholds Guide, July 21, 2020. Website: https://lakeforestca.gov.DocumentCenter/View/823/CEQA-Significance-Thresholds-Guide-2020--Transpo-Analysis-GuidelinesPDF

[3] SCAQMD 2019. SCAQMD Air Quality Significance Thresholds. Website:http://www.aqmd.gov/docs/default/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf

Air Pollutant	Maximum Daily Emissions (pounds/day)	
	Construction	Operation
Reactive Organic Gases	75	55
Source: SCAQMD[3]		

2.1.2 Localized Significance Thresholds

Project-related construction or operational air emissions may potentially exceed the State and national air quality standards in the Project vicinity, even though these pollutant emissions may not be significant enough to create a regional impact on the SCAQMD. The SCAQMD has established that air quality impacts are significant if there is a potential for a project's emissions to contribute or cause localized exceedances of the federal and/or State ambient air quality standards (NAAQS/CAAQS). To address the potential local air quality impacts from a project's construction and operation, the SCAQMD has developed localized significance thresholds (LST). The LSTs represent the maximum rates of daily construction or operational emissions from a project site that would not result in air pollutant levels exceeding national or State ambient air quality standards (SCAQMD 2003[4],2008[5]).

There are three principal differences between the regional thresholds and the LSTs.

- First, the regional thresholds include all sources of Project construction and operational emissions generated from onsite and offsite emission sources, whereas the LSTs only consider the emissions generated from onsite emission sources.

- Second, the LSTs only apply to CO, NO_X, and particulate matter (PM_{10} and $PM_{2.5}$), while the regional thresholds include ROG and SO_x.

- Third, the regional thresholds apply to emission sources regardless of where the source is located within the SCAQMD. In contrast, the LSTs depend on the project's size and emission location relative to the nearest local sensitive receptor[6].

For this localized assessment, the SCAQMD provides screening emission look-up tables for projects that disturb a maximum of 5 acres in size in a day. The look-up tables were developed by the SCAQMD to readily determine if the daily emissions of CO, NO_x, PM_{10}, and $PM_{2.5}$ from a project could significantly impact the local air quality. This analysis determined the appropriate LSTs based on the Project's source receptor area (SRA)[7], size, and distance to the nearest local sensitive receptor. The SCAQMD has divided the SCAQMD into 38 SRAs, each with a set of LSTs that depend on the air pollutant, project size, and distance to the nearest

[4] SCAQMD 2003. Final Localized Significance Threshold Methodology. Website: http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf?sfvrsn=2

[5] SCAQMD 2008: Final Localized Significance Threshold Methodology. Website: http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf

[6] The SCAQMD defines a sensitive receptor as an individual who is most health-wise susceptible to exposures to air pollutants including children the elderly, and adults with chronic health issues. Such receptors include residences, schools, elderly care centers, and hospitals where such receptors could be exposed to air pollutants for at least 24 hours.

[7] A source-receptor area (SRA) is a geographic area within the SCAQMD that can act as both a source of emissions and a receptor of emission impacts

sensitive receptor. The Project site is located within SRA 19, Saddleback Valley. The LSTs for this SRA were applied in this LST assessment.

LSTs for Construction

The CalEEMod model (Version 2022.1) was applied to determine the maximum daily onsite emissions during construction based on construction activity, equipment fleet, and hours. The SCAQMD has published a "Fact Sheet for Applying CalEEMod to Localized Significance Thresholds" (SCAQMD 2011)[8]. This fact sheet is used to determine the maximum site acreage that is actively disturbed in a day based on the construction equipment fleet and equipment hours as estimated in the CalEEMod model.

The LSTs are determined by:

- Source receptor area (SRA), the geographic area within the SCAQMD that can act as both a source of emissions and a receptor of emission impacts (the Project is located within SRA 19, Saddleback Valley);
- Size of the Project (the maximum area to be disturbed in a day); and
- Distance to the nearest sensitive receptor

The LST methodology estimates the emission rates for each SRA, project sizes of 1, 2, and 5 acres, and nearest receptor distances of 25, 50, 100, 200, and 500 meters. The methodology uses linear interpolation to determine the thresholds for project sizes between the values given or with receptors at distances between the given receptors.

The estimated onsite Project construction emissions are then compared to the LSTs to determine if the Project construction will have a localized air quality impact.

Table 3 shows the conceptual construction schedule as provided by the Project applicant. From Table 4, it is noted that several construction activities overlap in time. Therefore, the emissions from these overlapping construction activities are summed together to determine the maximum emissions that would occur in a single day.

[8] SCAQMD 2011: Fact Sheet for Applying CalEEMod to Localized Significance Thresholds. Website: http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/caleemod-guidance.pdf

Table 3: Construction Schedule

Activity	Start Date	End Date	Total Days
Demolition	April 1, 2024	April 30, 2024	22
Site Preparation	April 1, 2024	April 30,2024	22
Grading	April 1, 2024	May 30,2024	44
Infrastructure	April 1, 2024	May 31, 2024	45
Building Construction	April 1, 2024	June 30, 2024	44
Paving	June 2, 2024	June 30, 2024	20
Architectural Coating	June 2, 2024	June 30, 2024	20
Source: see Data Attachment			

Table 4 shows the maximum daily disturbed acreage during site demolition, site preparation, grading, and infrastructure during the principal dust-generating activities based on the types and numbers of construction equipment used for each construction activity identified by the CalEEMod model.

Based on the construction schedule, the construction activities resulting in the maximum disturbed area would occur when the demolition, site preparation, grading, and infrastructure activities would overlap in time. The information in Table 4 indicates that the total Project area that would be disturbed given the overlapping of Project construction activities, is 4 acres. However, the actual physical area of the Project site that would experience construction disturbances is approximately 2.5 acres. Therefore, it was assumed that the entire 2.5 acres would be disturbed in a day during construction. As a result, the LST construction area was set at 2.5 acres.

Table 4: Equipment Demolition, Site Preparation, Grading, and Infrastructure Disturbed Area Rates

Activity	Equipment Type	Equipment Quantity	Acres Disturbed per 8-hour Day	Operating Hours per Day	Acres Graded per Day
Demolition	Concrete/Industrial Saws	1	0.0	8	0
	Tractors/Loaders/Backhoes	3	0.0	8	0
	Rubber Tired Dozers	1	0.5	8	0.5
					Total: 0.5 acres
Site Preparation	Scraper	1	1.0	8	1.0
	Graders	1	0.5	8	0.5
	Tractors/Loaders/Backhoes	1	0.0	8	0
					Total 1.5 acres
Grading	Rubber Tired Dozer	1	0.5	8	0.5
	Graders	1	0.5	8	0.5

Activity	Equipment Type	Equipment Quantity	Acres Disturbed per 8-hour Day	Operating Hours per Day	Acres Graded per Day
	Tractors/Loaders/Backhoes	1	0.0	8	0.0
					Total 1.0 acr
Infrastructure	Crawler Tractors	1	0.5	8	0.5
	Excavator	1	0.0	8	0.0
	Rubber Tired Dozer	1	0.5	8	0.5
					Total 1.0 acres
					Total disturbed acreage: 4 acres/day **Actual area set to 2.5 acres, the physical area of the Project site that would be constructed**
Source: Table 7 shows the construction inventory developed for the demolition, site preparation, grading, and infrastructure activities as derived from the CalEEMod model.					

The LST specification also depends on the distance to the nearest sensitive receptor and the duration for which a receptor may be exposed to air pollution. The SCAQMD considers a sensitive receptor to be a location such as a residence, hospital, or convalescent facility where it is possible that an individual could remain for 24 hours or longer. Commercial and industrial facilities are not included in the definition of a sensitive receptor because employees do not typically remain onsite for a full 24 hours but are present for shorter periods, such as eight hours[9].

A mix of industrial and commercial uses surrounds the Project location. The closest sensitive receptor where such a receptor could reside for 24 hours or longer is located at existing residences situated about 75 meters to the south of the Project across Serrano Court. Therefore, the distance for sensitive receptors in the LST assessment was set at 75 meters to quantify the LSTs for PM_{10} and $PM_{2.5}$ that require exposure periods of 24 hours. The shortest distance for worker receptors was set at 25 meters for quantifying the LSTs for NO_2 and CO that require exposure periods of up to 8 hours. Table 5 provides the applicable construction LSTs for this Project.

[9] SCAQMD 2003. Final Localized Significance Threshold Methodology. Website: http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf?sfvrsn=2

Table 5: Construction Localized Significance Thresholds

NOx (lbs/day)	CO (lbs/day)	PM_{10} (lbs/day)	$PM_{2.5}$ (lbs/day)
142	1,128	27	8
LSTs for SRA 19:Project area of 2.5 acres and a receptor distance of 25 meters for NO_2 and CO and 75 meters for PM_{10} and $PM_{2.5}$. The LSTs were interpolated from the 2 and 5 acre LSTs provided in the SCAQMD LST look-up tables Source: see Data Attachment.			

LST for Operation

The active Project area is approximately 2.5 acres in size. Therefore, the LSTs for a 2.5-acre operational area were used to estimate the operational LSTs in this assessment. Table 6 presents the operational LSTs for this Project.

Table 6: Operational Localized Significance Thresholds

NOx (lbs/day)	CO (lbs/day)	PM_{10} (lbs/day)	$PM_{2.5}$ (lbs/day)
142	1,128	7	3
LSTs for SRA 19, Project area of 2.5 acres and a receptor distance of 25 meters for NO_2 and CO and 75 meters for PM_{10} and $PM_{2.5}$.			

2.1.3 Cumulative Significance Thresholds

The SCAQMD has published the following report on addressing cumulative impacts from air pollution: White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution (SCAQMD)[10]. The SCAQMD considers projects exceeding the project-specific significance thresholds cumulatively considerable. Therefore, the project-specific and cumulative significance thresholds are the same. As a result, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant.

The US Environmental Protection Agency currently designates the South Coast Air Basin, where the Project is located as nonattainment for ozone, PM_{10}, and $PM_{2.5}$. Air pollution is largely a cumulative impact resulting from emissions generated over a large geographic region. The nonattainment status of regional pollutants results from past and present development within the air basin, and this regional impact is a cumulative impact. In other words, new development projects (such as the proposed Project) within the air basin would contribute to this impact only on a cumulative basis. No single project would be sufficient in size to result in nonattainment of regional air quality standards. Instead, a project's emissions may be individually limited, but cumulatively considerable when combined with past, present, and future development projects.

Therefore, the determination of cumulative air quality impacts for construction and operational emissions was based on whether the project would result in regional emissions that exceed SCAQMD regional

[10] SCAQMD 2003. White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution

thresholds of significance for construction and operations on a project level. Projects that generate emissions below the SCAQMD regional significance thresholds would be considered consistent with regional air quality planning efforts and would not generate cumulatively considerable emissions.

2.2 - Criteria Pollutant Emission and Impact Estimates

2.2.1 Project Emissions

Construction

Construction emissions can vary substantially from day to day, depending on the activity level, the specific type of operation, and prevailing weather conditions. Construction emissions result from onsite and offsite activities. Onsite emissions principally consist of exhaust emissions from heavy-duty construction equipment, motor vehicle operation, and fugitive dust (mainly PM_{10}) from disturbed soil. Additionally, paving operations and the application of architectural coatings would release VOC emissions. Motor vehicle exhaust from haul trucks, vendor delivery vehicles, worker traffic, and road dust (PM10 and PM2.5) cause offsite emissions.

*Assumption*s

- Construction Schedule: Construction is anticipated to commence in April 2024 and lasts for approximately three months. The projected occupancy is expected in June 2024.
- Existing land will be cleared of a single-family building, various sheds, and small buildings, and trees and other vegetation
- 883 cubic yards of soil import required
- Fugitive dust mitigation applied as per SCAQMD Rule 403 – Fugitive Dust (2x daily watering, 12% maintenance of soil moisture, and restricting vehicle speed on unpaved surfaces to 15 miles per hour)
- Construction schedule provided by the Project Applicant
- Construction equipment inventory derived from the CalEEMod model equipment

Table 3able 7 provides the Project's construction equipment inventory based on the Project applicant's construction schedule and the default equipment provided in the CalEEMod model for the Project size and land use. Table 8 presents the Project's construction vehicle trips.

Note that the construction schedule utilized in the analysis, shown in Table 3, represents a "worst-case" analysis scenario. Should construction occur any time after the respective dates, impacts would be reduced since emission factors for construction decrease as time passes due to emission regulations becoming more stringent[11]. The construction activity duration and associated equipment

[11] As shown in the CalEEMod User's Guide Version 2021, Appendix G, Table G-11 "Statewide Average Annual Offroad Equipment Emission Factors";as the analysis year increases, emission factors for the same equipment pieces decrease due to the natural turnover of older equipment being replaced by newer less polluting equipment and new regulatory requirements.

represent a reasonable approximation of the expected construction fleet as required per CEQA Guidelines[12]. The duration of the construction activity was based on the information provided by the Project Applicant.

Table 7: Construction Equipment Inventory

Activity	Equipment	Project Number	Project Hours per day	Default Horse-power	Default Load Factor
Demolition	Concrete/Industrial Saws	1	8	33	0.73
	Tractor/Loader/Backhoe	3	8	84	0.37
	Rubber Tired Dozers	1	8	367	0.40
Site Preparation	Grader	1	8	148	0.41
	Tractor/Loader/Backhoe	1	7	84	0.37
	Scraper	1	8	423	0.48
Grading	Rubber Tired Dozer	1	8	367	0.40
	Graders	1	8	148	0.41
	Tractor/Loader/Backhoe	2	7	84	0.37
Infrastructure	Crawler Tractors	1	8	87	0.43
	Excavator	1	8	36	0.38
	Rubber Tired Loader	1	8	150	0.36
Building Construction					
	Tractors/Loaders/Backhoes	1	6	84	0.37
	Welders	3	8	46	0.45
	Generator Set	1	8	14	0.74
Paving	Cement and Motor Mixers	1	6	10	0.56
	Tractors/Loaders/Backhoes	1	8	97	0.37
	Pavers	1	6	81	0.42
	Paving Equipment	1	8	89	0.36
	Rollers	2	8	36	0.38
Architectural Coating	Air Compressor	1	6	37	0.48
Source: see Data Attachment					

[12] State of California. 2019 CEQA California Environmental Quality Act. 2019

Table 8: Construction Vehicle Trips

Activity	Construction Trips per Day		
	Worker	Vendor	Haul
Demolition	13	0	6
Site Preparation	8	0	0
Grading	10	0	3
Infrastructure	8	0	0
Building Construction	2	1	0
Paving	15	0	0
Architectural Coating	2	0	0
Source: see Data Attachment			

Table 9 presents the Project's estimated maximum daily regional construction emissions. As noted in Table 9, the Project's construction would not exceed the SCAQMD's regional emission significance thresholds. Table 10 presents the results of the Project's localized construction impact assessment. From Table 10, the Project's construction would not exceed the SCAQMD's construction localized emission significance thresholds.

Table 9: Estimated Maximum Daily Regional Construction Emissions

Construction Activity	Maximum Daily Regional Emissions[1] (pounds/day)					
	ROG	NO_X	C0	SO_x	PM_{10}	$PM_{2.5}$
2024						
Demolition	1.7	16.2	17.0	0.0	1.3	0.8
Site Preparation	1.3	12.7	11.9	0.0	0.7	0.5
Grading	1.7	16.1	16.1	0.0	3.7	2.1
Infrastructure	0.7	5.5	7.2	0.0	0.4	0.3
Building Construction	0.8	5.8	7.2	0.0	0.2	0.2
Paving	0.9	6.5	9.2	0.0	0.5	0.4
Architectural Coating	4.0	0.9	1.1	0.0	0.0	0.0
Maximum Daily Emissions[1]	6.2	56.3	59.4	0.0	6.3	3.8
SCAQMD Significance Thresholds	**75**	**100**	**550**	**150**	**150**	**55**
Emissions Exceed Thresholds?	**No**	**No**	**No**	**No**	**No**	**No**

Construction Activity	Maximum Daily Regional Emissions[1] (pounds/day)					
	ROG	NO_x	C0	SO_x	PM_{10}	$PM_{2.5}$

Notes:
[1] Overlapping construction during demolition + Site Preparation + Grading + Infrastructure + Building Construction
ROG = reactive organic gases NO_x = oxides of nitrogen PM_{10} = particulate matter 10 microns or less in diameter
$PM_{2.5}$ = particulate matter 2.5 microns or less in diameter CO = carbon monoxide SO_x = sulfur oxides
PM emissions reflect SCAQMD Rule 403 reductions
Source: see Data Attachment

Table 10: Estimated Maximum Daily Localized Construction Emissions

Construction Activity	Maximum Daily Localized Emissions (pounds/day)			
	NO_x	CO	PM_{10}	$PM_{2.5}$
2024				
Demolition	15.6	16.0	1.0	0.7
Site Preparation	12.7	11.4	0.6	0.5
Grading	15.9	15.4	3.5	2.0
Infrastructure	5.5	6.7	0.3	0.3
Building Construction	5.8	7.0	0.2	0.2
Paving	6.4	8.3	0.3	0.3
Architectural Coating	0.9	1.1	0.0	0.0
Maximum Daily Emissions[1]	**55.5**	**56.5**	**5.6**	**3.7**
SCAQMD Significance Thresholds	142	1,128	27	8
Emissions Exceed Thresholds?	**No**	**No**	**No**	**No**

Notes:
[1] Overlapping construction during demolition + Site Preparation + Grading + Infrastructure + Building Construction
NOx = oxides of nitrogen PM_{10} = particulate matter 10 microns or less in diameter
$PM_{2.5}$ = particulate matter 2.5 microns or less in diameter CO = carbon monoxide
PM emissions reflect SCAQMD Rule 403 emission reductions
Construction area of 2.5 acres; receptor distance for NO_x and CO = 25 meters; receptor distance for PM_{10} and $PM_{2.5}$ = 75 meters
Source: see Data Attachment

Project Operational Emissions

Assumptions

- Number of daily vehicle trips provided by the Project Trip Generation Analysis[13]
- Fleet mix provided by the Project Trip Generation Analysis
- Vehicle trip lengths provided by the Project Applicant

The Project's day-to-day operations would generate the Project's long-term operational emissions.

[13] Project Trip Generation Analysis, EPDS. September 14, 2023

Operational emissions for land-use development projects are typically distinguished as mobile, area, and energy-source emissions.

Mobile-Source Emissions

Mobile-source emissions are associated with Project-related automobiles and other motor vehicles that would travel to and from the Project site. The vehicle emission estimate requires information on the number of vehicle trips, the vehicle fleet mix, and the distance the vehicles travel during each trip. According to the Project's Trip Generation Analysis, the Project is expected to generate 142 daily weekday trips. Table 11 provides information on the number of daily operational trips and the types of vehicles used during the Project's operation. As noted, approximately 48 percent of the daily trips are associated with passenger vehicles, while the remaining vehicle trips are comprised of supervisor vehicles and field equipment/field trucks (dump trucks and boom trucks). The dump trucks and boom trucks were assumed to be medium-heavy duty diesel trucks, as provided by the Project Applicant. Note also that ten of the field equipment trucks were assumed to be equipped with a wood chipper[14]. The supervisor trucks were assumed to be light heavy-duty trucks.

Table 11: Project Daily Trip Generation

Land Use	Daily Trips(1)
Office Employees	10
Supervision	16
Field Employees	58
Field Equipment/Tree Trucks	58
Total All Vehicles	142

Note:
(1) All field equipment was assumed to be comprised of medium-heavy duty diesel trucks of 19,500 to 26,000 gross vehicle weight Supervisor trucks were assumed to be light heavy-duty trucks. All passenger vehicles were assumed to be light-duty automobiles.
Source: Project Trip Generation Analysis, EPDS September 14, 2023

Estimating vehicle emissions also requires information on the daily average distance each vehicle travels. The objective of this Project is to reduce travel time and distance. The Project applicant anticipates that the average one-way trip for the Project's field equipment/tree trucks and supervisor vehicles is 30 miles. An average trip distance of 20 miles was assumed for workers as provided by the Project applicant.

As discussed earlier, the localized assessment of Project impacts only considers emissions generated from onsite emission-producing activities. The CalEEMod model does not separate mobile source emissions from those generated from onsite and offsite emissions. Based on the Project site's intended vehicle

[14] The wood chippers are 140 horsepower diesel engines that are registered with the California Air Resources Board's Portable Equipment Registration Program; the Project Applicant indicates that the wood chippers are in the process of being converted to gasoline, however, the emission analysis assumed each chipper was diesel-fueled; each wood chipper was assumed to operate for 4 hours per day.

circulation plan, an average onsite trip travel distance of 0.1 miles was assumed to estimate onsite mobile source emissions for the LST operational assessment.

Area Source Emissions

Operational activities associated with the Project will result in emissions of various air pollutants. Operational emissions are expected from the following area sources:

- Architectural coatings – periodic painting maintenance
- Consumer products – use of products including detergents, cleaning compounds, polishes, and lawn and garden products
- Landscape maintenance equipment – combustion and evaporation of unburned fuel from the operation of lawnmowers, grinders, blowers, trimmers, and chainsaws.

Energy Emissions

- Combustion of natural gas within buildings
- Production of electricity that takes place offsite at electrical generating facilities

Onsite Support Equipment Emissions

The operational emissions also include the operation of a future wheeled loader to transport various processed materials from the chipping operations within the Project site.

Table 12 summarizes the Project's regional operational emissions along with a comparison to the SCAQMD's regional significance thresholds. As noted in Table 12, the Project's regional operational emissions are less than the SCAQMD regional significance thresholds.

Table 13 provides the localized operational emissions results compared to the SCAQMD localized significance thresholds. From Table 13, the Project's localized operational emissions are less than the SCAQMD localized significance thresholds.

Table 12: Estimated Maximum Daily Regional Operational Emissions

Emission Source	Maximum Daily Regional Emissions (pounds/day)					
	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Area	0.2	<0.1	0.3	<0.1	<0.1	<0.1
Energy	0.0	0.1	0.1	<0.1	<0.1	<0.1
Mobile	0.3	7.9	6.4	0.1	3.1	0.9
Offroad (Chippers)	1.5	12.0	20.2	<0.1	0.7	0.6
Onsite Support Equipment	0.1	0.9	1.6	<0.1	0.1	0.1

Emission Source	Maximum Daily Regional Emissions (pounds/day)					
	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Total Project Operational Emissions	2.1	20.8	28.6	0.1	3.8	1.5
SCAQMD Significance Threshold	**55**	**55**	**550**	**150**	**150**	**55**
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Notes:
NOx = oxides of nitrogen PM_{10} = particulate matter 10 microns or less in diameter ROG = reactive organic gases
$PM_{2.5}$ = particulate matter 2.5 microns or less in diameter CO = carbon monoxide
Source: see Data Attachment

Table 13: Estimated Maximum Daily Localized Operational Emissions

Operational Activity	Maximum Daily Localized Emissions (pounds/day)			
	NO_x	CO	PM_{10}	$PM_{2.5}$
Area	<0.1	0.3	<0.1	<0.1
Energy	0.1	0.1	<0.1	<0.1
Mobile	0.9	1.1	<0.1	<0.1
Onsite Support Equipment	0.9	1.6	0.1	0.1
Total Project Operational Emissions	1.9	3.1	0.1	0.1
SCAQMD Significance Threshold	142	1,128	7	3
Exceed Threshold?	**No**	**No**	**No**	**No**

Notes:
NOx = oxides of nitrogen PM_{10} = particulate matter 10 microns or less in diameter
$PM_{2.5}$ = particulate matter 2.5 microns or less in diameter CO = carbon monoxide
Source: see Data Attachment

2.2.2 Cumulative Impacts

Construction

As shown above in Table 9, the Project's maximum daily regional construction emissions would not exceed SCAQMD's regional significance thresholds. Therefore, the Project's construction emissions would not result in a cumulatively considerable incremental contribution to the existing air quality. Furthermore, all construction activities would comply with applicable SCAQMD rules and regulations, including Rule 403 to minimize fugitive PM dust emissions. Therefore, the cumulative impacts of the short-term construction of the Project would be less than significant.

Operations

As shown in Table 12 above, the Project's maximum daily operational emissions would not exceed SCAQMD's regional significance thresholds. Therefore, the Project's operational emissions would not result in a cumulatively considerable incremental contribution to the existing air quality. The cumulative impact of the long-term operation of the Project would be less than significant.

2.3 - Conclusion

The Project's construction and operational emissions would not exceed the SCAQMD's established project-level or cumulative regional or localized significance thresholds during either construction or operation. No mitigation is required.

SECTION 3: CALEEMOD EMISSION ESTIMATES - GREENHOUSE GAS EMISSIONS

This section analyzes the potential impacts on climate change from the Project's emissions of various greenhouses (GHG).

3.1 - Significance Threshold

To guide local lead agencies in assessing GHG emissions' significance in their CEQA documents, SCAQMD convened a GHG CEQA Significance Threshold Working Group (Working Group). Based on the last Working Group meeting (Meeting No. 15) in September 2010[15], SCAQMD identified a tiered approach for evaluating GHG emissions for development projects where SCAQMD is not the lead agency (SCAQMD 2010).

- Tier 1. If a project is exempt from CEQA, project-level and cumulative GHG emissions are less than significant.

- Tier 2. If the project complies with a GHG emissions reduction plan or mitigation program that avoids or substantially reduces GHG emissions in the project's geographic area (e.g., city or county), project-level and cumulative GHG emissions are less than significant.

- Tier 3. If GHG emissions are less than the screening-level threshold, project-level and cumulative GHG emissions are less than significant.

For projects that are not exempt or where no qualifying GHG reduction plans are directly applicable, SCAQMD requires an assessment of GHG emissions. Project-related GHG emissions include on-road transportation, energy use, water use, wastewater generation, solid waste disposal, area sources, off-road emissions, and construction activities. The SCAQMD Working Group identified that because construction activities would result in a "one-time" net increase in GHG emissions, construction activities should be amortized into the operational phase GHG emissions inventory based on the service life of a building. For buildings in general, it is reasonable to look at a 30-year time frame, since this is a typical interval before a new building requires the first major renovation. SCAQMD identified a screening-level threshold of 3,000 $MTCO_2e$ annually for all land-use types or the following land-use specific thresholds: 1,400 $MTCO_2e$ for commercial projects, 3,500 $MTCO_2e$ for residential projects, and 3,000 $MTCO_2e$ for mixed-use projects. These bright-line thresholds are based on a review of the Governor's Office of Planning and Research database of CEQA projects. Based on their 711 CEQA projects review, 90 percent of CEQA projects would exceed the bright-line thresholds. For purposes of this assessment, a significance threshold of 3,000 $MTCO_2e$ was used as the threshold for this assessment. Thus, and based on guidance from the SCAQMD, if a non-industrial project would emit GHGs less than 3,000 $MTCO_2e$ per year, the project is not considered a substantial GHG emitter and the GHG impact is less than significant, requiring no additional analysis and no mitigation. The SCAQMD's interim thresholds use the Executive Order S-3-05 goal as the basis for the Tier 3 screening levels. Achieving the Executive Order's objectives would contribute to worldwide efforts to cap CO_2 concentrations at 450 ppm, stabilizing global climate change.

[15] SCAQMD 2010. Greenhouse Gas CEQA Significance Thresholds Stakeholder Working Group Meeting #15. Website: http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting

3.2 - Project GHG Emissions

3.2.1 Construction

Table 14 summarizes the Project's construction GHG emissions. As per SCAQMD guidance, the Project's construction emissions are amortized over 30 years and added to the operational emissions to quantify the Project's total GHG emissions.

Table 14: Project Construction GHG Emissions

Activity	Annual GHG Emissions ($MTCO_2e$)
2024	172
Total Emissions Amortized Over 30 years	6
Source: see CalEEMod output	

3.2.2 Operations

Table 15 summarizes the Project's operational GHG emissions, construction GHG emissions, and the total Project GHG emissions. The Project would result in GHG emissions of 1,738 $MTCO_2e$ per year. This level of emissions does not exceed the 3,000 $MTCO_2e$ per year significance threshold adopted for this Project. Therefore, the Project would have a less than significant individual and cumulative impact on GHG emissions.

Table 15: Project Operational GHG Emissions

Activity	Annual GHG Emissions ($MTCO_2e$)[(1)]
Project Operational Emissions	
Area	<1
Energy	23
Mobile	1,292
Waste	2
Water	3
Refrigerated	<1
Offroad (Chippers)	30
Onsite Support Equipment	380
Total	1,732
Project Construction Emissions	6
Project Construction and Operation	1,738
Significance Threshold	**3,000**
Project Exceeds Threshold?	**NO**

Activity	Annual GHG Emissions ($MTCO_2e$)[1]
Note: CO_2 comprises over 99 percent of the indicated CO_2- equivalent emissions, with the remainder consisting of methane and nitrous oxide emissions Source: see Data Attachment	

3.3 - Consistency with Applicable Plans, Policy or Regulations Adopted for the Purpose of Reducing GHG Emissions

As noted in the previous section, the Project would not exceed the SCAQMD's recommended GHG significance threshold of 3,000 MT CO_2e per year. Because the Project would not exceed the threshold, this analysis supports the conclusion that the Project would not impede the State's trajectory toward the above-described statewide GHG reduction goals for 2045.

Notwithstanding, the analysis provided below examines the Project's consistency with the various state and local programs to reduce future GHG levels. Several plans and policies have been adopted to reduce GHG emissions in the Southern California region, including the State's 2008, 2017, and 2020 Scoping Plans, and local policies in the City's General Plan. The following subsections discuss the Project's consistency with these plans. As discussed therein, the Project would not conflict with plans and policies aimed at reducing GHG emissions. Project impacts are less than significant.

3.3.1 California Scoping Plans

The principal state plan and policy are set forth in Executive Order S-03-05, Assembly Bill (AB 32), the California Global Warming Solutions Act of 2006[16], and the subsequent Senate Bill (SB 32), the California Global Warming Solutions Act of 2006[17]: emissions limit (2015-2016). The quantitative goal of AB 32 is to reduce GHG emissions to 1990 levels by 2020. AB32 required the CARB to develop a Scoping Plan that describes California's approach to reduce GHGs to achieve the 2020 emission target.

In November 2017, CARB released the Final 2017 Scoping Plan Update (2017 Scoping Plan), which identifies the State's post-2020 reduction strategy. The 2017 Scoping Plan reflects the 2030 target of a 40% reduction below 1990 levels, set by Executive Order B-30-15 and codified by SB 32. The proposed Second Update builds upon key programs including the Cap-and-Trade Regulation, the Low Carbon Fuel Standard and much cleaner cars, trucks, and freight movement, utilizing cleaner, renewable energy, and strategies to reduce CH_4 emissions from agricultural and other wastes. The 2017 Scoping Plan establishes a new emissions limit of 260 MMTCO2e for the year 2030, which corresponds to a 40% decrease in 1990 levels by 2030

[16] AB32 The Global Warming Solutions act of 2006. Website: https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2008-scoping-plan-documents
[17] SB32 2016. The Global Warming Solutions act of 2006: emissions 2015-2016. Website: https://leginfo.legislature.ca.gov/faces/billCompareClient.xhtml?bill_id=201520160SB32

On December 15, 2022, CARB adopted the 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan)[18]. The 2022 Scoping Plan builds on the 2017 Scoping Plan and the requirements set forth by AB 1279, which directs the State to become carbon neutral no later than 2045. To achieve this statutory objective, the 2022 Scoping Plan outlines how California can reduce GHG emissions by 85% below 1990 levels and achieve carbon neutrality by 2045. The Scoping Plan scenario to do this is to "deploys a broad portfolio of existing and emerging fossil fuel alternatives and clean technologies, and align with statutes, Executive Orders, Board direction, and direction from the governor." The 2022 Scoping Plan sets one of the most aggressive approaches to reach carbon neutrality in the world. Unlike the 2017 Scoping Plan, CARB no longer includes a numeric per capita threshold and instead advocates for compliance with a local GHG reduction strategy (CAP) consistent with CEQA Guidelines section 15183.5. The key elements of the 2022 CARB Scoping Plan focus on transportation - the regulations that will impact this sector are adopted and enforced by CARB on vehicle manufacturers and outside the jurisdiction and control of local governments. The Project's consistency with the 2022 Scoping Plan is discussed below. It should be noted that the Project's consistency with the 2022 Scoping Plan also satisfies its consistency with AB 32 since the 2022 Scoping Plan is based on the overall targets AB 32 and SB 32 established. Consistency with the 2008 and 2017 Scoping Plan is unnecessary since the 2022 Scoping Plan has superseded both plans.

The Project would not impede the State's progress towards carbon neutrality by 2045 under the 2022 Scoping Plan. The Project would be required to comply with applicable current and future regulatory requirements promulgated through the 2022 Scoping Plan. Some of the current transportation sector policies the Project will comply with (through vehicle manufacturer compliance) include: Advanced Clean Cars II, Advanced Clean Trucks, Advanced Clean Fleets, Zero Emission Forklifts, the Off-Road Zero-Emission Targeted Manufacturer rule, Clean Off-Road Fleet Recognition Program, In-use Off-Road Diesel-Fueled Fleets Regulation, Off-Road Zero-Emission Targeted Manufacturer rule, Clean Off-Road Fleet Recognition Program, Amendments to the Inuse Off-Road Diesel-Fueled Fleets Regulation, carbon pricing through the Cap-and-Trade Program, and the Low Carbon Fuel Standard. As such, the Project would be consistent with the 2022 Scoping Plan.

3.3.2 City of Lake Forest

The City of Lake Forest Recreation and Resources Element of the City of Lake Forest General Plan[19] includes goals, policies, and actions addressing air quality and GHG emissions (Goal RR-4). Table 18 summarizes the Project consistency with the GHG Goal RR4-Actions. As shown in Table 18, the Project is consistent with the City of Lake Forest General Plan's Recreation and Resources Element actions.

[18] ARB. 2022 Scoping Plan for Achieving Carbon Neutrality. AB 32 Climate Change Scoping Plan | California Air Resources BoardWebsite:

[19] City of Lake Forest General Plan, Recreation and Resources Element 2015. Website: https://lakeforestca.gov/DocumenCenter/View/10652/Recreation-and-Resources-Element

Table 16: Project Consistency with the City of Lake Forest GHG Goal RR-4 Actions

City of Lake Forest Goal RR-4 Action	Project Consistency
RR-4d. Continue to review development projects to ensure that all new public and private development complies with the California Code of Regulations (CCR), Title 24 standards as well as the energy efficiency standards established by the Lake Forest Municipal Code.	**Consistent**: The Project will comply with the latest regulations under Title 24, CalGreen, and the City of Lake Forest
RR-4e. Monitor GHG emissions generated by the community over time for consistency with the established GHG reduction targets, and update the City's community GHG Inventory every five years. In the event that the City determines that ongoing efforts to reduce GHG emissions are not on track to meet the City's adopted GHG reduction targets, the City shall establish and adopt new and/or revised GHG reductions measures that will effectively meet the established GHG reduction targets.	**Consistent**: The Project will comply with any new GHG emission regulations promulgated by the City of Lake Forest.
RR-4f: Provide the necessary facilities and infrastructure to facilitate the use of City-owned low or zero-emission vehicles such as electric vehicle charging facilities and conveniently located alternative fueling stations at key City facilities as operations necessitate and/or as funding becomes available.	**Not applicable**. The is a City requirement
RR-4g: Evaluate and consider multi-modal transportation benefits to all City employees, such as free or low-cost monthly transit passes. Encourage employer participation in similar programs. Encourage new transit/shuttle services and use.	**Consistent**: The applicant indicates that several employees carpool to work each day to minimize VMT and fuel consumption.
RR-4j: Encourage community car-sharing and carpooling.	**Consistent**: The applicant indicates that several employees do carpool to work.
RR-4K: Establish and adopt standards and requirements for electric vehicle parking, including minimum requirements for the installation of electric vehicle charging stations in new multi-family residential and commercial, office, and light industrial development.	**Consistent:** The Project will provide for an electric vehicle charging stall.
RR-4l: Periodically review and update the City's Green Building Program to reflect best practices, such as encouraging the use of cement substitutes and recycled building materials for new construction.	**Consistent:** The Project will implement the elements of the City's Green Building Program.

City of Lake Forest Goal RR-4 Action	Project Consistency
RR-4m: Update the City's Green Building Program to promote the reduction of urban heat islands through vegetation management and cool surfaces. Encourage multi-family residential and non- residential development to increase the use of higher-albedo materials for surfaces including roofs, parking areas, driveways, roads, and sidewalks. Encourage developments with parking lot areas to shade these areas with vegetation or solar panels when appropriate. Support various programs to plant and maintain trees, which can also contribute to a reduction of urban heat islands.	**Consistent:** The Project will implement the elements of the City's Green Building Program.
RR-4n: Future development projects implemented under the General Plan will be required to demonstrate consistency with SCAQMD construction emission thresholds. Where emissions from individual projects exceed SCAQMD thresholds, the following actions shall be incorporated as necessary to minimize impacts. These measures do not exclude the use of other, equally effective mitigation measures. • Require a minimum of 50 percent of construction debris be diverted for recycling. • Require building materials to contain a minimum 10 percent recycled content.	**Consistent:** The Project will implement the construction debris and building material diversion and recycling requirements.

City of Lake Forest Goal RR-4 Action	Project Consistency
RR-4o: Future development projects implemented under the General Plan will be required to demonstrate consistency with SCAQMD's operational emission thresholds. For projects where operational emissions exceed regulatory thresholds, the following measures may be used to reduce impacts. Note the following measures are not all inclusive and developers have the option to add or substitute measures that are equally or more appropriate for the scope of their project. • Develop a project specific TDM program for residents and/or employees that provides opportunities for carpool/vanpools. • Provide onsite solar/renewable energy in excess of regulatory requirements. • Ensure all parking areas are wired for capability of future EV charging and include EV charging stations that exceed regulatory requirements.	**Consistent.** The Project applicant indicates that employees carpool to work each day to minimize VMT and fuel consumption. While the project currently does not include solar energy generation, the building roof structure would be designed to support solar panels in the future, consistent with Title 24 requirements. The project will provide for a EV charging station.

3.4 - Conclusion

The Project's construction and operational GHG emissions would have a less than significant individual and cumulative impact on GHG emissions. The Project would not conflict with an applicable plan, policy, or regulation adopted to reduce GHG emissions. No mitigation is required.

SECTION 4: PROJECT FUEL AND ENERGY CONSUMPTION

4.1 - Assumptions

- Construction equipment fuel consumption derived from California Air Resources Board (ARB Offroad2021 emission model and the CalEEMod construction equipment
- Fuel Consumption from vehicle travel derived from ARB EMFAC2021 emission model
- Electrical and natural gas usage derived from the CalEEMod model

4.2 - Significance Thresholds

Neither Appendix F of the State CEQA Guidelines nor PRC Section 21100(b)(3)) provides a numerical threshold of significance that might be used to evaluate the potential significance of energy consumption of a Project. Instead, the emphasis is on reducing "the wasteful, inefficient, and unnecessary consumption of energy." Based on this focus of the guidelines, for purposes of this report, the Project would have a significant impact related to energy consumption if it would:

- Involve the wasteful, inefficient, and unnecessary consumption of energy, especially fossil fuels such as coal, natural gas, and petroleum, associated with Project design, Project location, the use of electricity and natural gas, and the use of fuel by vehicles anticipated to travel to and from the Project.

4.3 - Construction

4.3.1 Electricity and Natural Gas Usage

Southern California Edison Company would provide temporary electric power for as-necessary lighting and electronic equipment such as computers inside temporary construction trailers. The electricity used for such activities would be temporary and would be substantially less than that required for Project operation and would have a negligible contribution to the Project's overall energy consumption.

Natural gas is not anticipated to be required during the Project construction. During the construction, fuels would primarily consist of diesel and gasoline, discussed below under the "petroleum" subsection. Any minor amounts of natural gas that may be consumed as a result of Project construction would be substantially less than that required for Project operation and would have a negligible contribution to the Project's overall energy consumption.

4.3.2 Petroleum Fuel Usage

Off-road heavy-duty construction equipment associated with construction activities would rely on diesel fuel, as vendors and haul trucks would be involved in delivering building materials and removing the demolition debris from the Project site. Construction workers would travel to and from the Project site throughout the duration of construction. The analysis assumed construction workers would travel to and from the site in gasoline-powered passenger vehicles. Table 17 presents the fuel usage for the off-road construction equipment. These estimates are based on the annual total fuel consumption and horsepower-hour data within the ARB OFFROAD2021 emission model for specific types of diesel

construction equipment employed in the Project construction. Note that the total fuel consumption during construction computed below likely substantially overstates the amount of fuel usage. Although construction equipment and their duration are listed under a particular construction activity, there is a likelihood that not all of the inventoried equipment would operate over the entire duration of the construction activity.

Table 18 summarizes the Project's construction vehicle fuel usage. The fuel usage is based on the vehicle type (worker vehicle, vendor vehicle, and haul truck), vehicle miles traveled and fuel usage factors as derived from the ARB EMFAC2021 model. This information is then used to determine the estimated annual fuel consumption associated with vehicle usage during Project construction and operational activities. Table 19 summarizes the total construction fuel consumption.

4.4 - Operational Energy Requirements

Table 20 summarizes the Project's operational energy requirements.

4.5 - Conclusion

Project construction would result in fuel consumption from construction tools and equipment, vendor and haul truck trips, and vehicle trips generated by construction workers traveling to and from the site. Construction activities and corresponding fuel energy consumption would be temporary and localized. The use of diesel fuel and heavy-duty equipment would not be a typical operational condition of the Project. Also, there are no unusual Project characteristics that would cause construction equipment to be less energy efficient compared with similar construction sites in other parts of the State. Whether for a household task or construction project such as the proposed Project, any construction job's rational goal is to minimize construction costs while meeting all legal requirements. Therefore, the Project's construction-related fuel consumption would not result in inefficient, wasteful, or unnecessary energy use compared with other regional construction sites.

According to CEQA Guidelines Appendix F, the goal of conserving energy implies the wise and efficient use of energy, including decreasing overall per capita energy consumption, reducing reliance on natural gas and oil, and increasing reliance on renewable energy sources. The Project would comply with all energy efficiency requirements under all applicable State, county, and local business and energy code ordinances. As a result, the Project's operation would not result in inefficient, wasteful, or unnecessary energy use compared with other similar projects in the region. No mitigation is required.

Table 17: Construction Equipment Fuel Usage

Equipment Type	Equipment (Diesel)	Project Number	Project Hours per day	Default Horse-power	Default Load Factor	Days of Construction	Total Horsepower-hours	Fuel Rate (gal/hp-hr)	Fuel Use (gallons)
Demoliton	Tractors/Loaders/Backhoes	3	8	84	0.37	22	16,410	0.056500	927
	Rubber Tired Dozers	1	8	367	0.4	22	25,837	0.044800	1,157
	Concrete/Industrial Saws	1	8	33	0.73	22	4,240	0.0419	178
Site Preparation	Graders	1	8	148	0.41	22	10,680	0.054000	577
	Tractors/Loaders/Backhoes	1	7	84	0.37	22	4,786	0.056500	270
	Scrapers	1	8	423	0.48	22	35,735	0.047300	1,690
Grading	Graders	1	8	148	0.41	44	21,359	0.054000	1,153
	Tractors/Loaders/Backhoes	2	7	84	0.37	44	19,145	0.044800	858
	Rubber Tired Dozers	1	8	367	0.4	44	51,674	0.056500	2,920
Infrastructure	Crawler Tractors	1	8	87	0.43	45	13,468	0.058400	787
	Excavators	1	8	36	0.38	45	4,925	0.056100	276
	Rubber Tired Loaders	1	8	150	0.36	45	19,440	0.050100	974
Building Construction	Generator Sets	1	8	14	0.74	44	3,647	0.056500	206
	Tractors/Loaders/Backhoes	1	6	84	0.37	44	8,205	0.045000	369
	Welders	3	8	46	0.45	44	21,859	0.045000	984
Paving	Tractors/Loaders/Backhoes	1	8	84	0.37	20	4,973	0.041900	208
	Pavers	1	8	81	0.42	20	5,443	0.056500	308
	Paving Equipment	1	8	89	0.36	20	5,126	0.059600	306
	Rollers	2	8	36	0.38	20	4,378	0.056500	247
	Cement and Mortar Mixers	1	8	10	0.56	20	896	0.058000	52
Architectural Coating	Air Compressor	1	6	37	0.48	20	2131.2	0.045000	96
								Total	14543
Fuel Consumption rates derived from the ARB OFFROAD2021									

Table 18: Estimated Project Construction Vehicle Fuel Usage

Construction Source	Gallons of Diesel Fuel	Gallons of Gasoline Fuel
Haul Trucks	872	0
Vendor Trucks	60	0
Worker Vehicles	0	1,189
Construction Vehicles Total	932	1,189
Source: see Data Attachment		

Table 19: Total Construction Fuel Usage

Construction Source	Gallons of Diesel Fuel	Gallons of Gasoline Fuel
Construction Vehicles	932	1,189
Off-road Construction Equipment	14,543	0
Construction Total	15,475	1,189
Source: see Data Attachment		

Table 20: Project Annual Operational Energy Requirements

Operational Source (value per year)		
	Annual VMT	Gallons of Fuel
Transportation – Project	1,306,781 810,300(DSL) 496,400(GAS)	79.686(DSL) 16,936(GAS)
Electricity – Project	Thousand Kilowatt-Hours	
	56,588	
Natural Gas – Project	Thousand British Thermal Units	
	252,489	
Source: see Data Attachment		

CalEEMod Model Spreadsheet Output

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Great Scott Tree Care Project - Orange County

Update 1

Estimate of Construction LSTs

Activity	Equiment	Number	Acres Disturbed per 8-hour day	Total Area Disturbed
Demolition	Concrete/Indistrial Saw	1	0	0
	Tractors/Loaders/Backhoe	3	0	0
	Rubber Tired Dozer	1	0.5	0.5
			Total	0.5
Site Preparation				
	Grader	1	0.5	0.5
	Tractor/Loader/Backhoe	1	0	0
	Scraper	1	1	1
				1.5
Grading				
	Tractor/Loader/Backhoe	2	0	0
	Grader	1	0.5	0.5
	Runner Tired Dozer	1	0.5	0.5
				1
Infrastructure				
	Crawler Tractors	1	0.5	0.5
	Excavator	1	0	0
	Rubber Tired Dozer	1	0.5	0.5
				1

Size of Maximum Daily Disturbed Construction Area: (Demolition+Site Prep + Grading + Infrastructure) 2.5 acres

Size of Maximum Daily Disturbed Operation Area: 2.5 acres (active projet area is approximately 2.5 acres)

Source Receptor Area: 19

Distance to Sensitive Receptor 75 meters for PM10 and PM2.5

Distance to Worker Receptor: 25 meters for NO2 and CO

Construction LST

	Distance = 25 meters		Distance = 50 meters		Distance = 100 meters		Distance = 75 meters	
Size (acres)	NOx (lbs/day)	CO (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)
2	131	993	18	6	30	10		
5	197	1804	37	11	49	16		
2.5	**142**	**1128**	21	7	33	11	**27**	**9**

Estimation of Operational LSTs

	Distance = 25 meters		Distance = 50 meters		Distance = 100 meters		Distance = 75 meters	
Size (acres)	NOx (lbs/day)	CO (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)
2	131	993	5	2	8	3		
5	197	1804	9	3	12	4		
2.5	**142**	**1128**	6	2	9	3	**7**	**3**

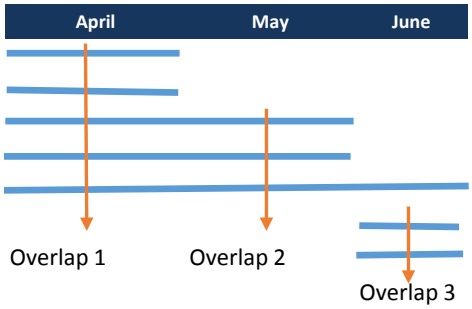
Great Scott Tree Care Project - Orange County

Construction Schedule

e 3: Construction Schedule

Activity	Start Date	End Date	Total Days
Demolition	1-Apr-24	30-Apr-24	22
Site Preparation	1-Apr-24	30-Apr-24	22
Grading	1-Apr-24	30-May-24	44
Infrastructure	1-Apr-24	31-May-24	45
Building Construction	1-Apr-24	30-Jun-24	44
Paving	2-Jun-24	30-Jun-24	20
Architectural Coating	2-Jun-24	30-Jun-24	20

Overlapping Activities



Great Scott Tree Care Project - Orange County

Estimation of Demolition Debris

Building Demolition

Single Family House

Length (ft)	Width (ft)	Stories	Vegetative Factor	Volume (cy)	
40	50	1	1.3	520	Note 1

Sheds

Length (ft)	Width (ft)	Height-ft	Volume (cy)	
20	20	8	39	Note 1

Length (ft)	Width (ft)	Height-ft	Volume (cy)	
20	15	8	29	Note 1

Pens

Length (ft)	Width (ft)	Height-ft	Volume (cy)	
60	70	8	411	Note 1

Total Volume	**999**	**cubic yards**	
Total Building Debris Weight	**500**	**tons**	Note 1

Tree Removal

Rule of Thumb: 15 trees,8 inches in diameter = 40 cy		Note 2
64 trees planned for removal =	**160 cy**	Note 3
For Mixture of Trees, 5 cy = 1 ton	**32 Tons**	Note 1

Total Tons for Demolition Removal	**532 tons**

Note 1: FEMA 2010. Debris Estimating Field Guide
Website: https://www.fema.gov/media-library-data/1558616150217-8ff03e353e675b00c08a84b5916fa397/fema_329_debris_estimating_field_guide_9-1-2010.pdf

Note 2: Dorchester County 2014. Dorchester County Debris Management Plan
Website: https://www.dorchestercountysc.gov/home/showdocument?id=8604

Note 3: Project Description

Great Scott Tree Care Project - Orange County

CalEEMod Construction Emission Summary

	Maximum Daily Emissions (pounds/day)									
2022	**ROG**	**NOx**	**CO**	**SOx**	**PM10Exh**	**PM10Fug**	**PM10Total**	**PM2.5Exh**	**PM2.5 Fug**	**PM2.5Total**
Demolition										
Onsite	1.6	15.6	16.0	0.0	0.7	0.3	1.0	0.6	0.1	0.7
Offsite	0.1	0.6	1.0	0.0	0.0	0.3	0.3	0.0	0.1	0.1
Total	1.7	16.2	17.0	0.0	0.7	0.6	1.3	0.6	0.2	0.8
Site Prep										
Onsite	1.3	12.7	11.4	0.0	0.6	0.0	0.6	0.5	0.0	0.5
Offsite	0.0	0.0	0.5	0.0	0.0	0.1	0.1	0.0	0.0	0.0
Total	1.3	12.7	11.9	0.0	0.6	0.1	0.7	0.5	0.0	0.5
Grading										
Onsite	1.7	15.9	15.4	0.0	0.7	0.0	0.7	0.7	0.0	0.7
Offsite	0.0	0.0	0.6	0.0	0.0	0.2	0.2	0.0	0.1	0.1
Total	1.7	15.9	16.0	0.0	0.7	0.2	0.9	0.7	0.1	0.8
Infrastructure										
Onsite	0.7	5.5	6.7	0.0	0.3	0.0	0.3	0.3	0.0	0.3
Offsite	0.0	0.0	0.5	0.0	0.0	0.1	0.1	0.0	0.0	0.0
Total	0.7	5.5	7.2	0.0	0.3	0.1	0.4	0.3	0.0	0.3
Building Construction										
Onsite	0.8	5.8	7.0	0.0	0.2	0.0	0.2	0.2	0.0	0.2
Offsite	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.8	5.8	7.2	0.0	0.2	0.0	0.2	0.2	0.0	0.2
Paving										
Onsite	0.8	6.4	6.3	0.0	0.3	0.0	0.3	0.3	0.0	0.3
Offsite	0.1	0.1	0.9	0.0	0.0	0.2	0.2	0.0	0.1	0.1
Total	0.9	6.5	7.2	0.0	0.3	0.2	0.5	0.3	0.1	0.4
Architectural Coating										
Onsite	4.1	0.9	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Offsite	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	4.1	0.9	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Onsite: Overlap 1: Demo + Site Prep +Grading + Infrastructure + Buildng Construction	6.1	55.5	56.5	0.0	2.5	0.3	2.8	2.3	0.1	2.4
Max Onsite: Overlap 2: Grading + Infrastructure + Building Construction	3.2	27.2	29.1	0.0	1.2	0.0	1.2	1.2	0.0	1.2
Max Onsite: Overlap 3: Building Construction + Paving + Architectural Coating	5.7	13.1	14.5	0.0	0.5	0.0	0.5	0.5	0.0	0.5
Max Onsite	**6.1**	**55.5**	**56.5**	**0.0**	**2.5**	**0.3**	**2.8**	**2.3**	**0.1**	**2.4**
Max Total Overlap 1: Demo + Site Prep +Grading + Infrastructure + Buildng Construction	6.2	56.1	59.3	0.0	2.5	1.0	3.5	2.3	0.3	2.6
Max Total: Overlap 2: Grading + Infrastructure + Building Construction	3.2	27.2	30.4	0.0	1.2	0.3	1.5	1.2	0.1	1.3
Max Total: Overlap 3: Bilding Construction + Paving + Architectural Coating	5.8	13.2	15.6	0.0	0.5	0.2	0.7	0.5	0.1	0.6
Max Total (Onsite + Offsite)	**6.2**	**56.1**	**59.3**	**0.0**	**2.5**	**1.0**	**3.5**	**2.3**	**0.3**	**2.6**

Regional Threshold (pounds/day)	**75**	**100**	**550**	**150**		**150**	**55**
Exceeds Threshold (poundss/day)	**No**	**No**	**No**	**No**		**No**	**No**
Local Threshold (pounds/day)		**142.0**	**1128.2**			**27.2**	**8.9**
Exceeds Threshold (pounds/day)		**NO**	**NO**			**NO**	**NO**

Note: emissions shown as 0.0 pounds/day indicate emissions less than0.1 pounds/day

Regional Summary (pounds/day)

	ROG	NOx	CO	SOx	PM10	PM2.5
Demolition	1.7	16.2	17.0	0.0	1.3	0.8
Site Preparation	1.3	12.7	11.9	0.0	0.7	0.5
Grading	1.7	15.9	16.0	0.0	0.9	0.8
Infrastructure	0.7	5.5	7.2	0.0	0.4	0.3
Building Construction	0.8	5.8	7.2	0.0	0.2	0.2
Paving	0.9	6.5	7.2	0.0	0.5	0.4
Architectural Coating	4.1	0.9	1.2	0.0	0.0	0.0
Max Total Daily Emissions	6.2	56.1	59.3	0.0	3.5	1.0

Onsite Local Emissions (pounds/day)

	NOx	CO	PM10	PM2.5
Demolition	15.6	16.0	1.0	0.7
Site Preparation	12.7	11.4	0.6	0.5
Grading	15.9	15.4	0.7	0.7
Infrastructure	5.5	6.7	0.3	0.3
Building Construction	5.8	7.0	0.2	0.2
Paving	6.4	6.3	0.3	0.3
Architectural Coating	0.9	1.2	0.0	0.0
Max Onsite Local Daily Emissions	55.5	56.5	2.8	2.4

Great Scott Tree Care Project - Orange County

Construction Equipment Fuel Usage

Equipment Type	Equipment (Diesel)	Project Number	Project Hours per day	Default Horse-power	Default Load Factor	Days of Construction	Total Horsepower-hours	Fuel Rate (gal/hp-hr)	Fuel Use (gallons)
Demoliton	Tractors/Loaders/Backhoes	3	8	84	0.37	22	16,410	0.056500	927
	Rubber Tired Dozers	1	8	367	0.4	22	25,837	0.044800	1,157
	Concrete/Industrial Saws	1	8	33	0.73	22	4,240	0.0419	178
Site Preparation	Graders	1	8	148	0.41	22	10,680	0.054000	577
	Tractors/Loaders/Backhoes	1	7	84	0.37	22	4,786	0.056500	270
	Scrapers	1	8	423	0.48	22	35,735	0.047300	1,690
Grading	Graders	1	8	148	0.41	44	21,359	0.054000	1,153
	Tractors/Loaders/Backhoes	2	7	84	0.37	44	19,145	0.044800	858
	Rubber Tired Dozers	1	8	367	0.4	44	51,674	0.056500	2,920
Infrastructure	Crawler Tractors	1	8	87	0.43	45	13,468	0.058400	787
	Excavators	1	8	36	0.38	45	4,925	0.056100	276
	Rubber Tired Loaders	1	8	150	0.36	45	19,440	0.050100	974
Building Construction	Generator Sets	1	8	14	0.74	44	3,647	0.056500	206
	Tractors/Loaders/Backhoes	1	6	84	0.37	44	8,205	0.045000	369
	Welders	3	8	46	0.45	44	21,859	0.045000	984
Paving	Tractors/Loaders/Backhoes	1	8	84	0.37	20	4,973	0.041900	208
	Pavers	1	8	81	0.42	20	5,443	0.056500	308
	Paving Equipment	1	8	89	0.36	20	5,126	0.059600	306
	Rollers	2	8	36	0.38	20	4,378	0.056500	247
	Cement and Mortar Mixers	1	8	10	0.56	20	896	0.058000	52
Architectural Coating	Air Compressor	1	6	37	0.48	20	2131.2	0.045000	96
								Total	14543

Fuel Consumption rates derived from the ARB OFFROAD2021

Great Scott Tree Care Project - Orange County

Fuel Consumption from Construction Vehicles (Derived from the ARB EMFAC2021 Mobile Source Emission Model)

Emission Factors

Region (County)	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	VMT (miles/day)	Fuel Consumption (1000 gallons/day)	Fuel Rate (miles/gallon)
SoCAB	2024	LHDT1	Aggregated	Aggregated	DSL	4521713	220.2	20.5
SoCAB	2024	MHDT-T6	Aggregated	Aggregated	DSL	5002001	560.4	8.9
SoCAB	2024	HHDT - T7	Agregated	Aggregatged	DSL	13368764	2208.3	6.1
							Average (50%/50%)	**7.5**
SoCAB	2024	LDA	Aggregated	Aggregated	GAS	218661478.4	7460.397566	29.3
SoCAB	2024	LDT1	Aggregated	Aggregated	GAS	18293108.56	749.2484986	24.4
SoCAB	2024	LDT2	Aggregated	Aggregated	GAS	105566684.3	4409.351871	23.9
						Average	**(50%/25%/25%)**	**27**

Vehicle Assumptions (CalEEMod)
Haiul Trucks
HHDT - T7 (Heavy heavy duty haul trucks)
MHDT-T6 (medium heavy duty haul truck)
Vendor trucks assu ed to be 50% HHDT-T7 and MHDT-T6)
LDA (light duty automobile for worker vehicles)
LDT1 (light duty truck 1 for wortker vehicles)
LDT2 (light duty truck 2 for worker vehicles)
Worker vehicles represented as 50% LDT, 25% LDT1, and 25% LDT2

Construction Vehicle Use **(Derived from the CalEEMod model output)**

Fuel Consumption for Haul Trucks

Construction Activity	No Haul Truck Trips/day	Trip Length	Duration (Days)	VMT (miles)	DSL Fuel (gallons)
Demolition	6	20	22	2640	436
Site Preparation	0	20	22	0	0
Grading	3	20	44	2640	436
Infrastructure	0	20	45	0	0
Building Construction	0	20	44	0	0
Paving -	0	20	20	0	0
Architectural Coating	0	20	20	0	0
Total	**9**			**5280**	**872**

Fuel Consumption for Vendor Trucks

Construction Activity	No Vendor Truck Trips/day	Duration (days)	Trip Length (miles)	VMT (miles)	Fuel	Fuel Rate (miles/gallon)	DSL Fuel (gallons)
Demolition	0	22	10.2	0	DSL	7.5	0
Site Preparation	0	22	10.2	0	DSL	7.5	0
Grading	0	44	10.2	0	DSL	7.5	0
Infrastructure	0	45	10.2	0	DSL	7.5	0
Building Construction	1	44	10.2	448.8	DSL	7.5	60
Paving	0	20	10.2	0	DSL	7.5	0
Architectural Coating	0	20	10.2	0	DSL	7.5	0
Total				**448.8**			**60**

Fuel Consumption for Worker Vehicles

Activity	No Worker Vehicles Trips/day	Duration (days)	Trip Length (miles)	VMT (miles)	Fuel	Fuel Rate (miles/gallon)	Gas Fuel (gallons)
Demolition	13	22	18.5	5291	GAS	27	198
Site Preparation	8	22	18.5	3256	GAS	27	122
Grading	10	44	18.5	8140	GAS	27	304
Inffrastructure	8	45	18.5	6660	GAS	27	249
Building Construction	2	44	18.5	1628	GAS	27	61
Paving	15	20	18.5	5550	GAS	27	208
Architectural Coating	2	20	18.5	740	GAS	27	28
Total -DSL				**31265**			**1169**

Summary	Gallons
Total -DSL	932
Total - GAS	1169
	2101

Great Scott Tree Care Project - Orange County

Daily Vehicle Trips

Passenger Vehicles	
Office Employees	10
Field Employees	58
Total	68
Trucks	
Supervisors	16
Feld Equipment/Trucks	58
Total	74
Grand Total	142

Fleet Mix

		Trip Mix	Daily Trips
Office and Field Employees	LDA	100%	68
Supervisor Trucks	LDT2	22%	16
Field/Equipoment Trucks	MHDT	78%	58
			142

Vehicle Trip Rate

Building Size: 5899 Sq-ft

		Trip Rate
Office and Field Employees	LDA	11.52738
Trucks	LHD1/MHI	12.544

Great Scott Tree Care Project - Orange County

Estimation of Operational Vehicle Fuel Use

Annual Operational VMT	1306781	miles per year from CalEEMod

Operational Fleet Mix

	Vehicle Class	Daily Trips	Trips/year	Miles/trip	Miles/year	Miles/gallon	Gallons/year
Office and Field Employees	LDA - GAS	68	24820	20	496400	29.3	16936
Supervisor Trucks	LHDT1 - DSL	16	5840	30	175200	20.5	8532
Field/Equipment Trucks	MHDT - DSL	58	21170	30	635100	8.9	71154
		142	51835		1306781		

VMT Total-GAS	496,400	miles/year
VMT Total-DSL	810,300	miles/year
	1,306,781	miles/year
Fuel - GAS	16,936	gallons/year
Fuel - DSL	79,686	gallons/year

Note 1: Average fuel rate taken from the Construction Vehicle Fuel Use Worksheet

Great Scott Tree Care Project - Orange County Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Great Scott Tree Care Project - Orange County
Construction Start Date	4/1/2024
Operational Year	2024
Lead Agency	City of Lake Forest
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	4.20
Location	33.661003125020926, -117.67465565348397
County	Orange
City	Lake Forest
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	6021
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.19

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

General Light Industry	5.90	1000sqft	0.14	5,899	7,500	—	—	—
Other Non-Asphalt Surfaces	80.1	1000sqft	1.84	0.00	0.00	—	—	—
Parking Lot	7.06	1000sqft	0.16	0.00	0.00	—	—	—
User Defined Industrial	5.90	User Defined Unit	0.00	0.00	—	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	7.38	6.17	56.2	59.2	0.10	2.53	0.97	3.50	2.33	0.21	2.53	—	10,601	10,601	0.43	0.17	3.20	10,666
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.74	0.83	5.46	5.95	0.01	0.25	0.09	0.34	0.23	0.02	0.25	—	1,010	1,010	0.04	0.01	0.14	1,015
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.13	0.15	1.00	1.09	< 0.005	0.05	0.02	0.06	0.04	< 0.005	0.05	—	167	167	0.01	< 0.005	0.02	168
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	75.0	100	550	150	—	—	150	—	—	55.0	—	—	—	—	—	—	—

Unmit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	75.0	100	550	150	—	—	150	—	—	55.0	—	—	—	—	—	—	—
Unmit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	7.38	6.17	56.2	59.2	0.10	2.53	0.97	3.50	2.33	0.21	2.53	—	10,601	10,601	0.43	0.17	3.20	10,666
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.74	0.83	5.46	5.95	0.01	0.25	0.09	0.34	0.23	0.02	0.25	—	1,010	1,010	0.04	0.01	0.14	1,015
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.13	0.15	1.00	1.09	< 0.005	0.05	0.02	0.06	0.04	< 0.005	0.05	—	167	167	0.01	< 0.005	0.02	168

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	2.78	2.11	20.8	28.6	0.10	0.81	2.96	3.77	0.75	0.78	1.53	6.56	11,133	11,139	1.31	1.06	24.1	11,512
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.73	2.06	21.1	28.0	0.10	0.81	2.96	3.77	0.75	0.78	1.53	6.56	11,089	11,095	1.31	1.06	2.12	11,447
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.21	1.63	17.5	22.0	0.09	0.61	2.95	3.56	0.56	0.78	1.34	6.56	10,102	10,109	1.27	1.05	11.3	10,466
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.40	0.30	3.20	4.01	0.02	0.11	0.54	0.65	0.10	0.14	0.25	1.09	1,673	1,674	0.21	0.17	1.87	1,733
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	55.0	55.0	550	150	—	—	150	—	—	56.0	—	—	—	—	—	—	—
Unmit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	55.0	55.0	550	150	—	—	150	—	—	56.0	—	—	—	—	—	—	—
Unmit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—
Exceeds (Annual)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3,000
Unmit.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	No

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.81	0.30	7.87	6.45	0.07	0.10	2.96	3.06	0.10	0.78	0.88	—	7,510	7,510	0.49	1.02	22.6	7,851
Area	0.05	0.20	< 0.005	0.26	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.06	1.06	< 0.005	< 0.005	—	1.06
Energy	0.01	< 0.005	0.07	0.06	< 0.005	0.01	—	0.01	0.01	—	0.01	—	141	141	0.01	< 0.005	—	141
Water	—	—	—	—	—	—	—	—	—	—	—	2.61	9.36	12.0	0.27	0.01	—	20.6
Waste	—	—	—	—	—	—	—	—	—	—	—	3.94	0.00	3.94	0.39	0.00	—	13.8
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.54	1.54
Off-Road	1.92	1.61	12.9	21.8	0.03	0.70	—	0.70	0.65	—	0.65	—	3,471	3,471	0.14	0.03	—	3,483
Total	2.78	2.11	20.8	28.6	0.10	0.81	2.96	3.77	0.75	0.78	1.53	6.56	11,133	11,139	1.31	1.06	24.1	11,512
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.80	0.29	8.18	6.08	0.07	0.10	2.96	3.06	0.10	0.78	0.88	—	7,467	7,467	0.50	1.03	0.59	7,786
Area	—	0.15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.01	< 0.005	0.07	0.06	< 0.005	0.01	—	0.01	0.01	—	0.01	—	141	141	0.01	< 0.005	—	141
Water	—	—	—	—	—	—	—	—	—	—	—	2.61	9.36	12.0	0.27	0.01	—	20.6
Waste	—	—	—	—	—	—	—	—	—	—	—	3.94	0.00	3.94	0.39	0.00	—	13.8
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.54	1.54
Off-Road	1.92	1.61	12.9	21.8	0.03	0.70	—	0.70	0.65	—	0.65	—	3,471	3,471	0.14	0.03	—	3,483
Total	2.73	2.06	21.1	28.0	0.10	0.81	2.96	3.77	0.75	0.78	1.53	6.56	11,089	11,095	1.31	1.06	2.12	11,447
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.81	0.29	8.29	6.18	0.07	0.10	2.95	3.05	0.10	0.78	0.88	—	7,479	7,479	0.50	1.03	9.75	7,807
Area	0.03	0.18	< 0.005	0.18	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.72	0.72	< 0.005	< 0.005	—	0.73
Energy	0.01	< 0.005	0.07	0.06	< 0.005	0.01	—	0.01	0.01	—	0.01	—	141	141	0.01	< 0.005	—	141
Water	—	—	—	—	—	—	—	—	—	—	—	2.61	9.36	12.0	0.27	0.01	—	20.6

Waste	—	—	—	—	—	—	—	—	—	—	—	3.94	0.00	3.94	0.39	0.00	—	13.8
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.54	1.54
Off-Road	1.37	1.15	9.18	15.5	0.02	0.50	—	0.50	0.46	—	0.46	—	2,473	2,473	0.10	0.02	—	2,481
Total	2.21	1.63	17.5	22.0	0.09	0.61	2.95	3.56	0.56	0.78	1.34	6.56	10,102	10,109	1.27	1.05	11.3	10,466
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.15	0.05	1.51	1.13	0.01	0.02	0.54	0.56	0.02	0.14	0.16	—	1,238	1,238	0.08	0.17	1.61	1,292
Area	0.01	0.03	< 0.005	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.12	0.12	< 0.005	< 0.005	—	0.12
Energy	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	23.3	23.3	< 0.005	< 0.005	—	23.4
Water	—	—	—	—	—	—	—	—	—	—	—	0.43	1.55	1.98	0.04	< 0.005	—	3.42
Waste	—	—	—	—	—	—	—	—	—	—	—	0.65	0.00	0.65	0.07	0.00	—	2.28
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	0.25
Off-Road	0.25	0.21	1.68	2.84	< 0.005	0.09	—	0.09	0.08	—	0.08	—	409	409	0.02	< 0.005	—	411
Total	0.40	0.30	3.20	4.01	0.02	0.11	0.54	0.65	0.10	0.14	0.25	1.09	1,673	1,674	0.21	0.17	1.87	1,733

3. Construction Emissions Details

3.1. Demolition (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.92	1.61	15.6	16.0	0.02	0.67	—	0.67	0.62	—	0.62	—	2,494	2,494	0.10	0.02	—	2,502
Demolition	—	—	—	—	—	—	0.33	0.33	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.94	0.97	< 0.005	0.04	—	0.04	0.04	—	0.04	—	150	150	0.01	< 0.005	—	151
Demolition	—	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.17	0.18	< 0.005	0.01	—	0.01	0.01	—	0.01	—	24.9	24.9	< 0.005	< 0.005	—	25.0
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.05	0.75	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	169	169	< 0.005	0.01	0.69	172
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.04	0.01	0.53	0.23	< 0.005	0.01	0.11	0.11	0.01	0.03	0.04	—	429	429	0.03	0.07	0.90	451
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.85	9.85	< 0.005	< 0.005	0.02	9.98
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	25.9	25.9	< 0.005	< 0.005	0.02	27.2

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.63	1.63	< 0.005	< 0.005	< 0.005	1.65
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.28	4.28	< 0.005	< 0.005	< 0.005	4.50

3.3. Site Preparation (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.56	1.31	12.7	11.4	0.03	0.55	—	0.55	0.51	—	0.51	—	2,716	2,716	0.11	0.02	—	2,725
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	0.76	0.69	< 0.005	0.03	—	0.03	0.03	—	0.03	—	164	164	0.01	< 0.005	—	164
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.14	0.13	< 0.005	0.01	—	0.01	0.01	—	0.01	—	27.1	27.1	< 0.005	< 0.005	—	27.2
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.45	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	102	102	< 0.005	< 0.005	0.42	103
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.91	5.91	< 0.005	< 0.005	0.01	5.99
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.98	0.98	< 0.005	< 0.005	< 0.005	0.99
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.96	1.65	15.9	15.4	0.02	0.74	—	0.74	0.68	—	0.68	—	2,454	2,454	0.10	0.02	—	2,462
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	0.20	1.91	1.86	< 0.005	0.09	—	0.09	0.08	—	0.08	—	296	296	0.01	< 0.005	—	297
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.35	0.34	< 0.005	0.02	—	0.02	0.02	—	0.02	—	49.0	49.0	< 0.005	< 0.005	—	49.1
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.04	0.60	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	136	136	< 0.005	< 0.005	0.56	138
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.01	0.07	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	15.8	15.8	< 0.005	< 0.005	0.03	16.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.61	2.61	< 0.005	< 0.005	< 0.005	2.64
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Building Construction (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.93	0.77	5.84	6.95	0.01	0.22	—	0.22	0.20	—	0.20	—	944	944	0.04	0.01	—	947
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.09	0.70	0.84	< 0.005	0.03	—	0.03	0.02	—	0.02	—	114	114	< 0.005	< 0.005	—	114
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.13	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	18.8	18.8	< 0.005	< 0.005	—	18.9
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	33.6	33.6	< 0.005	< 0.005	0.14	34.1

Vendor	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	31.3	31.3	< 0.005	< 0.005	0.08	32.7
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.90	3.90	< 0.005	< 0.005	0.01	3.96
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.78	3.78	< 0.005	< 0.005	< 0.005	3.94
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.65	0.65	< 0.005	< 0.005	< 0.005	0.66
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.63	0.63	< 0.005	< 0.005	< 0.005	0.65
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Paving (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.89	0.75	6.44	8.26	0.01	0.31	—	0.31	0.29	—	0.29	—	1,244	1,244	0.05	0.01	—	1,248
Paving	—	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.35	0.45	< 0.005	0.02	—	0.02	0.02	—	0.02	—	68.2	68.2	< 0.005	< 0.005	—	68.4
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	11.3	11.3	< 0.005	< 0.005	—	11.3
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.06	0.90	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	203	203	< 0.005	0.01	0.83	206
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.7	10.7	< 0.005	< 0.005	0.02	10.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.78	1.78	< 0.005	< 0.005	< 0.005	1.80
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Architectural Coating (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	0.91	1.15	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	3.95	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.32	7.32	< 0.005	< 0.005	—	7.34
Architectural Coatings	—	0.22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.21	1.21	< 0.005	< 0.005	—	1.22

Architectural Coatings	—	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.72	6.72	< 0.005	< 0.005	0.03	6.82
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.35	0.35	< 0.005	< 0.005	< 0.005	0.36
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.06	0.06	< 0.005	< 0.005	< 0.005	0.06
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Infrastructure (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.79	0.67	5.50	6.66	0.01	0.34	—	0.34	0.31	—	0.31	—	992	992	0.04	0.01	—	995
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.08	0.68	0.82	< 0.005	0.04	—	0.04	0.04	—	0.04	—	122	122	< 0.005	< 0.005	—	123
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.12	0.15	< 0.005	0.01	—	0.01	0.01	—	0.01	—	20.2	20.2	< 0.005	< 0.005	—	20.3
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.45	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	102	102	< 0.005	< 0.005	0.42	103
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.1	12.1	< 0.005	< 0.005	0.02	12.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.00	2.00	< 0.005	< 0.005	< 0.005	2.03
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.16	0.14	0.12	2.66	0.01	< 0.005	0.95	0.95	< 0.005	0.24	0.24	—	814	814	0.01	0.02	3.81	822
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.65	0.16	7.75	3.79	0.06	0.10	2.01	2.11	0.09	0.54	0.64	—	6,697	6,697	0.48	1.01	18.8	7,028
Total	0.81	0.30	7.87	6.45	0.07	0.10	2.96	3.06	0.10	0.78	0.88	—	7,510	7,510	0.49	1.02	22.6	7,851

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.15	0.14	0.13	2.29	0.01	< 0.005	0.95	0.95	< 0.005	0.24	0.24	—	770	770	0.02	0.02	0.10	775
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.65	0.15	8.05	3.79	0.06	0.10	2.01	2.11	0.10	0.54	0.64	—	6,698	6,698	0.48	1.01	0.49	7,011
Total	0.80	0.29	8.18	6.08	0.07	0.10	2.96	3.06	0.10	0.78	0.88	—	7,467	7,467	0.50	1.03	0.59	7,786
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.03	0.03	0.02	0.44	< 0.005	< 0.005	0.17	0.17	< 0.005	0.04	0.04	—	129	129	< 0.005	< 0.005	0.27	131
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.12	0.03	1.49	0.69	0.01	0.02	0.37	0.38	0.02	0.10	0.12	—	1,109	1,109	0.08	0.17	1.34	1,162
Total	0.15	0.05	1.51	1.13	0.01	0.02	0.54	0.56	0.02	0.14	0.16	—	1,238	1,238	0.08	0.17	1.61	1,292

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	54.1	54.1	0.01	< 0.005	—	54.4
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	5.90	5.90	< 0.005	< 0.005	—	5.94
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	60.0	60.0	0.01	< 0.005	—	60.3
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	54.1	54.1	0.01	< 0.005	—	54.4
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	5.90	5.90	< 0.005	< 0.005	—	5.94
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	60.0	60.0	0.01	< 0.005	—	60.3
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	8.95	8.95	< 0.005	< 0.005	—	9.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	0.98	0.98	< 0.005	< 0.005	—	0.98
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	9.93	9.93	< 0.005	< 0.005	—	9.98

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.01	< 0.005	0.07	0.06	< 0.005	0.01	—	0.01	0.01	—	0.01	—	80.9	80.9	0.01	< 0.005	—	81.1
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.01	< 0.005	0.07	0.06	< 0.005	0.01	—	0.01	0.01	—	0.01	—	80.9	80.9	0.01	< 0.005	—	81.1

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.01	< 0.005	0.07	0.06	< 0.005	0.01	—	0.01	0.01	—	0.01	—	80.9	80.9	0.01	< 0.005	—	81.1
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.01	< 0.005	0.07	0.06	< 0.005	0.01	—	0.01	0.01	—	0.01	—	80.9	80.9	0.01	< 0.005	—	81.1
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.4	13.4	< 0.005	< 0.005	—	13.4
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.4	13.4	< 0.005	< 0.005	—	13.4

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.05	0.04	< 0.005	0.26	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.06	1.06	< 0.005	< 0.005	—	1.06
Total	0.05	0.20	< 0.005	0.26	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.06	1.06	< 0.005	< 0.005	—	1.06
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	0.15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.01	0.01	< 0.005	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.12	0.12	< 0.005	< 0.005	—	0.12

Total	0.01	0.03	< 0.005	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.12	0.12	< 0.005	< 0.005	—	0.12

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	2.61	9.36	12.0	0.27	0.01	—	20.6
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2.61	9.36	12.0	0.27	0.01	—	20.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	2.61	9.36	12.0	0.27	0.01	—	20.6
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2.61	9.36	12.0	0.27	0.01	—	20.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.43	1.55	1.98	0.04	< 0.005	—	3.42
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.43	1.55	1.98	0.04	< 0.005	—	3.42

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	3.94	0.00	3.94	0.39	0.00	—	13.8
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	3.94	0.00	3.94	0.39	0.00	—	13.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	3.94	0.00	3.94	0.39	0.00	—	13.8
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	3.94	0.00	3.94	0.39	0.00	—	13.8
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.65	0.00	0.65	0.07	0.00	—	2.28
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.65	0.00	0.65	0.07	0.00	—	2.28

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.54	1.54
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.54	1.54
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.54	1.54
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.54	1.54
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	0.25
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	0.25

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Rubber Tired Loaders	0.14	0.12	0.91	1.57	< 0.005	0.05	—	0.05	0.04	—	0.04	—	251	251	0.01	< 0.005	—	251
Other Material Handling Equipment	1.78	1.50	12.0	20.3	0.03	0.65	—	0.65	0.60	—	0.60	—	3,220	3,220	0.13	0.03	—	3,231
Total	1.92	1.61	12.9	21.8	0.03	0.70	—	0.70	0.65	—	0.65	—	3,471	3,471	0.14	0.03	—	3,483
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Rubber Tired Loaders	0.14	0.12	0.91	1.57	< 0.005	0.05	—	0.05	0.04	—	0.04	—	251	251	0.01	< 0.005	—	251
Other Material Handling Equipment	1.78	1.50	12.0	20.3	0.03	0.65	—	0.65	0.60	—	0.60	—	3,220	3,220	0.13	0.03	—	3,231
Total	1.92	1.61	12.9	21.8	0.03	0.70	—	0.70	0.65	—	0.65	—	3,471	3,471	0.14	0.03	—	3,483
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Rubber Tired Loaders	0.02	0.02	0.12	0.20	< 0.005	0.01	—	0.01	0.01	—	0.01	—	29.6	29.6	< 0.005	< 0.005	—	29.7
Other Material Handling Equipment	0.23	0.19	1.56	2.63	< 0.005	0.08	—	0.08	0.08	—	0.08	—	380	380	0.02	< 0.005	—	381
Total	0.25	0.21	1.68	2.84	< 0.005	0.09	—	0.09	0.08	—	0.08	—	409	409	0.02	< 0.005	—	411

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	4/1/2024	4/30/2024	5.00	22.0	—
Site Preparation	Site Preparation	4/1/2024	4/30/2024	5.00	22.0	—
Grading	Grading	4/1/2024	5/30/2024	5.00	44.0	—
Building Construction	Building Construction	4/1/2024	5/30/2024	5.00	44.0	—
Paving	Paving	6/2/2024	6/30/2024	5.00	20.0	—
Architectural Coating	Architectural Coating	6/2/2024	6/30/2024	5.00	20.0	—
Infrastructure	Trenching	4/1/2024	5/31/2024	5.00	45.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Demolition	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Site Preparation	Graders	Diesel	Average	1.00	8.00	148	0.41
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Site Preparation	Scrapers	Diesel	Average	1.00	8.00	423	0.48
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	7.00	84.0	0.37
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	1.00	6.00	84.0	0.37
Building Construction	Welders	Diesel	Average	3.00	8.00	46.0	0.45
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Paving	Cement and Mortar Mixers	Diesel	Average	1.00	8.00	10.0	0.56
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48
Infrastructure	Crawler Tractors	Diesel	Average	1.00	8.00	87.0	0.43
Infrastructure	Excavators	Diesel	Average	1.00	8.00	36.0	0.38

Infrastructure	Rubber Tired Loaders	Diesel	Average	1.00	8.00	150	0.36

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	12.5	18.5	LDA,LDT1,LDT2
Demolition	Vendor	—	10.2	HHDT,MHDT
Demolition	Hauling	6.05	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	7.50	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	10.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	2.48	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	0.97	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—

Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.50	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT
Infrastructure	—	—	—	—
Infrastructure	Worker	7.50	18.5	LDA,LDT1,LDT2
Infrastructure	Vendor	—	10.2	HHDT,MHDT
Infrastructure	Hauling	0.00	20.0	HHDT
Infrastructure	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%
Limit vehicle speeds on unpaved roads to 25 mph	44%	44%

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	8,849	2,950	5,227

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (Ton of Debris)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	532	—
Paving	0.00	0.00	0.00	0.00	2.00

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
General Light Industry	0.00	0%
Other Non-Asphalt Surfaces	1.84	0%
Parking Lot	0.16	100%
User Defined Industrial	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	349	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
General Light Industry	68.0	68.0	68.0	24,826	1,360	1,360	1,360	496,513
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	74.0	74.0	74.0	27,009	2,220	2,220	2,220	810,268

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	8,849	2,950	5,227

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
General Light Industry	56,588	349	0.0330	0.0040	252,489
Other Non-Asphalt Surfaces	0.00	349	0.0330	0.0040	0.00
Parking Lot	6,182	349	0.0330	0.0040	0.00
User Defined Industrial	0.00	349	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
General Light Industry	1,364,144	97,203
Other Non-Asphalt Surfaces	0.00	0.00
Parking Lot	0.00	0.00
User Defined Industrial	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Light Industry	7.31	—
Other Non-Asphalt Surfaces	0.00	—
Parking Lot	0.00	—
User Defined Industrial	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
General Light Industry	Other commercial A/C and heat pumps	R-410A	2,088	0.30	4.00	4.00	18.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Rubber Tired Loaders	Diesel	Average	1.00	4.00	150	0.36
Other Material Handling Equipment	Diesel	Average	10.0	4.00	173	0.40

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	9.15	annual days of extreme heat
Extreme Precipitation	4.15	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	15.9	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	0	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	0	0	0	N/A
Wildfire	0	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	1	1	2
Extreme Precipitation	N/A	N/A	N/A	N/A

Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	67.9
AQ-PM	44.3
AQ-DPM	48.7
Drinking Water	47.3
Lead Risk Housing	16.5
Pesticides	65.6
Toxic Releases	60.7
Traffic	34.2
Effect Indicators	—

CleanUp Sites	18.7
Groundwater	0.00
Haz Waste Facilities/Generators	75.2
Impaired Water Bodies	77.3
Solid Waste	54.8
Sensitive Population	—
Asthma	17.7
Cardio-vascular	52.2
Low Birth Weights	54.3
Socioeconomic Factor Indicators	—
Education	12.6
Housing	56.0
Linguistic	12.3
Poverty	23.7
Unemployment	10.7

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	83.35685872
Employed	99.57654305
Median HI	75.51648916
Education	—
Bachelor's or higher	76.02977031
High school enrollment	100
Preschool enrollment	46.65725651

Transportation	—
Auto Access	52.9449506
Active commuting	13.56345438
Social	—
2-parent households	35.57038368
Voting	39.99743359
Neighborhood	—
Alcohol availability	82.61260105
Park access	81.35506224
Retail density	55.72950083
Supermarket access	30.41190812
Tree canopy	77.06916463
Housing	—
Homeownership	39.57397665
Housing habitability	68.7925061
Low-inc homeowner severe housing cost burden	72.33414603
Low-inc renter severe housing cost burden	73.24522007
Uncrowded housing	61.41408957
Health Outcomes	—
Insured adults	88.86179905
Arthritis	90.1
Asthma ER Admissions	78.2
High Blood Pressure	90.7
Cancer (excluding skin)	57.8
Asthma	72.9
Coronary Heart Disease	93.8
Chronic Obstructive Pulmonary Disease	88.0

Diagnosed Diabetes	92.6
Life Expectancy at Birth	89.2
Cognitively Disabled	87.2
Physically Disabled	55.6
Heart Attack ER Admissions	58.0
Mental Health Not Good	73.6
Chronic Kidney Disease	93.4
Obesity	82.4
Pedestrian Injuries	19.6
Physical Health Not Good	87.1
Stroke	93.8
Health Risk Behaviors	—
Binge Drinking	4.8
Current Smoker	70.9
No Leisure Time for Physical Activity	82.7
Climate Change Exposures	—
Wildfire Risk	1.1
SLR Inundation Area	0.0
Children	68.4
Elderly	73.1
English Speaking	56.3
Foreign-born	41.2
Outdoor Workers	68.3
Climate Change Adaptive Capacity	—
Impervious Surface Cover	74.8
Traffic Density	29.6
Traffic Access	23.0

Other Indices	—
Hardship	11.4
Other Decision Support	—
2016 Voting	68.9

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	36.0
Healthy Places Index Score for Project Location (b)	81.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Construction dates provided by the Applicant
Construction: Off-Road Equipment	Construction equipment inventory derived from the CalEEMod default values except for the building construction where no crane will be required and the addition of an Infrastructure Construction Phase

Construction: Dust From Material Movement	Soil import as per the applicant
Operations: Vehicle Data	Fleet mix and trip lengths as per the project traffic memorandum
Operations: Fleet Mix	Fleet MIx as per Project Traffic Memorandum
Operations: Off-Road Equipment	Future operations may require the operation of a loader for onsite material handing !0 filed operational trucks will be equipped with an Apache Drum Chipper for offsite operations

November 2020

MATERIAL CULTURE
CONSULTING

Prepared for:

E|P|D Solutions, Inc.
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Irvine, CA 92614

PHASE I CULTURAL AND PALEOTNOLOGICAL RESOURCES ASSESSMENT

Great Scott Nursery Development

City of Lake Forest, Orange County, California

Material Culture Consulting™
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PHASE 1 CULTURAL AND PALEONTOLOGICAL RESOURCES ASSESSMENT:
GREAT SCOTT PROJECT
LAKE FOREST, ORANGE COUNTY, CALIFORNIA

Prepared For:
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September 2020

Type of Study: Cultural and paleontological resources assessment
Cultural Resources within Area of Potential Impact: One
Paleontological Formations: Younger Quaternary Alluvium, Capistrano Formation
USGS Quadrangle: Section 11 and 12 of Township 6 S, Range 8 W, El Toro
APN(s): 610-301-07, 610-301-20
Survey Area: 6.37 acres
Date of Survey: September 17, 2020

Key Words: Paleontology, Archaeology, CEQA, Phase I Survey, Positive Survey, Orange County, High Cultural Sensitivity, Moderate Paleontological Sensitivity

MANAGEMENT SUMMARY

Great Scott Tree Service (Proponent) proposes to convert a currently developed area with two residential houses, a barn, and multiple structures used for storage and animal pens, as well as open dirt areas used for parking and storage into an office, parking area, and wood chipping drying area for the Great Scott Tree Service (GSTS) (Project). The Project is located in the City of Lake Forest, Orange County, California. The Project includes the remodel of the existing house into an office, the removal of existing animal pens and structures, and the construction of a concrete foundation pad and gravel parking area. Material Culture Consulting, Inc. (MCC) was retained by EPD Solutions, Inc. (EPD) to conduct the Phase I cultural and paleontological resource investigation of the Project Area. These assessments were conducted in accordance with the California Environmental Quality Act (CEQA). This assessment included a California Historical Resources Information System (CHRIS) records search at the South Central Coastal Information Center (SCCIC), and background/literature research, a locality search at the Natural History Museum of Los Angeles County (LACM), an examination of geological maps and paleontological literature, a search of the Sacred Lands File by the Native American Heritage Commission (NAHC), outreach efforts with twenty-two Native American tribal representatives, and an intensive-level pedestrian survey of the Project Area.

On September 1, 2020, staff at the California Historical Resource Information System (CHRIS) conducted a search at the South Central Coastal Information Center (SCCIC), located at California State University, Fullerton. The cultural resource records search identified thirty-four prior cultural resources investigations within a ½ -mile buffer of the Project Area. Two of these studies are adjacent to the Project Area. The cultural resources records search also identified twelve previously recorded cultural resources within a ½ -mile radius of the Project Area, one of which is located within the Project Area itself. The closest cultural resource, located within the most northwestern portion of the Project Area, is a prehistoric site. A review of historical aerials and topographic maps show the Project Area was developed for agricultural purposes, tree groves, as late as 1938. The Project Area remained as such until the 1990s when commercial development began in the surrounding area.

On August 4, 2020, MCC Archaeologist Erika McMullin, requested a SLF search from the NAHC. The NAHC responded and did not identify any previously known tribal cultural resources or sacred lands within the Project Area or within a mile of the Project Area. The NAHC provided MCC with contact information for eighteen tribes/individuals to reach out to for additional information on August 5, 2020. MCC sent letters on August 6, 2020 to all eighteen Native American contacts, requesting any information related to cultural resources or heritage sites within or adjacent to the Project Area. Additional attempts at contact by letter, email or phone call were made on August 25, 2020 and September 9, 2020. As a result of this outreach effort, MCC received five responses from tribes/contacts, including Gabrieleno Band of Mission Indians-Kizh Nation, Gabrieleno/Tongva San Gabriel Band of Mission Indians, Gabrielino Tongva Indians of California, San Luis Rey Band of Mission Indians, and Soboba Band of Luiseno Indians. Two tribes, San Luis Rey Band of Mission Indians and Soboba Band of Luiseno Indians, did not provided comments or concerns for the Project and deferred to local tribes. MCC did not conduct formal consultation with the Native American representatives.

The Project Area is comprised of surficial younger Quaternary Alluvium and Capistrano Formation. It is likely that the entire Project Area is underlain by these and/or older Quaternary deposits at unknown depth. Four previously recorded fossil localities are located within one mile of the Project Area.

Erika McMullin, MCC Archaeologist and Cross-Trained Paleontologist, conducted the cultural and paleontological survey of the Project Area on September 17, 2020. During fieldwork, overall survey conditions were fair, but ground visibility varied throughout the Project Area due to present structures and dense vegetation. The entirety

of the Project Area is encompassed by multiple structures, including two residential houses, a barn, and equestrian facilities. Therefore, the entire Project Area has been subjected to intense surface and subsurface modification from construction of the buildings, landscaping, and use. One newly recorded historic site was observed during the survey and one historic structure is within the Project Area which will not be impacted by the Project.

The potential for encountering significant cultural resources within the Project Area is considered high. MCC recommends archaeological monitoring during initial ground-disturbance activities, such as site preparation, demolition of structures, and grading up to three feet below surface, in order to quickly assess any discoveries of cultural resources during project implementation. MCC also recommends setting a plan in place to expediently address inadvertent discoveries and/or human remains, should these be encountered during any phase of development associated with the Project. If the historic structure is impacted by the Project, formal evaluation by a qualified architectural historian is required.

Excavation has the potential to impact the paleontologically sensitive older Quaternary sediments. MCC recommends that a paleontological resource mitigation program be put in place to provide spot-check monitoring to confirm presence or absence of sensitive paleontological sediments or deposits, and methods to salvage and curate any recovered fossils associated with the current study area, should these be unearthed during ground disturbance within the Project Area. If potentially sensitive geologic units are observed during spot-check monitoring, then full-time paleontological monitoring is recommended for all ground disturbance activities.

A copy of this report will be permanently filed with the SCCIC at California State University, Fullerton. All notes, photographs, correspondence, and other materials related to this Project are located at MCC, in Pomona, California.

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INTRODUCTION

Great Scott Tree Service (Proponent) proposes to convert a currently developed area with a home, a barn, and multiple structures used for storage and animal pens, as well as open dirt areas used for parking and storage into an office, parking area, and wood chipping drying area for the Great Scott Tree Service (Project). The Project is located in the City of Lake Forest, Orange County, California. The Project includes the remodel of the house into an office, the removal of existing animal pens and structures, and the construction of a concrete foundation pad and gravel parking area. Material Culture Consulting, Inc. (MCC) was retained by EPD Solutions to conduct a Phase I cultural and paleontological resource investigation of the Project Area. These assessments were conducted in accordance with the California Environmental Quality Act (CEQA). According to CEQA, if development of a Project has the potential to result in significant impacts to cultural or paleontological resources, a plan must be developed to mitigate those impacts to a level which is less than significant. This assessment documents the potential for encountering cultural and paleontological resources during development of Projects within the Project Area and provides recommendations on how to mitigate impacts to those resources.

PROJECT LOCATION AND DESCRIPTION

The proposed Project Area is located in the City of Lake Forest, Orange County, California (Figures 1 and 2). The Project Area is located to the south and east of Serrano Creek, and it is bound by Linear Lane to the west and north of Canada Road (Figure 3). Specifically, the proposed Project is located on the El Toro USGS 7.5-minute quadrangle, Section 11 and 12 of Township 6 South and Range 8 West (San Bernardino Base Meridian) (Figure 2). The Project Area consists of two parcels, identified as Assessor's Parcel Number (APN) 610-301-07 and 610-301-20, which encompasses approximately 6.37 acres. Presently, the Project Area contains two residential houses, a barn, and multiple structures used for storage and animal pens, as well as open, dirt areas used for parking and storage. The Project proposes the remodeling of a house into an office, and the construction of an gravel parking area and concrete foundation pad in addition to the removal of the animal pens and storage structures.

PROJECT PERSONNEL

Tria Belcourt, M.A., RPA, President of MCC, served as the Project Manager and Principal Archaeologist for the study. Ms. Belcourt is a Qualified Orange County Archaeologist, and oversaw the project and performed editorial review of this report. Belcourt is a Registered Professional Archaeologist (RPA) with a M.A. in Anthropology from the University of Florida, a B.A. in Anthropology from the University of California at Los Angeles with over 16 years of experience in California archaeology and 12 years of experience overseeing paleontological assessments in California (See Appendix A). Jennifer Kelly, M.Sc. is a Qualified Orange County Paleontologist and served as the Principal Investigator for Paleontology for the study. Ms. Kelly conducted the paleontological resource literature and map reviews, oversaw the field study, and prepared the paleontological sections of the report. Ms. Kelly has a M.Sc. in Geology from California State University, Long Beach, and has over 14 years of experience in environmental and paleontological compliance in California (See Appendix A). Sonia Sifuentes, M.Sc, RPA, co-authored this report. Julia Carvajal, M.A., provided GIS support for this study. Erika McMullin, MCC Archaeologist and cross-trained Paleontologist, conducted the field survey and co-authored this report.

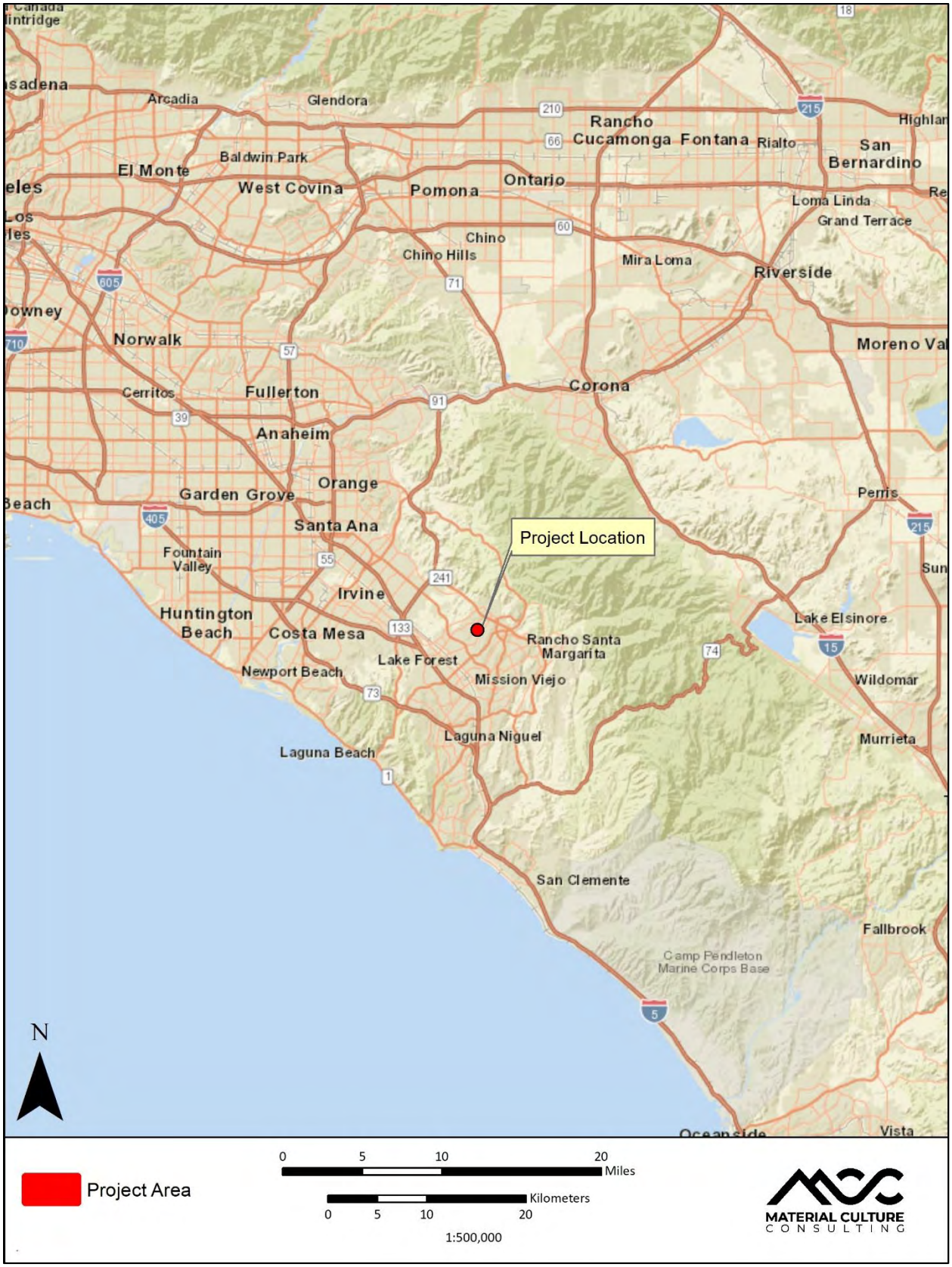

Figure 1. Great Scott Project Vicinity (1:500,000)

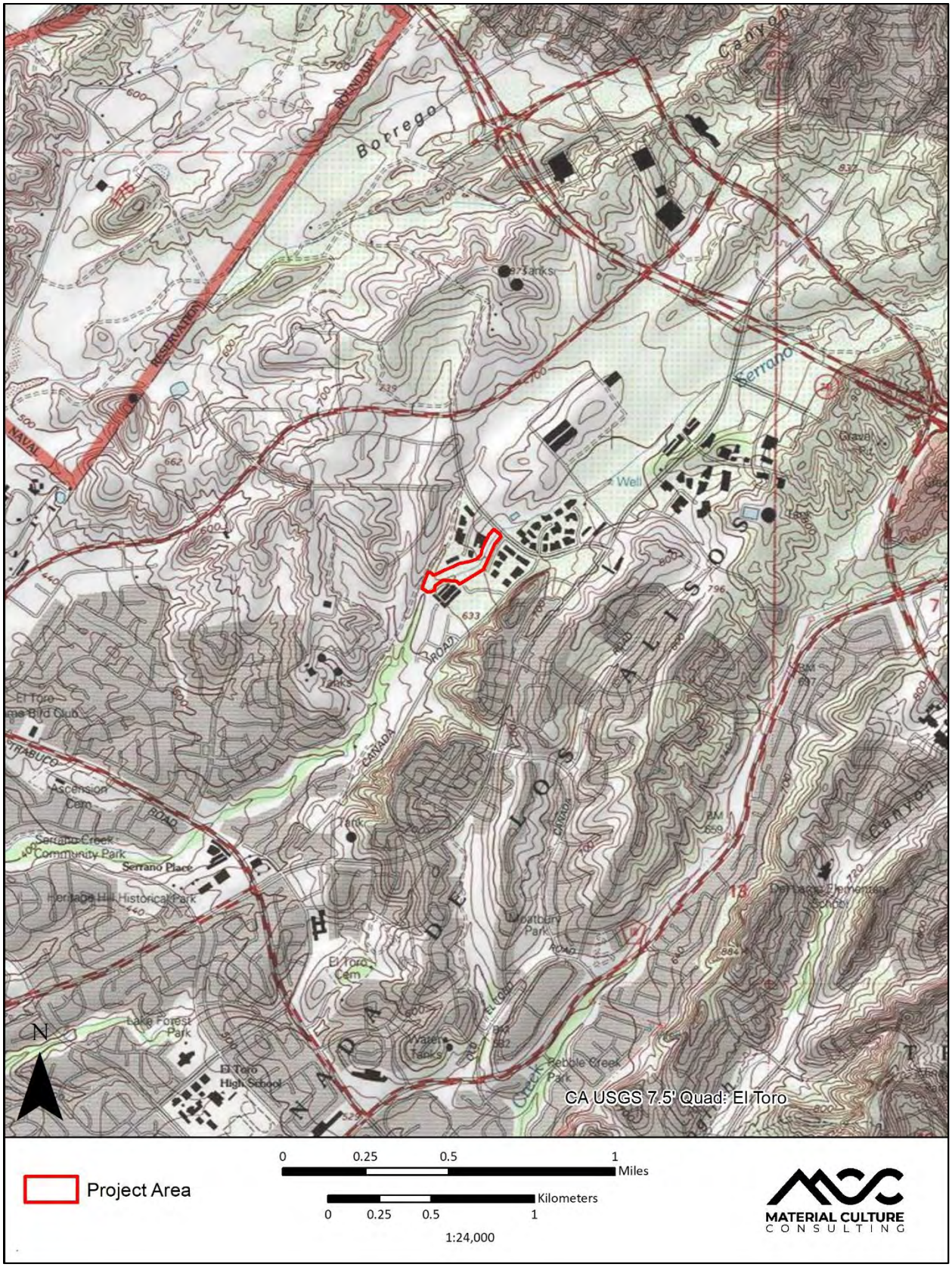

Figure 2. Great Scott Project Area (1:24,000, as depicted on El Toro USGS 7.5 Minute Quadrangle)

Figure 3.Great Scott Project Area (1:2,500, as depicted on aerial photograph)

REGULATORY ENVIRONMENT

The current study is subject to local and state laws and regulations regarding cultural and paleontological resources. These regulations require the identification of cultural and paleontological resources within the Project Area which should be considered during the planning stage of new Projects; include application review for Projects that would potentially involve land disturbance; provide Project-level standard conditions of approval that address unanticipated discoveries; and provide requirements to develop specific mitigation measures if resources are encountered during any development activity. Specific governing legislation and regulations include the following:

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

CEQA declares that it is state policy to "take all action necessary to provide the people of this state with...historic environmental qualities." It further states that public or private Projects financed or approved by the state are subject to environmental review by the state. All such Projects, unless entitled to an exemption, may proceed only after this requirement has been satisfied. CEQA requires detailed studies that analyze the environmental impacts of a proposed Project. In the event that a Project is determined to have a potential significant environmental impact, CEQA requires that alternative plans and mitigation measures be considered. CEQA includes historic and archaeological resources as integral features of the environment.

CEQA requires a designated lead agency to determine whether a Project may have a significant impact on historical resources. A historical resource is defined as a resource listed in, or determined to be eligible for listing in, the California Register of Historical Resources (CRHR) (Section 21084.1); a resource included in a local register of historical resources (Section 15064.5(a)(2)); or any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant (Section 15064.5 (a)(3)). Public Resources Code (PRC) Section 5024.1, Section 15064.5 of the Guidelines, and Sections 21083.2 and 21084.1 of the Statutes of CEQA were used as one of the basic guidelines for the current cultural resources study. PRC Section 5024.1 directs evaluation of historical resources to determine their eligibility for listing on the CRHR.

The purpose of the register is to maintain listings of the state's historical resources. The criteria for listing resources on the CRHR were expressly developed to be in accordance with previously established criteria developed for listing on the NRHP, enumerated above, and require similar protection to what NHPA Section 106 mandates for historic properties. According to Public Resources Code (PRC) Section 5024.1(c)(1-4), a resource is considered historically significant if it meets at least one of the following criteria:

1. Associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States;
2. Associated with the lives of persons important to local, California or national history;
3. Embodies the distinctive characteristics of a type, period, region or method of construction or represents the work of a master or possesses high artistic values; or
4. Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California or the nation.

In addition to having significance, resources must retain integrity. Integrity is the authenticity of a historical resource’s physical identity as evidenced by the survival of characteristics or historic fabric that existed during the resource’s period of significance. Alterations to a resource or changes in its use over time may have historical, cultural, or architectural significance. Simply, resources must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. A resource that has lost its historic character or appearance may still have sufficient integrity for the California Register, if,

under Criterion 4, it maintains the potential to yield significant scientific or historical information or specific data. Note that California Historical Landmarks with numbers 770 or higher are automatically included in the CRHR.

Under CEQA, if an archeological site is not a significant "historical resource" but meets the definition of a "unique archeological resource" as defined in PRC Section 21083.2, then it should be treated in accordance with the provisions of that section. A unique archaeological resource is defined in PRC Section 21083.2(g) as follows:

An archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
2. Has a special and particular quality such as being the oldest of its type or the best available example of its type.
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Resources that neither meet any of these criteria for listing on the NRHP or CRHR nor qualify as a "unique archaeological resource" under CEQA PRC Section 21083.2 are viewed as not significant. Under CEQA, "A non-unique archaeological resource need be given no further consideration, other than the simple recording of its existence by the lead agency if it so elects" [PRC Section 21083.2(h)].

Impacts to historical resources that alter the characteristics that qualify the historical resource for listing on the CRHR are considered to be a significant impact. Impacts to a historical resource are considered significant if the Project activities physically destroy or damage all or part of a resource; change the character of the use of the resource or physical feature within the setting of the resource which contribute to its significance; or introduce visual, atmospheric, or audible elements that diminish the integrity of significant features of the resource. If it can be demonstrated that a Project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts to be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that they cannot be left undisturbed, mitigation measures are required (Section 21083.2 (a), (b), and (c)).

CALIFORNIA HISTORICAL LANDMARKS AND POINTS OF HISTORICAL INTEREST

Historical landmarks are sites, buildings, features, or events that are of statewide significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value. In order to be considered a California Historical Landmark, the landmark must meet at least one of the following criteria:

1) Associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States;
2) Associated with the lives of persons important to local, California, or national history;
3) Embodies the distinctive characteristics of a type, period, region, or method of construction; represents the work of a master; or possesses high artistic values;
4) Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

If a site is primarily of local or countywide interest, it may meet the criteria for the California Point of Historical Interest Program. Points of Historical Interest are sites, buildings, features, or events that are of local (city or county) significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value. To be eligible for designation as a Point of Historical Interest, a resource must meet at least one of the following criteria:

1. The first, last, only, or most significant of its type in the local geographic region (city or county);
2. Associated with an individual or group having a profound influence on the history of the local area;
3. A prototype of, or an outstanding example of, a period, style, architectural movement or construction; or
4. One of the more notable works or the best surviving work in the local region of a pioneer architect, designer, or master builder.

Points of Historical Interest designated after December 1997 and recommended by the State Historical Resources Commission are also listed in the California Register. No historical resource may be designated as both a Landmark and a Point of Interest. If a Point of Interest is subsequently granted status as a Landmark, the Point of Interest designation will be retired.

PALEONTOLOGY

The State of California Public Resources Code (Chapter 1.7), Sections 5097.5 and 30244, includes additional state level requirements for the assessment and management of paleontological resources. These statutes require reasonable mitigation of adverse impacts to paleontological resources resulting from development on state lands, define the removal of paleontological "sites" or "features" from state lands as a misdemeanor, and prohibit the removal of any paleontological "site" or "feature" from State land without permission of the jurisdictional agency. These protections apply only to State of California land, and thus apply only to portions of the Project, if any, which occur on State land.

As defined by Society for Vertebrate Paleontology (SVP), paleontological resources means any fossilized remains, traces, or imprints of prehistoric plants and/or animals which are preserved in or on the earth's crust that can provide information about the history of past life on the planet (2009). Generally, any resource greater than 5,000 years old is considered to be a fossil and are considered a nonrenewable resource that are subject to impacts from land development (SVP, 2010). Paleontological resources are important scientific and educational resources because they are used to:

1) Document the evolutionary history of now extinct organisms to study any associated evolution patterns and/or speciation;
2) Reconstruct the environments, climate change, and/or paleoecological relationships these organism lived in; and
3) Determine the relative geologic age of the strata in which the resources occur and any geological events that resulted in the deposition of the sediments that formed the strata.

Fossil resources vary widely in their relative abundance and distribution and not all are regarded as significant. Vertebrate fossils, whether preserved remains or track ways, are classed as significant by most state and federal agencies and professional groups (and are specifically protected under the California Public Resources Code). In some cases, fossils of plants or invertebrate animals are also considered significant and can provide important information about ancient local environments. Assessment of significance is also subject to the California Environmental Quality Act (CEQA) criterion that the resource constitutes a "unique paleontological resource or site." A significant paleontological resource is considered to be of scientific interest if it is a rare or previously

unknown species, it is of high quality and well-preserved, it preserves a previously unknown anatomical or other characteristic, provides new information about the history of life on earth, or has an identified educational or recreational value. Paleontological resources that may be considered not to have scientific significance include those that lack provenience or context, lack physical integrity due to decay or natural erosion, or that are overly redundant or are otherwise not useful for research. Vertebrate fossil remains and traces include bone, scales, scutes, skin impressions, burrows, tracks, tail drag marks, vertebrate coprolites (feces), gastroliths (stomach stones), or other physical evidence of past vertebrate life or activities (BLM 2016). The full significance of fossil specimens or fossil assemblages cannot be accurately predicted before they are collected, and in many cases, before they are prepared in the laboratory and compared with previously collected material.

Pre-construction assessment of significance associated with an area or formation must be made based on previous finds, characteristics of the sediments, and other methods that can be used to determine paleoenvironmental conditions. A separate issue is the potential of a given geographic area or geologic unit to preserve fossils. Information that can contribute to assessment of this potential includes:

1) The existence of known fossil localities or documented absence of fossils nearby and in the same geologic unit (e.g. "Formation" or one of its subunits);
2) Observation of fossils within the Project vicinity;
3) The nature of sedimentary deposits in the area of interest, compared with those of similar deposits known elsewhere (size of particles, clasts and sedimentary structures conducive or non-conducive to fossil inclusion) that may favor or disfavor inclusion of fossils; and
4) Sedimentology details, and known geologic history, of the sedimentary unit of interest in terms of the environments in which the sediments were deposited, and assessment of the favorability of those environments for the probable preservation of fossils.

As so defined, significant paleontological resources are determined to be fossils or assemblages of fossils that are unique, unusual, rare, uncommon, or diagnostically important. Significant fossils can include remains of large to very small aquatic and terrestrial vertebrates or remains of plants and animals previously not represented in certain portions of the stratigraphy. Assemblages of fossils that might aid stratigraphic correlation, particularly those offering data for the interpretation of tectonic events, geomorphologic evolution, and paleoclimatology are also critically important (Scott and Springer 2003; Scott et al. 2004).

CITY OF LAKE FOREST GENERAL PLAN

The City of Lake Forest's policies pertaining to cultural resources are contained in the Recreation and Resource Element of the Lake Forest General Plan (City of Lake Forest 2020). GOAL RR-3 states, " A community that values its history and preserves its cultural features to bolster community identity and protect sensitive resource." To meet this goal, the city has four policies as follows:

RR-3.1 Preservation. Protect areas containing significant historic, archaeological, and paleontological resources, as defined by the California Public Resources Code.

RR-3.2 County of Orange Coordination. Coordinate with the County of Orange to preserve local historic resources, conserve historical assets within the City, and allow for local community events to occur at these special locations.

RR-3.3 Development. Ensure that human remains are treated with sensitivity and dignity, and ensure compliance with the provisions of California Health and Safety Code Section 7050.5 and California Public Resources Code Section 5097.98.

RR-3.4 Tribal Consultation. Consult with Native American tribes that may be impacted by proposed development, as necessary, and in accordance with state, local, and tribal intergovernmental consultation requirements.

BACKGROUND

ENVIRONMENTAL SETTING

The Project Area is located in the City of Lake Forest, bound by commercial development in all cardinal directions. The Project Area is bounded west of Linear Lane, north of Canada Road, and located south and east of Serrano Creek. The City of Lake Forest is located in Orange County, which is situated within the coastal plains of the Peninsular Ranges geomorphic province. The Project Area is relatively flat, with elevations within the Project Area averaging 168m (550 feet) above mean sea level (AMSL). Serrano Creek, an intermittent creek, runs through the northern portion of the Project Area and runs northeast-southwest through Orange County. Climate in the region consists of warm summers and cool winters, with temperatures ranging 55° to 75° F (Climate Data 2020). The average annual precipitation in Fountain Valley is 12 inches, with most rainfall occurring between December and March (City of Fountain Valley 2020). Project Area has been previously disturbed by the development of a home, barn, animal pens, and storage facilities.

PALEONTOLOGICAL SETTING

Located between an elevated coastal terrace and the Santa Ana Mountains, the City of Lake Forest is part of a coastal plain that is underlain by geologic units consisting of the Peninsular Ranges and Geomorphic Province, characterized by Quaternary deposits of the Pleistocene epoch (11,000 to 1,600,000 years) through the Holocene epoch (less than 11,000 years) (Michael Baker International 2014). The Project Area is situated northeast of the Newport-Inglewood fault zone, which is an active northwest trending fault system that extends 44 miles between Newport Beach and Beverly Hills (State of California- Department of Toxic Substances Control 2013:35). Traces of the Elsinore Fault Zone follow the ridge of the Santa Ana Mountains (Schollhamer et al. 1981). The geology in the region is derived as fluvial deposits from the Santa Ana River. The geologic units underlying the Project Area are mapped as Young Quaternary fan alluvium (Qyf_{sa}) dating from the late Holocene to Pleistocene and the Capistrano Formation dating to Late Miocene to early Pliocene. Nearby geological unites, within 3-miles of the Project Area include the Topanga Formation dating to the middle Miocene and the Vaqueros Formation dating to early Miocene. (Jennings et al. 1977) (Figure 4).

Young Quaternary fan alluvium (Qyf_{sa}) are Holocene to late Pleistocene-aged alluvial fan deposits that typically consist of river and stream derived sediments. The sediments are comprised of unconsolidated to slightly consolidated gray-hued arkosic, sandy and gravel -sand deposits. These deposits specifically are grain-size silty sand and derived as overbank deposits from waterways such as the Serrano Creek. Generally, these sediments have a low paleontological sensitivity rating.

Vaqueros Formation is an early Miocene deposit. The sediments consist of white, coarse-grained, arkose sandstone and brown, flaggy concretionary sandstone and siltstone. It is known to be fossiliferous and contain marine fossil deposits (Woodburne and Golz 1972).

Capistrano Formation was formed during the Late Miocene to Early Pliocene. It is part of the submarine fan complex associated with the Los Angeles Basin. The sediments consist of well-sorted, yellow-grey to light brownish-gray siltstone with interbedded lenticular white fine-grained sandstone. The Capistrano Formation is recognized internationally as the source of the second-most scientifically significant Miocene marine mammal collection and has been assigned high paleontological sensitivity level (Raschke 1984).

Topanga Formation is a middle Miocene formation deposited in the marine basins as the mountains and island blocks of the San Gabriel, Santa Ana, and Catalina masses were quickly uplifted (Minch 1997). The sediments

consist of tan to gray conglomerate and sandy conglomerate that is well-cemented and resistant to erosion (Schoellhamer et al. 1981). The sediment can range from conglomerate to marine sandstone to siltstone and to shale. The Topanga Formation is known to produce abundant and diverse marine vertebrate and invertebrate fauna fossils in addition to an abundant amount of terrestrial plant fossils (Raschke 1984).

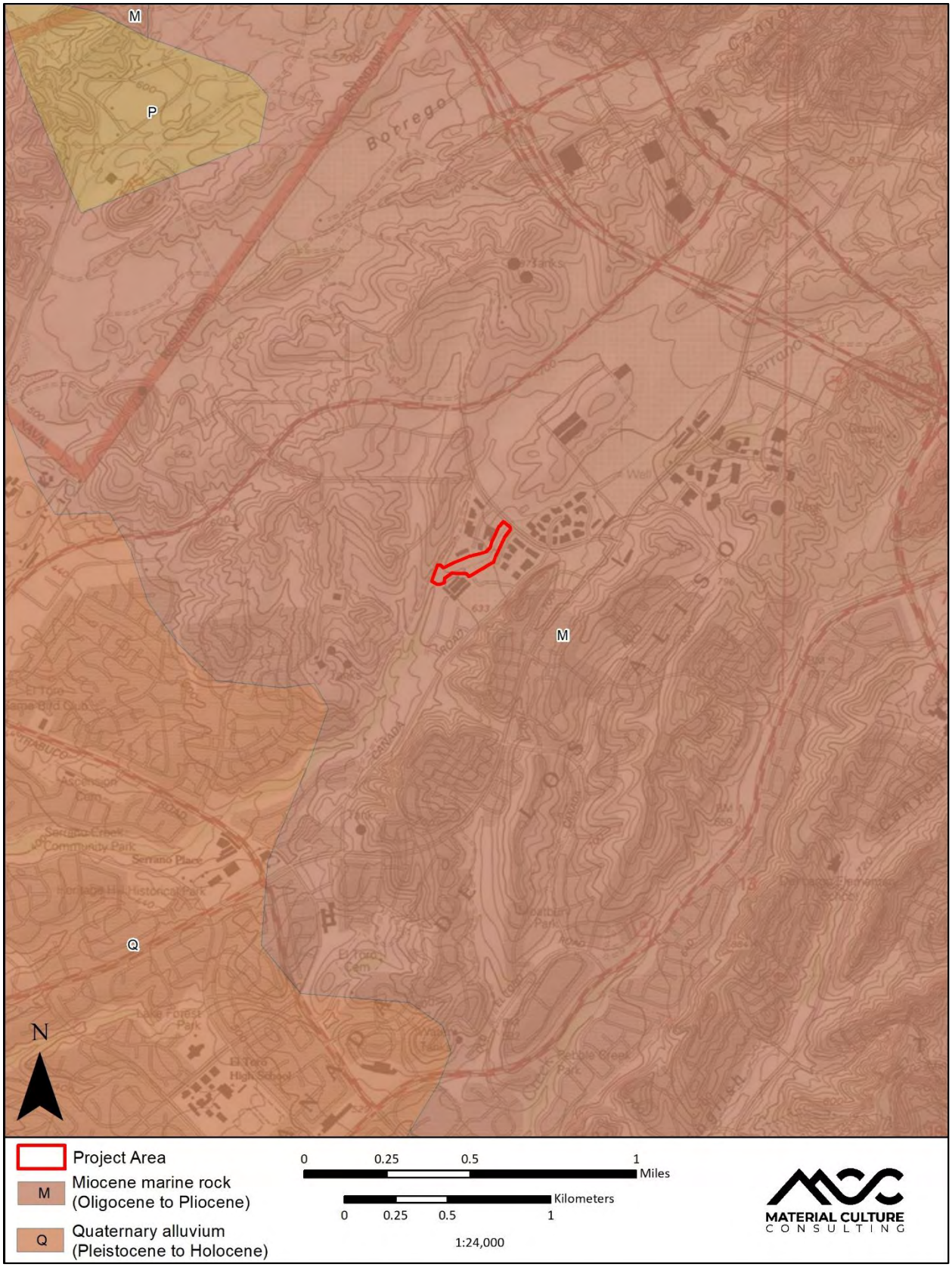

Figure 4. Geological Map of Project Area (1:24,000; complied by USGS in open source PDF format)

PREHISTORIC CONTEXT

The prehistoric cultural chronology for the proposed Project Area is based on chronological information provided by Wallace (1955), Chartkoff and Chartkoff (1984), Morrato (1984), Mason, Koerper and Langenwalter (1997), Koerper, Mason and Peterson (2003), and Byrd and Raab (2007). There are four prehistoric periods for the southern coastal region, which are defined as: Horizon I (Paleo-Indian), Horizon II (Milling Stone Assemblages), Horizon III (Intermediate), and Horizon IV (Late Prehistoric).

Horizon I/Paleo-Indian

The Paleo Indian Period is associated with the terminus of the late Pleistocene (12,000 to 10,000 years before present (YBP)). The environment during the late Pleistocene was cool and moist, which allowed for glaciation in the mountains and the formation of deep, pluvial lakes in the deserts and basin lands (Moratto 1984). However, by the terminus of the late Pleistocene, the climate became warmer, which caused glaciers to melt, sea levels to rise, greater coastal erosion, large lakes to recede and evaporate, extinction of Pleistocene megafauna, and major vegetation changes (Moratto 1984; Martin 1967, 1973; Fagan 1991). Paleo Indians were likely attracted to multiple habitat types, including mountains, marshlands, estuaries, and lakeshores. These people likely subsisted using a more generalized hunting, gathering, and collecting adaptation, utilizing a variety of resources including birds, mollusks, and both large and small mammals (Erlandson and Colten 1991; Moratto 1984; Moss and Erlandson 1995). The oldest archaeological sites known in the California are attributed to the San Dieguito culture, which consists of a hunting culture with flaked stone tool industry (Warren 1967). The material culture related to this time included scrapers, hammer stones, large flaked cores, drills, and choppers, which were used to process food and raw material. The closest local example of the San Dieguito is a site located on the bluffs above Middle Newport Bay (Padon 1998).

Horizon II/Milling Stone Period

The Milling Stone Period dates back well over8,000-3,000 YBP and is characterized by warmer and drier climates, also known as the Altithermal (Fagan 2003). Subsistence characteristics altered, with a generalized plant collecting economy supplemented by hunting and fishing suggested by the artifact assemblage of millingstones and handstones. Sites from this period appear to be part of an expansion of settlement to take advantage of new habitats and resources that became available as sea levels stabilized between about 6,000to 5,000 years ago. Most sites were in coastal areas and huge shell mounds near these coastal habitats suggest increase sedentary occupation and population increase (Fagan 2003). Around 3500 YBP, the archaeological data suggests an economic shift to more reliance on hunting with the appearance of large projectile points. Unique artifacts associated with this period include discoidals and cogged stones (Padon 1998). This period persisted over thousands of years without great change (Mason et al. 1997 and Koerper et al. 2003).

Horizon III/Intermediate Period

The Intermediate Period dates from roughly 3000-1000 YBP and sites attributed to this time period indicate an increased reliance on coastal resources with continued reliance on hunting and collecting strategies. Along the coasts, deep sea fishing begins, with circular fishhooks and perforated stones (possibly associated with larger nets) observed within the artifact assemblage (Drover et al. 1983; Koerper and Drover1983).Artifact assemblage for this time period are characterized by the appearance of the bow and arrow, evidence of increased quantities of bone tools, and increased reliance on the mortar and pestle. Most sites were in coastal areas (Mason et al. 1997 and Koerper et al. 2003). The first permanently occupied villages make their appearance during this period (Chartkoff and Chartkoff 1984).

Horizon IV/Late Prehistoric Period

The Late Prehistoric Period dates from 1, 350 YBP to 150 YBP and is characterized by an increasing political-economic-social complexity. Villages tend to be larger with evidence of increase in smaller satellite sites established for seasonal support for the main village. Intensive exploitation of localized resources, and social contacts and economic influences appear accelerated through trade and social interaction. Artifact assemblage changes included the replace of the atlatl and dart with bow and arrows, introduction of soapstone bowls, shell ornaments, steatite effigies, emergence of Tizon brownware, and cremations (Padon 1998). These changes have been linked to the arrival of Shoshonean peoples in the area. Settlement expanded into the hills and canyons inland (Mason et al. 1997 and Koerper et al. 2003).

ETHNOGRAPHY

The Project Area has historically been situated between three North American terrorites: The Cahuilla people, Gabrielino people, and the Luiseño. Migration of Shoshone peoples from the Great Basin into the desert and coastal Southern California regions occurred approximately 1000 to 600 years B.P. Both the Cahuilla and Luiseño ethnographic groups derived from this migration.

Cahuilla
The Cahuilla territory was bounded by the San Bernardino Mountains to the north, the Orocopia Mountains to the east, the Santa Ana River/the San Jacinto Plain and the eastern portion of Palomar Mountains to the west, and Borrego Springs and the Chocolate Mountains to the south (Bean 1978). The Project Area falls within the western region of the tribe's traditional territory, denoted by the San Gorgonio Pass. The Cahuilla existed within the most geographically diverse region, having exploited more than 500 native and non-native plants (Bean and Saubel 1972). The Cahuilla spoke a language that belongs to the Cupan group of the Takic subfamily of the Uto-Aztecan language family, a language family that includes the Shoshonean groups of the Great Basin (Bean and Shipek 1978).

The prehistoric Cahuilla occupation is characterized by structures within permanent villages that ranged from small brush shelters to dome-shaped or rectangular dwellings. Villages were situated near water sources, in the canyons near springs, or on alluvial fans at man-made walk-in wells (Bean 1972). There appears to be slight difference in subsistence tools between the Desert, Pass, or Mountain Cahuilla groups. The Desert Cahuilla used deep, wooden mortars with a long pestle whereas San Gorgonio Pass Cahuilla utilized shallower mortars with basketry rims (Kroeber 1908: 40, 43). Cahuilla granaries were usually raised on pole platforms two to four feet high, which resembled birds' nests, and were used to store mesquite (Kroeber 1908: 42).

In comparison with other Southern California tribes, the Cahuilla appear to have had a lower population density and a less rigid social structure. The Cahuilla are patrilineal, with closely related patrilineages that share an assumed common ancestor which is important socially and ceremonially (Hudlow 2007). The office of lineage leader, also known as a *nét*, directed subsistence activities, settled conflicts, represented the clan regionally and was responsible for correct performances of ceremonies, with the official role of the chief passed from father to eldest son (Bean 1978; Hudlow 2007).

Initial contact with European explorers with the Cahuilla most likely occurred during the expedition of Juan Bautista de Anza in 1777 (Napton and Greathouse 1982). The presence of the San Gabriel Mission in the early 1800s led to more contact via baptisms (Napton and Greathouse 1982). It also led to the Native Americans moving away from traditional habitation sites to separate themselves from the influence of the Mission (Brumgardt 1977). The Cahuilla traditions may have been relatively stable until mission secularization in 1834, due to the policy of the

Catholic Mission fathers, or padres, to maintain imported European traditional style settlement and economic patterns (Bean and Shipek 1978). After 1877, when the United States government established Indian reservations in the region and religious missionaries began conversion of the Native American populations in the region, traditional cultural practices were prohibited. Presently, the Cahuilla reside in nine separate reservations in Southern California, located in Imperial, Riverside and San Diego counties (Bean 1978).

Gabrielino

The territory of the Gabrielino at the time of Spanish contact covers much of current-day Los Angeles and Orange counties. The southern extent of this culture area is bounded by Aliso Creek, the eastern extent is located east of present-day San Bernardino along the Santa Ana River, the northern extent includes the San Fernando Valley, and the western extent includes portions of the Santa Monica Mountains. The Gabrielino also occupied several Channel Islands including Santa Barbara Island, Santa Catalina Island, San Nicholas Island, and San Clemente Island. Because of their access to certain resources, including a steatite source from Santa Catalina Island, this group was among the wealthiest and most populous aboriginal groups in all of southern California. Trade of materials and resources controlled by the Gabrielino extended as far north as the San Joaquin Valley, as far east as the Colorado River, and as far south as Baja California (Bean and Smith 1978; Kroeber 1925).

The Gabrielino lived in permanent villages and smaller, resource-gathering camps occupied at various times of the year depending upon the seasonality of the resource. Larger villages were comprised of several families or clans, while smaller, seasonal camps typically housed smaller family units. The coastal area between San Pedro and Topanga Canyon was the location of primary subsistence villages, while secondary sites were located near inland sage stands, oak groves, and pine forests. Permanent villages were located along rivers and streams, as well as in sheltered areas along the coast. Gabrielino houses were domed, circular structures made of thatched vegetation. Houses varied in size and could house from one to several families. Sweathouses—semicircular, earth-covered buildings—were public structures used in male social ceremonies. Other structures included menstrual huts and a ceremonial structure called a yuvar, an open-air structure built near the chief's house (Bean and Smith 1978; Kroeber 1925). The social structure of the Gabrielino is little known; however, there appears to have been at least three social classes: 1) the elite, which included the rich, chiefs, and their immediate family; 2) a middle class, which included people of relatively high economic status or long-established lineages; and 3) a class of people that included most other individuals in the society. Villages were politically autonomous units comprised of several lineages. During times of the year when certain seasonal resources were available, the village would divide into lineage groups and move out to exploit them, returning to the village between forays (Bean and Smith 1978; Kroeber 1925).

Clothing was minimal; men and children most often went naked, while women wore deerskin or bark aprons. In cold weather, deerskin, rabbit fur, or bird skin (with feathers intact) cloaks were worn. Island and coastal groups used sea otter fur for cloaks. In areas of rough terrain, yucca fiber sandals were worn. Women often used red ochre on their faces and skin for adornment or protection from the sun. Adornment items included feathers, fur, shells, and beads (Bean and Smith 1978; Kroeber 1925). Hunting implements included wooden clubs, sinew-backed bows, slings, and throwing clubs. Maritime implements included rafts, harpoons, spears, hook and line, and nets. A variety of other tools included deer scapulae saws, bone and shell needles, bone awls, scrapers, bone or shell flakers, wedges, stone knives and drills, metates, mullers, manos, shell spoons, bark platters, and wooden paddles and bowls. Baskets were made from rush (Juncus sp.), deer grass (Muhlenbergia rigens), and skunkbush (Rhus trilobata). Baskets were fashioned for hoppers, plates, trays, and winnowers for leaching, straining, and gathering. Baskets were also used for storing, preparing, and serving food, and for keeping personal and ceremonial items (Bean and Smith 1978; Kroeber 1925). The Gabrielino had exclusive access to soapstone, or steatite, procured from Santa Catalina Island quarries. This highly prized material was used for making pipes, animal carvings, ritual

objects, ornaments, and cooking utensils. The Gabrielino profited well from trading steatite since it was valued so much by groups throughout southern California (Bean and Smith 1978; Kroeber 1925).

Luiseño

The Spanish name Luiseño was used to identify Native Americans who were associated with the Mission San Luis Rey, with the Luiseño most likely had no known native term for their own nationality (Bean and Shipek 1978). Extensive research has been accumulated that gives detailed accounts of the Luiseño (DuBois 1908, Sparkman 1908, Kroeber 1976, White 1963, and Bean and Shipek 1978). At the time of these ethnographies, the Luiseño maintained a sophisticated political organization structure, and their lands extended from western San Jacinto to the Pacific Ocean along several major waterways, including Temecula, Santa Margarita, and San Luis Rey Rivers (Bean and Shipek 1978). Neighboring tribes included the Cahuilla to the east, the Serrano to the north, and the Gabrielino to the west. Each of these groups are part of the same Uto-Aztecan linguistic group and are Takic-speakers. The boundaries for territories fluctuate as new information evolves in ethnographic research, so there is a likelihood that there was quite a bit of overlap between groups over time as well.

The Luiseño organized themselves according to family groups or lineages, rather than forming exogamous moieties. Each lineage occupied land that they held in common, and they lived socially and politically separately from others (Bean and Shipek 1978). They typically resided in villages near reliable water sources and maintained special purpose camps close to the main villages. In the springtime, families would replenish food supplies by gathering local fruit, seeds, bulbs and roots. In the fall, families would move into the upland areas to gather acorns, prickly pear, toyon berries, and yucca. The Luiseño territory contained several species of oak that produced edible acorns. Acorns were stored and processed as needed by breaking the shell, grinding the meat into a powder, and leaching the tannic acid from the nut by using water. A porridge was made from the leached nuts and cooked with water using hot stones in baskets. The Luiseño used a wide variety of tools, including manos and metates, bone and shell fish hooks, stone and shell ornaments, bone awls, wooden throwing sticks, hammer stones, handstones, pestles, mortars, and drills, which are evident in late Prehistoric archaeological sites. Presently, there are six federally recognized Luiseño tribes with associated reservations within Southern California.

Figure 5. Ethnographic division of Southern California (based on Sturtevant and Heizer 1978)

HISTORICAL SETTING

The process of exploration and colonization of Alta California began in earnest in 1769, led by Spaniard Gaspar de Portola and Franciscan Fray (or Father) Junipero Serra. Once the first European exploration of California occurred, the region underwent immense change. As early as 1827, Anglo-Americans were migrating into Southern California. In the decades to come, California would be taken by the United States with the close of the Mexican-American War and subsequent events such as the Civil War and California Gold Rush would continue to shape the history of California.

Spanish Period (1769 to 1821) to Mexican Period (1821 to 1848)

The Spanish period began in 1769 with Captain Gaspar de Portolá's land expedition and ended in 1821 with Mexican Independence. During the Spanish Period, the California mission system was established throughout California. The closest mission to the Project Area was Mission San Juan Capistrano. Originally established in 1775, Mission San Juan Capistrano was re-established a year later and relocated in 1778 to its current location (Hallan-Gibson 1986).The missionaries were established to convert the native population, known as neophytes, and to establish military strong points or "presidios" to protect and to keep foreign interests such as Russia or England from invading lands claimed by Spain. Despite providing neophytes with new skills, European diseases and conflicts decimated the native populations.

During the Spanish Period of California, the Project Area was part of a large land grant owned by Jose Serrano. Serrano was granted the 10,668-acre Rancho Canada de Los Alisos in 1842, which encompassed most of present-day Lake Forest.

The Mexican-American War began in 1846 and ended in 1848. During this time, California was invaded by United States troops, gaining control of valuable Pacific ports and land. California surrendered to the United States Navy in July 1847.In 1848, The Treaty of Guadalupe Hidalgo was signed, giving sovereignty to Alta California, New Mexico, and Arizona to the United States. This event starts the beginning of the American Period.

American Period (1848 to present)

The new colonial period brought in an influx of European settlers to California. The settlers, originally concentrated on Alta California's coast, began expanding inland in search of mineral resources. The increase of settlers caused the native populations to be displaced from their lands. Conflicts arose between the Native Americans and the invading white colonists leading to the establishment of reservations for villages by executive order.

During the 1850s, southern California experienced a cattle boom creating a prosperous industry until the expansion of agriculture. The completion of the transcontinental railroad in 1869 encouraged developers, land speculators, and settlers to invest and move to California. During this time, Orange County's economy changed from stock raising to farming such as growing gain and citrus crops.

Dwight Writing purchased most of Jose Serrano's Rancho Canada de Los Alisos, known as El Toro, after the United States government took control of California and terminated the rancho system. Whiting introduced dry farming, citrus farming, and citrus production. In addition, he planted Eucalyptus groves for construction wood. Much of the groves can still be seen throughout the city, especially near Serrano Creek. Whiting is also credited with bringing the Sante Fe rail line through the region. As a result, the town of El Toro expanded to a shipping, commerce, and social center. After World War II, the El Toro Marine Base and imported water infrastructure were built, helping to shape the city's development of residential, commercial, ad industrial growth. The increase in development replaced the city's agricultural production. The City of Lake Forest was incorporated in 1991. It has an established area, Heritage Hill, to preserve the city's past. The park is home to the Serrano Adobe, the home which belonged to Jose Serrano.

METHODS

CALIFORNIA HISTORIC RESOURCES INVENTORY SYSTEM AND CULTURAL BACKGROUND RESEARCH

On September 1, 2020, staff at the California Historical Resource Information System (CHRIS) conducted a search at the South Central Coastal Information Center (SCCIC), located at California State University, Fullerton. The search identified any previously recorded cultural resources and prior cultural resources investigations within a 1-mile radius of the Project Area. The CHRIS search also included a review of the National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR), the California Points of Historical Interest list, the California Historical Landmarks list, the Archaeological Determinations of Eligibility list, and the California State Inventory of Historical Resources. . Additional background research included historical aerial photos and a search of the Bureau of Land Management General Land Office Records.

NATIVE AMERICAN OUTREACH AND BACKGROUND RESEARCH

MCC requested a search of the Sacred Lands File (SLF) from the Native American Heritage Commission (NAHC) on August 4, 2020. The NAHC responded on August 5, 2020, that the SLF search yielded negative results for known tribal cultural resources or sacred lands within a ½ -mile radius of the Project Area. The NAHC requested that eighteen Native American tribes or individuals be contacted for further information regarding the general Project vicinity. MCC subsequently sent letters on August 6, 2020 to all twenty-two Native American contacts, requesting any information related to cultural resources or heritage sites within or adjacent to the Project Area. Additional attempts at contact by letter, email, or phone call were made on August 25, 2020 and September 9, 2020. MCC did not conduct formal consultation with the Native American representatives.

PALEONTOLOGICAL RECORDS SEARCH

The literature review included an examination of geologic maps of the Project Area and a review of relevant geological and paleontological literature to determine which geologic units are present within the Project Area and whether fossils have been recovered from those geologic units elsewhere in the region. As geologic units may extend over large geographic areas and contain similar lithologies and fossils, the literature review includes areas well beyond the Project Area. The results of this literature review include an overview of the geology of the Project Area and a discussion of the paleontological sensitivity (or potential) of the geologic units within the Project Area. The purpose of a locality search is to establish the status and extent of previously recorded paleontological resources within and adjacent to the study area for a given project. In August 2020, a locality search was conducted through the Natural History Museum of Los Angeles County (LACM). This search identified any vertebrate localities in the LACM records that exist near the Project Area in the same or similar deposits.

CULTURAL AND PALEONTOLOGICAL FIELD SURVEY

The survey stage is important in a Project's environmental assessment phase to verify the exact location of each identified cultural or paleontological resource, the condition or integrity of the resource, and the proximity of the resource to areas of cultural resources sensitivity. In addition, the field survey provides invaluable information on the type of sediment present within the Project Area, which informs the assessment of paleontological sensitivity.

Erika McMullin, MCC Archaeologist and cross-trained Paleontologist, conducted the field survey of the proposed Project Area on September 17, 2020. The survey consisted of walking in parallel transects spaced at approximately 10-meter intervals over the Project Area, while closely inspecting the ground surface. The Project Area was examined for artifacts (e.g., flaked stone tools, tool-making debris, stone milling tools or fire-affected rock), soil discoloration that might indicate the presence of a cultural midden, soil depressions and features indicative of the former presence of structures or buildings (e.g., postholes, foundations), or historic-era debris (e.g., metal, glass,

ceramics). Existing ground disturbances (e.g. cutbanks, ditches, animal burrows, etc.) were visually inspected. Representative photographs were taken of the entire Project Area and are included in the Results section below.

RESULTS

CALIFORNIA HISTORIC RESOURCES INVENTORY SYSTEM AND CULTURAL BACKGROUND RESEARCH RESULTS

The complete results of the CHRIS resources records search are included as Confidential Appendix B of this report. A summary of the findings is presented below.

The CHRIS records search identified thirty-four prior cultural resources investigations within ½-mile radius of the Project Area (See Table 1). Of these, two of the studies are adjacent to the Project Area.

Table 1. Previously Conducted Investigations within ½ -mile Radius of Project Area

CHRIS Report Number	Year	Author(s)	Report Title	Affiliation	Distance from Project Area
OR-00277	1978	Cottrell, Marie G.	Archaeological Reconnaissance of the Serrano Highlands, Project Area (rancho De Los Alisos, Units 1 & 2)	N/A	Within ½-mile
OR-00495	1980	Cottrell, Marie G.	Archaeological Assessment of Rancho De Los Alisos Planning Area 6.	N/A	Within ½-mile
OR-00580	1977	Anonymous	The Aliso Creek Watershed, Orange County, California a Proposal for Creating an Archaeological District for the National Register of Historic Places and a Suggested Research and Study Design	Scientific Resource Surveys, Inc.	Within ½-mile
OR-00611	1988	Bissell, Ronald M.	Cultural Resources Reconnaissance of the Baker Ranch Property, El Toro Orange County, California	RMW Paleo Associates, Inc.	Within ½-mile
OR-00730	1984	Bissell, Ronald M.	Cultural Resources Assessment Tentative Tract 12110 Orange County, California	RMW Paleo Associates, Inc.	Within ¼-mile
OR-00738	1984	Bissell, Ronald M.	Cultural Resources Assessment Tentative Tract 11986 Orange County, California	RMW Paleo Associates, Inc.	Within ½-mile
OR-00748	1984	Bissell, Ronald M.	Cultural Resources Assessment Los Alisos Research and Development Park El Toro, Orange County, California	RMW Paleo Associates, Inc.	Adjacent to Project Area
OR-00773	1985	Bissell, Ronald M.	Archaeological Site CA-ORA-1057, a Late Prehistoric Period Hunting Camp in El Toro, Orange County, California	RMW Paleo Associates, Inc.	Within ½-mile
OR-00798	1985	Bissell, Ronald M.	Archaeological Survey of the Canada Apartments Property in El Toro, Orange County, California	RMW Paleo Associates, Inc.	Within ½-mile
OR-00799	1985	Bissell, Ronald M.	Archaeological Survey of Property Belonging to the William Lyon Company El Toro, Orange County, California	RMW Paleo Associates, Inc.	Within ½-mile
OR-00875	1987	Bissell, Ronald M.	Cultural Resources Reconnaissance of the Canada Ridge Lane Property, El Toro, Orange County, California	RMW Paleo Associates, Inc.	Within ½-mile
OR-00909	1988	Bissell, Ronald M.	Cultural Resources Reconnaissance of Tentative Parcel 83-110, El Toro, Orange County	RMW Paleo Associates, Inc.	Within ½-mile
OR-00940	1988	Bissell, Ronald M.	Interim Report Test Excavation of Nine Archaeological Sites on the Pacific Commerce CenterProperty, El Toro Area, Orange County California	RMW Paleo Associates, Inc.	Within ¼-mile

CHRIS Report Number	Year	Author(s)	Report Title	Affiliation	Distance from Project Area
OR-01022	1989	Del Chario, Kathleen C., V. Drummy-Chapel, and C. R. Demcak	Cultural Resource Assessment for the Allen-McColloch Pipeline (amp) Flow Augmentation Project Reaches S4b/s5	ARM	Within ½-mile
OR-01088	1990	Brock, James P.	Report on Archaeological Monitoring of Rough Grading of Bake Parkway From Portola Parkway to Station 159+40.81, El Toro, California	Archaeological Advisory Group	Within ½-mile
OR-01372	1994	Brown, Joan C.	Mitigation and Monitoring of Eight Prehistoric Archaeological Sites, CA-ORA-510, CA-ORA-647, CA-ORA-648, CA-ORA-1062, CA-ORA-1063, CA-ORA-1065, CA-ORA-1066, CA-ORA-1171, Located in Southern Orange County, California	RMW Paleo Associates, Inc.	Within ½-mile
OR-01567	1997	Jertberg, Patricia R.	Archaeological Services for 25781 Atlantic Ocean Drive, Lake Forest (permit #w007506)	Petra Resources Inc.	Within ¼-mile
OR-01583	1974	Nicoll, Gerald A.	Archaeology and Paleontology Report for Rancho De Los Alisos Area, Orange County, California	G.A. Nicoll and Associates	Within ½-mile
OR-01678	1998	Jertberg, Patricia R.	Archaeological Services for Tract 13344, Lot 6, 25741 Atlantic Ocean Drive, Pacific Commercentre, Lake Forest, Orange County, California	Petra Resources Inc.	Within ½-mile
OR-01679	1998	Jertberg, Patricia R.	Archaeological Services for Tract 13343, Lot 5, Pacific Commercentre, Lake Forest	Petra Resources Inc.	Within ½-mile
OR-01696	1998	Jertberg, Patricia R.	Archaeological Services for Tract 13344, Lot 13, 26012 Atlantic Ocean Drive, and Lot 39, 26021 Commercentre Drive, Lake Forest	Petra Resources, Inc.	Within ½-mile
OR-01697	1998	Jertberg, Patricia R.	Archaeological Services for Tract 13343, Lot 1, 20571 Crescent Bay Drive, Lake Forest	Petra Resources, Inc.	Within ½-mile
OR-02211	2001	Hoover, Anne M.	Cultural Resources Reconnaissance and Monitoring of Pacific Commercentre, and Mitigation of CA-ORA-1581, City of Lake Forest, County of Orange, Ca	RMW Paleo Associates, Inc.	Within ½-mile
OR-02218	2000	Brock, James P.	Archaeological Assessment for the Proposed Comfort Inn Project, 20768 Lake Forest Drive, Orange County, Ca	Archaeological Advisory Group	Within ½-mile
OR-02219	2000	White, Robert S., White, Laurie, and Minch, John	Archaeological and Paleontological Assessments of a 12.05 Acre Parcel Located Just East of Dimension Drive and Enterprise Way in Lake Forest, Orange County	Archaeological Associates, Ltd.	Adjacent to Project Area
OR-03063	2001	Bonner, Wayne H.	Records Search Results for Sprint Pcs Facility Og65xc417d (the Pacific World Site), Located at 25791 Commercentre Drive, El Toro in Orange County, California	Michael Brandman Associates	Within ½-mile
OR-03744	2009	Carolyn Losee	Cultural Resources Investigation for T-Mobile LA33498A "The Arbors" 26356 Vintage Woods Road, Lake Forest, Orange County, CA 92630	Archaeological Resources Technology	Within ½-mile
OR-03748	2009	Patrick O. Maxon	Phase II Archaeological Evaluation CA-ORA- 1004 & CA-ORA-1150	Bonterra Consulting	Within ½-mile
OR-03749	2008	Patrick O. Maxon	Phase I Cultural Resources Reconnaissance Survey- Proposed Alton Parkway Extension Project, Including Baker Ranch, Lake Forest, CA	BonTerra Consulting	Within ½-mile

CHRIS Report Number	Year	Author(s)	Report Title	Affiliation	Distance from Project Area
OR-03770	2009	Clark, Fatima	Results of the Cultural Resource Assessment for the Southern California Edison Replacement of Deteriorated Pole Nos. 2140160E, 2140170E, 2140171E, 2140178E, 2140179E, and 2280425; Orange County, California; WO 4805-0557	PCR Services Corporation	Within ¼-mile
OR-03840	2009	Marken, Mitch	Phase I Archaeological Assessment for the IRWD Baker Regional Water Treatment Plant Project, Orange County, CA	ESA	Within ½-mile
OR-03992	2010	Bray, Madeleine	Archaeological Addendum Report for the IRWD Baker Regional Water Treatment Plant Project, Orange County, CA	ESA	Within 1-mile
OR-04358	1999	Gust, Sherrl	Archaeological and Paleontological Monitoring Report for Serrano Creek Business Center, Lake Forest, California	RMW Paleo Associates, Inc.	Within ½-mile
OR-04574	2011	Brunzell, David	Cultural Resources Assessment of the Crown Castle USA Southern California Metro PCS DAS Project, Orange and Los Angeles Counties, California (BCR Consulting Project No. SYN1007)	BCR Consulting	Within 1-mile

The records search identified twelve previously recorded cultural resources within a ½ -mile radius of the Project Area. Resources identified in the records search include twelve prehistoric resources. The closest cultural resource, P-30-000037, is located along and within the northwest edge the Project Area.

Table 2. Previously Recorded Cultural Resources within ½ -mile Radius of Project Area

Primary Number	Trinomial	Age	Attributes	NRHP/CRHR	Distance from Project Area
P-30-000037	CA-ORA-000037	Prehistoric	AP01 (Unknown)	Unknown	Within Project Area
P-30-000040	CA-ORA-000040	Prehistoric	AP02 (Lithic Scatter)	Unknown	Within ½-mile
P-30-000510	CA-ORA-000510	Prehistoric	AP02 (Lithic Scatter)	Unknown	Within ¼ -mile
P-30-001057	CA-ORA-001057	Prehistoric	AP02 (Lithic Scatter); AP08 (Stone Feature)	Unknown	Within ¼ -mile
P-30-001062	CA-ORA-001062	Prehistoric	AP02 (Lithic Scatter)	Unknown	Within ¼ -mile
P-30-001064	CA-ORA-001064	Prehistoric	AP02 (Lithic Scatter)	Unknown	Within ½-mile
P-30-001065	CA-ORA-001065	Prehistoric	AP02 (Lithic Scatter)	Unknown	Within ½-mile
P-30-001171	CA-ORA-001171	Prehistoric	AP02 (Lithic Scatter)	Unknown	Within ½-mile
P-30-001581	CA-ORA-001581	Prehistoric	AP02 (Lithic Scatter); AP15 (Habitation Debris)	Unknown	Within ¼ -mile
P-30-100311	n/a	Prehistoric	AP02 (Lithic Scatter)	Unknown	Within ½-mile
P-30-100438	n/a	Prehistoric	AP02 (Lithic Scatter)	Unknown	Within ½-mile
P-30-100439	n/a	Prehistoric	AP02 (Lithic Scatter)	Unknown	Within ½-mile

Several additional sources were consulted for this Project as well (see Table 3). These additional sources did not identify significant potential for historic era or prehistoric cultural resources.

Table 3. Other Sources Reviewed for the Project Area

Source	Results
National Register of Historic Places (1979-2002 & supplements)	Negative
Historical United States Geological Survey topographic maps (USGS 2012)	Project Area has been used for groves since at least 1938 with major development starting in early 1990s. Project Area has not changed since early 2000s.
Historical United States Department of Agriculture aerial photos	Project Area has been used for groves since at least 1938 with major development starting in early 1990s. Project Area has not changed since early 2000s.
California Register of Historical Resources (1992-2010)	Negative
California Inventory of Historic Resources (1976-2010)	Negative
California Historical Landmarks (1995 & supplements to 2010)	Negative
California Points of Historical Interest (1992 to 2010)	Negative
Local Historical Register Listings	Negative
Bureau of Land Management General Land Office Records (BLM GO 2008)	Two land grants from late 1800s for Jose Serrano.

A review of historical aerials and topographic maps show the Project Area was developed for agricultural development, planting of groves, as late as 1938. During this time, a barn was built and remains presently. The groves continued until the early 1990s when commercial development began around the Project Area.

Figure 6. Project Area with groves (as depicted on 1938 aerial photograph)

Figure 7. Project Area with groves (as depicted on 1967 aerial photograph)

Figure 8. Project Area with commercial developments (as depicted on 1993 aerial photograph)

Figure 9. Project Area with increased commercial developments (as depicted on 2003 aerial photograph)

NATIVE AMERICAN OUTREACH AND BACKGROUND RESEARCH RESULTS

As a result of the effort to contact the eighteen Native American Tribes or individuals identified by the NAHC, MCC received two responses. These responses came in the form of letters, emails and phone calls. Below is a summary of the responses provided by Native American Tribes.
On August 8, 2020, MCC received an email from Brandy, Historic Preservation Technician for Gabrieleno Band of Mission Indians. Ms. Salas requested the Lead Agency's contact information.

On September 9, 2020 MCC placed a phone call to Anthony Morales, Chairperson for Gabrielino/Tongva San Gabriel Band of Mission Indians. Mr. Morales stated that due to the Project Area's location, the Project warrants archaeological and Native American monitoring, but would like to be updated once the survey and record search results have been conducted in order to provide a positive answer. After updating Mr. Morales on November 3, 2020, Mr. Morales stated that the tribe requests a Native American monitor if an archaeological monitor is present. He also requested to be updated as the project progresses.

On September 9, 2020 MCC placed a phone call to Robert Dorame, Chairperson for Gabrielino-Tongva Tribe. Mr. Dorame would like to be updated once the survey and record search results have been conducted before giving the tribe's response. On November 3, 2020, Mr. Dorame was updated with the record search and survey results. He informed MCC the tribe requests to be notified if any cultural resources or human remains, regardless of the coroner's decision, are observed or impacted during construction.

On September 9, 2020 MCC placed a call to the San Luis Rey Band of Mission Indians. Ms. Cami stated that Project Area is out of tribe's boundaries and defers to Juaneno Band of Mission Indians Acjachemen Nation-Belardes.

On September 9, 2020 MCC spoke to Joseph Ontiveros, Cultural Resource Director for Soboba Band of Luiseño Indians. Mr. Ontiveros deferred the Project to other tribes in the area.

As of November 3, 2020, MCC has not received any additional responses from the remaining NAHC-listed groups or individuals we contacted for information. Should MCC receive additional responses once the final report is submitted, the information will be passed on to EPD Solutions to be added to the report as an addendum. NAHC and Native American correspondence materials, including our communication attempts, are provided as Appendix C.

PALEONTOLOGICAL RECORDS SEARCH RESULTS

The locality search at LACM did not yield any fossil localities within the Project Area and no fossil localities within one mile of the Project Area (See Appendix D) (Bell 2020). The Project Area is geologically mapped with surficial deposits of younger Quaternary alluvium, the Capistrano Formation, and the Topanga Formation (Bell 2020). While the younger Quaternary alluvium deposits typically do not contain significant vertebrate fossils within the uppermost layers, the Capistrano Formation and the Topanga Formation are known to have a high sensitivity for producing fossils, as well as potential older Quaternary deposits at unknown depth (Raschke 1984). The closest vertebrate fossil localities from the Capistrano Formation is LACM VP 5500, which is located approximately less ½ mile southeast of the Project Area. At an unknown depth, a seal (Pinnipedia) was produced. The next closest vertebrate fossil locality from the Capistrano Formation is LACM VP 4666-4668, located approximately ¾-mile west of the Project Area, near El Toro Road and Trabuco Road. This locality produced mammals including eared seals (Otariidae) at 22 feet below ground surface. LACM IP 7706, invertebrate fossils from the Topanga Formation was produced at an unknown depth and is located approximately 1 mile west of the Project Area. Another locality, LACM VP 7546-7547, from the Capistrano Formation, located approximately 1-mile northwest of the Project. The locality was produced at an unknown depth and contained dolphins (Pontoporiidae) and seal (Imagotariinae). LACM VP 3491, from the Capistrano Formation, is located approximately 2 miles southwest of the Project Area. It produced include sharks (Carcharodon, Isurus), teleost fishes (Teleostei), eared seals (Otariidae) and toothed whale (Odontoceti) at an unknown depth. Additional literature was consulted, including The University of California Museum of Paleontology (UCMP)'s Miocene Mammal Mapping Project (MioMap), resulting in four recorded fossil localities within the area of the Project (Carrasco et al. 2005). The four localities were identified 3-miles east of the Project Are and produced bird specimens (Chendytes milleri, Oceanodroma, and Mancallinae). Three of the localities, LACM 4555, LACM 4554, and LACM 4559 are deposits from the Vaqueros Formation. The other locality, LACM 2385, was produced from the Topanga Formation. The results are detailed below in Table 4.

Table 4. Previously Recorded Paleontological Localities with 3-mile Radius of Project Area

Locality Number	Location	Formation	Taxa	Depth	Distance to Project Area
LACM VP 5500	East of Lake Forest Drive between Vintage Road on the north & Pittsford Drive on the south	Capistrano Formation	Seals (Pinnipedia)	Unknown	Within ½-mile
LACM VP 4666-4668	West of El Toro Road & north of Trabuco Road	Capistrano Formation	Mammals, including eared seals (Otariidae)	22 ft bgs	Within ¾-mie
LACM IP 7706	1-mile W.S.W. of El Toro	Topanga Formation	Invertebrates	Unknown	Within 1-mile
LACM VP 7546-7547	N. side of Blake Parkway, W. of state highway 241	Capistrano Formation	Dolphin (Pontoporiidae), seal (Imagotariinae)	Unknown	Within 1-mile
LACM VP 3491	Cheery Street & El Toro Road	Capistrano Formation	Shark (Carcharodon, Isurus; teleost fishes (Teleostei); eared seals (Otariidae); toothed whale (Odontoceti)	Unknown	Within 2-miles

Locality Number	Location	Formation	Taxa	Depth	Distance to Project Area
LACM 2373	Upper Oso Reservoir	Vaqueros Formation	Bird (Chendytes milleri)	Unknown	Within 3-miles
LACM 2374	Upper Oso Reservoir	Vaqueros Formation	Bird (Oceanodroma)	Unknown	Within 3-miles
LACM 2543	Upper Oso Reservoir	Vaqueros Formation	Bird (Mancallinae)	Unknown	Within 3-miles
LACM 2385	Upper Oso Reservoir	Topanga Canyon	Bird (Chendytes milleri)	Unknown	Within 3-miles

Key: VP-Vertebrate Paleontology; IP-Invertebrate Paleontology; bgs-below ground surface

CULTURAL AND PALEONTOLOGICAL FIELD SURVEY RESULTS

Erika McMullin, MCC Archaeologist and Cross-Trained Paleontologist, conducted the cultural and paleontological survey of the Project Area on September 17, 2020. During fieldwork, overall survey conditions were fair, and ground visibility varied throughout the Project Area due to present structures and dense vegetation. The entirety of the Project Area is encompassed by multiple structures, including two residential houses, a barn, a garden, a corral, and equestrian facilities (Figures 10-16). Therefore, the entire Project Area has been subjected to intense surface and subsurface modification from construction of the buildings, landscaping, and use. Some areas of the Project Area were inaccessible due to dense vegetation, steep slope, and fencing. Vegetation consisted of oak trees, oak scrub, poison oak, flowering tobacco, eucalyptus trees, pine trees, palm trees, tall grasses and weeds, with some residential landscaping present. The ground surface was obscured by pine duff, oak litter, and 4-6 feet tall weeds. Ground visibility varied throughout the Project Area; overall it was poor, ranging from 0-25%, due to dense vegetation (Figures 17-20). Soil is comprised of light brown to dark brown sandy silt with pebble to cobble sized inclusions of rounded to sub-rounded granitic material (Figures 21-26). Imported gravel was noted in some areas. The surveyable portions of the Project Area are highly disturbed due to many of the pathways being trafficked by vehicles, pedestrians, and farm animals. Other disturbances to the Project Area include modern refuse located on Linear Lane, faunalturbation, and refuse and debris from residence occupation (Figures 27-28). Within the Project Area is an historic-era barn. The barn will not be altered in any way or impacted by the Project. No paleontological resources were discovered during the intensive-pedestrian survey. The archaeological survey resulted in one newly observed historic site being identified, EM-SITE-001. The site is comprised of five glass bottles and one bi-metal, tear tab can fragment. The site dates between 1924 to 1985, but likely dates to the late 1930s to mid-1940s During this time, the area existed as an agricultural area and the bottles may represent this event. It is located approximately 15-20 ft. (4.5-6 meters) west of Linear Lane, and 15 ft. (4.5 m) east of Serrano Creek. The site is heavily disturbed as modern refuse is scattered within and outside of the concentration. The site boundaries may extend outside of the observed area due to heavy oak litter covering the surface floor. Previously recorded site P-30-000037, was not relocated during the survey due to the area being inaccessible (steep slope), and having dense vegetation surrounding the area.

Figure 10. Overview of barn and animal pens from Serrano Creek, view east.

Figure 11. Overview of barn, view northwest.

Figure 12. Overview of animal pens behind barn, view west.

Figure 13. Overview of residence near Linear Lane, view south.

Figure 14. Overview of area near residential home with compacted dirt area, view north.

Figure 15. Overview of corral with tall weeds, view west.

Figure 16. Overview of residential home near Canada Road, view northwest.

Figure 17. Representative photo of vegetation and modern refuse within Project Area, view west.

Figure 18. Representation of ground visibility and vegetation near Linear Lane, view north.

Figure 19. Representative photo of surficial soil observed within Project Area in gated area near Linear Lane, view south.

Figure 20. Representative photo of ground visibility in western portion of Project Area, view northwest.

Figure 21. Representative photo of ground visibility in western portion of Project Area, view south.

Figure 22. Representative of ground visibility in western portion of Project Area, plan view.

Figure 23. Representative photo of surficial soil observed within Project Area, plan view.

Figure 24. Representative photo of surficial soil, with imported gravel observed within Project Area, plan view.

Figure 25. Representative photo of surficial soil observed within Project Area, plan view.

Figure 26. Representative photo of surficial soil observed within Project Area, plan view.

Figure 27. Representative photo of modern refuse disturbance, plan view.

Figure 28. Representative photo of faunalturbation noted throughout Project Area, plan view.

CONCLUSIONS AND RECOMMENDATIONS

CULTURAL RESOURCES CONCLUSIONS

The Phase I cultural resource assessment of the Project Area included a CHRIS records search, NAHC outreach, background research, and a field pedestrian survey. The records search results indicated 12 previously recorded resources within the Project Area. The closest resource to the Project, P-30-000037, is located within the Project Area. Review of historic aerials and topographic maps shows agricultural development began in the 1930s. During the review of historic aerials, the barn was confirmed as a historic-era built environment resource located in the Project Area. The barn will not be removed or remodeled during construction. NAHC outreach efforts, two Native American tribes/contacts deferred to other tribes for any further consultation related to the Project. Three other tribes expressed interest in the project. Gabrielino Band of Mission Indians-Kizh Nation requested the lead agency's contact information. Gabrielino/Tongva San Gabriel Band of Mission Indians requests a Native American monitor presence to accompany an archaeologist. Gabrielino Tongva Indians of California asks to be notified if any cultural resources and/or human remains are observed during construction.

CULTURAL RESOURCES RECOMMENDATIONS

The potential for encountering significant cultural resources within the Project Area is considered high, due to a positive pedestrian survey and 12 previously recorded resources within ½-mile of the Project Area, with 1 resource being within the Project Area. Prior to the start of construction, a cultural resources management plan (CRMP) should be prepared and implemented. It is recommended the Project's CRMP implement the following:

- If the historic structure will be impacted by the Project, formal evaluation by a qualified Architectural Historian is required.
- Archaeological monitoring during all initial ground-disturbance activities, including vegetation removal, site preparation, demolition of historic structures, and grading up to three feet below surface, in order to quickly assess any discoveries of cultural resources during initial project implementation.
- Development of an inadvertent discovery plan in place to expediently address archaeological and / or tribal cultural resource discoveries should these be encountered during any phase of development associated with the Project. In the event that these resources are inadvertently discovered during ground-disturbing activities, work must be halted within 50 feet of the find until it can be evaluated by a qualified archaeologist. Construction activities could continue in other areas. If the discovery proves to be significant, additional work, such as data recovery excavation, may be warranted and would be discussed in consultation with the appropriate regulatory agency(ies).
- Procedures of conduct following the discovery of human remains on non-federal lands have been mandated by California Health and Safety Code §7050.5, PRC §5097.98 and the California Code of Regulations (CCR) §15064.5(e). According to the provisions in CEQA, should human remains be encountered, all work in the immediate vicinity of the burial must cease, and any necessary steps to ensure the integrity of the immediate area must be taken. The Orange County Coroner shall be immediately notified and must then determine whether the remains are Native American. If the Coroner determines the remains are Native American, the Coroner has 24 hours to notify the NAHC, who will in turn, notify the person they identify as the Most-Likely-Descendent (MLD) of any human remains. Further actions will be determined, in part, by the desires of the MLD. The MLD has 48 hours to make recommendations regarding the disposition of the remains following notification from the NAHC of the discovery. If the MLD does not make recommendations within 48 hours, the owner shall, with appropriate dignity, reinter the remains in an area of the property secure from further disturbance. Alternatively, if the owner does not accept the MLD's recommendations, the owner or the descendent may request mediation by the NAHC.

PALEONTOLOGICAL RESOURCES CONCLUSIONS

The Phase I paleontological resource assessment of the Project Area included a locality records search, literature review, and a field pedestrian survey. No significant paleontological resources were identified within the Project Area during the locality search or the field survey. The geologic units mapped within the Project Area are comprised of younger Quaternary fan alluvium and exposures of the Capistrano Formation. While younger Quaternary deposits typically do not contain significant vertebrate fossils within the uppermost layers, deposits from the Capistrano Formation have a high sensitivity for containing vertebrate fossils. There are nearby localities from similar sedimentary deposits to those found within 1-mile of the proposed Project Area. MCC recommends the Project Area be considered high sensitivity, and to have the potential for construction activities of the proposed project to impact underlying paleontological resources.

PALEONTOLOGICAL RESOURCES RECOMMENDATIONS

Excavation has the potential to impact the paleontologically sensitive older Quaternary sediments at depth. MCC recommends that a paleontological resource mitigation program (PRMP) be put in place to monitor, salvage, and curate any recovered fossils associated with the current study area, should these be unearthed during ground disturbance within the Project Area. It is recommended the Project's PRMP implement the following:

- A trained and qualified paleontological monitor should perform spot-check and/or monitoring of any excavations on the Project that have the potential to impact paleontological resources in undisturbed native sediments below 5 feet in depth. The monitor will have the ability to redirect construction activities to ensure avoidance of adverse impacts to paleontological resources.
- The Project paleontologist may re-evaluate the necessity for paleontological monitoring after examination of the affected sediments during excavation, with approval from Lead Agency and Client representatives.
- Any potentially significant fossils observed shall be collected and recorded in conjunction with best management practices and SVP professional standards.
- Any fossils recovered during mitigation should be deposited in an accredited and permanent scientific institution for the benefit of current and future generations.
- A report documenting the results of the monitoring, including any salvage activities and the significance of any fossils, will be prepared and submitted to the appropriate personnel.

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Appendix A
Qualifications

Tria Belcourt, M.A., RPA
President and Principal Environmental Specialist

Tria Belcourt oversees and is responsible for the entire work process at Material Culture Consulting. She is responsible for planning, supervising, and overseeing field projects, including responsibility for the professional quality of evaluations and recommendations. Tria has primary accountability for the technical completeness and competence of work conducted by her staff. She is responsible for development of work plans and/or research designs, for performance of crew chiefs, for selection standards and limitations on work assignments of crew members, for analysis and interpretation of field data, for integration of fieldwork results into comparative regional perspectives, and for preparation of reports. Tria's advanced academic training and more than sixteen years of professional archaeological experience has included rigorous training and application of anthropological and archaeological theory and methods, and in recording, collecting, handling, analyzing, evaluating, and reporting cultural property data, relative to the type and scope of work proposed.

Tria has been an archaeological project manager and principal investigator for over nine years, leading and managing several complex compliance projects throughout the State of California and in Southern Nevada, which have involved each step of cultural resource compliance and management. Prior to this, she spent six years as a field technician and crew chief on projects throughout California and the Southeastern United States. Her experience includes conducting background research, field survey, resource testing and formal NRHP/CRHR evaluation, data recovery plan development and implementation. She has prepared hundreds of technical reports for all of the above to state and federal standards, including following BLM standards for GIS spatial data management and technical reporting – ranging from simple clearance forms, to letter reports, to extensive data recovery reports. She was the lead preparer of the Fort Irwin Integrated Cultural Resource Management Plan (2009-2013) and has also prepared several cultural resource management plans for state regulated projects. She has overseen and conducted archaeological monitoring and management of unanticipated discovery of resources, including Native American human remains on federal lands (and repatriation of the remains), and reported the results and outcomes of cultural resource monitoring efforts in lengthy technical reports. Finally, Tria regularly provides third party and QA/QC review of cultural resource technical documents, due to her keen understanding of state and federal regulations and laws governing the management of cultural resources throughout the state of California.

EDUCATION

2014 Graduate Certificate in Environmental Management of Military Lands, Colorado State University
2010 Professional Certification in CEQA/NEPA, ICF International Corporation
2009 M.A. in Anthropology, University of Florida Gainesville, Florida
Professional Certification in GIS
2006 B.A. in Anthropology, Magna Cum Laude, University of California, Los Angeles, California

AFFILIATIONS/CERTIFICATIONS/TRAINING

- Society for Historical Archaeology (SHA)
- Society for California Archaeology (SCA)

UTILITY SECTOR EXPERIENCE

SCE Transmission Line Rating and Remediation Project (TLRR) – Control Silver Peak 66kV Subtransmission, Kern and Los Angeles Counties, California. Cultural Resource Inventory Assessment (October 2016- present). Ms. Belcourt provides project management and leadership for this SCE project, as the Principal Investigator for Archaeology, under contract to Arcadis (2016-2018) and Environmental Intelligence (2018-present). MCC is tasked with all aspects of cultural resources assessments including records searches, surveys, maintaining and generating GIS data according to SCE Schema, obtaining federal and state permits for cultural resources studies, and technical reporting.

SCE Transmission Line Rating and Remediation Project (TLRR) - Kern River 66kV, Kern and Los Angeles Counties, California. Cultural Resource Inventory Assessment (October 2016- present). Ms. Belcourt provides project management and leadership for this SCE project, as the Principal Investigator for Archaeology, under contract to Arcadis (2016-present). MCC is tasked with all aspects of cultural resources assessments including records searches, surveys, maintaining and generating GIS data according to SCE Schema, obtaining federal and state permits for cultural resources studies, and technical reporting.

SCE Transmission Line Rating and Remediation Project (TLRR) – Eldorado Pisgah Lugo 220kV Subtransmission, Kern and Los Angeles Counties, California. Cultural Resource Inventory Assessment (October 2016- present). Ms. Belcourt provides project management and leadership for this SCE project, as the Principal Investigator for Archaeology, under contract to Arcadis (2016-present). MCC is tasked with all aspects of cultural resources assessments including records searches, surveys, maintaining and generating GIS data according to SCE Schema, obtaining federal and state permits for cultural resources studies, and technical reporting.

SCE Transmission Line Rating and Remediation Project (TLRR) – Control Haiwee 115kV Subtransmission, Kern and Los Angeles Counties, California. Cultural Resource Inventory Assessment (April 2017- present). Ms. Belcourt provides project management and leadership for this SCE project, as the Principal Investigator for Archaeology, under contract to Arcadis (2016-2018) and to SWCA (2018-present). MCC is tasked with all aspects of cultural resources assessments including records searches, surveys, maintaining and generating GIS data according to SCE Schema, obtaining federal and state permits for cultural resources studies, and technical reporting.

SCE Transmission Line Rating and Remediation Project (TLRR) – Ivanpah Coolwater Kramer Inyokern 115kV Subtransmission, Kern and Los Angeles Counties, California. Cultural Resource Inventory Assessment (April 2017- present). Ms. Belcourt provides project management and leadership for this SCE project, as the Principal Investigator for Archaeology, under contract to Arcadis (2016-2018) and to SWCA (2018-present). MCC is tasked with all aspects of cultural resources assessments including records searches, surveys, maintaining and generating GIS data according to SCE Schema, obtaining federal and state permits for cultural resources studies, and technical reporting.

Pacific Gas and Electric Company (PG&E), NERC Alert Program – Archaeological Principal Investigator; throughout California; 2015 – Present. Belcourt provides oversight of all task orders and project management of on-call task orders involving cultural resource desktop reviews, records searches and field reviews for the PG&E NERC Alert program: tracking and reporting efforts, maintaining project schedule, and timely submittal of data to prime contractor (Arcadis).

Southern California Edison (SCE), On-Call and Emergency Projects – Archaeological Principal Investigator and Project Manager; throughout California, 2013 – Present. Belcourt has provided oversight of over 200 task orders for on-call and emergency projects to date, involving cultural resource desktop reviews, records searches and field reviews for deteriorated poles, system upgrades, initial studies to support capital projects, and monitoring support to replace facilities due to natural disasters. This high-volume program includes preparing and submitting budgets, managing support staff and overseeing work, tracking and reporting efforts, maintaining project schedules, and preparing technical reports and GIS datasets for submittal to prime contractor (SWCA).

Southern California Edison (SCE), Large Capital Projects – Archaeological Principal Investigator and Project Manager; throughout California, 2014 – Present. Belcourt has provided oversight of over 20 task orders for major projects to date, involving cultural resources for this contract with SWCA, Environmental Intelligence and ICF. This includes preparing and submitting budgets, managing support staff and overseeing work, tracking and reporting efforts, maintaining project schedule, and preparing technical reports and GIS datasets for submittal to prime contractors.

Southern California Edison (SCE), Small Capital Projects – Archaeological Principal Investigator and Project Manager; throughout California, 2014 – Present. Belcourt provides oversight of all task orders and project management of task orders involving cultural resources for this contract with Environmental Intelligence and ICF. This includes preparing and submitting budgets, managing support staff and overseeing work, tracking and reporting efforts, maintaining project schedule, and preparing technical reports and GIS datasets for submittal to prime contractors.

Southern California Edison (SCE), Coolwater Lugo Transmission Project —- Environmental Project Manager; San Bernardino County, California; 2014 – 2015. Belcourt provided oversight of all project management on CWLTP: tracking and reporting efforts of subconsultants (Pacific Legacy, Paleo Solutions and Urbana Preservation and Planning), maintaining project schedule and timely submittal of project deliverables to agency reviewers. Served as communication facilitator between SCE and BLM/CPUC agency reviewers. Provided final review of the Cultural Resources Technical Report (which included over 1,000 cultural resources) and the Historic Built Environment Report - prior to draft submittal to BLM.

SCE, Eldorado Ivanpah Transmission Project – In-house Consultant for Archaeology; San Bernardino County, California and Clark County, Nevada; 2010-2012. Belcourt provided complex regulatory oversight and project management regarding cultural and paleontological resource management. She developed compliance training to inform and guide construction activities and major capital project teams. She also developed and implemented internal cultural resource management programs based on project migitation measures. Tria coordinated with BLM archaeologists on discovery and management of previously unknown cultural resources identified during construction. She provided environmental analyses, technical reports, and clearance documentation for over 20 project modifications during construction without delay to project. Developed the cultural resources geodatabase for EITP and coordinated regularly with the project GIS team.

Silver State South Substation, In-house Consultant for Archaeology; Southern California Edison, Clark County, NV; 2010-2012. Provided regulatory oversight and project management regarding cultural and paleontological resource management during project licensing and scoping. Identified potential impacts to cultural and paleontological resources, developing appropriate mitigation measures in preparation for and projecting alternative conclusions.

Tehachapi Renewable Transmission Project, Multiple Roles; Southern California Edison, Segments 1-3 and Segments 6-11, Kern, Los Angeles and Orange County, CA; 2009 - Present. Tria provided service to this project over seven years in multiple roles – archaeological field monitor, project coordinator, in-house consultant at SCE, and principal investigator. She provided regulatory oversight and project management regarding cultural and paleontological resource management for all segments of TRTP. Developed and implemented internal cultural resource management programs based on the mitigation measures in the Final Environmental Impact Report/Environmental Impact Statement (FEIR/EIS) for TRTP, and for the existing Special Use Permits and Record of Decision for TRTP, issued by the Angeles National Forest (ANF). Oversaw preparation of the Historic Properties Treatment Plans, fieldwork and technical report preparation for two large-scale Phase III Data Recovery excavations on Angeles National Forest. Coordinated with ANF archaeologists on discovery and management of previously unknown cultural resources identified during construction. Provided cultural resources analyses and clearance documentation, including technical reports, for over 100 project modifications during construction without delay to project. Finally, Tria was responsible for maintaining the geospatial data for the project within the SCE cultural resources geodatabase TRTP and coordinated with the project GIS team.

Desert Tortoise Habitat Conservation Plan Area, Principal Investigator; Cadiz Inc., San Bernardino County, CA; 2013. Oversaw records search to identify the extent of previous cultural resources surveys and all previously recorded prehistoric and historic resources within the 7,500-acre Desert Tortoise Habitat Conservation Plan (HCP) area (Project Area) located on lands administered by the BLM Needles Field Office in unincorporated San Bernardino County, California.

SOLAR SECTOR EXPERIENCE

Ecoplexus California Correctional Institution Solar Project, Tehachapi, Kern County, California. Cultural and Paleontological Assessments (April 2018 – present). Belcourt provided oversight and project management for this project, involving cultural and paleontological resource desktop reviews, Native American outreach, coordinated AB52 consultation between the State of California and local tribes, arranged for the records searches and coordinated field surveys. She also oversaw production of the final technical report, project schedule, and timely submittal of data to prime contractor.

Ecoplexus Ironwood State Prison and Chuckawalla Valley State Prison Solar Project, City of Blythe, Riverside County. Cultural and Paleontological Assessments (June 2018 – present). Belcourt provided oversight and project management for this project, involving cultural and paleontological resource desktop reviews, Native American outreach, coordinated AB52 consultation between the State of California and local tribes, arranged for the records searches and coordinated field surveys. She also oversaw production of the final technical report, project schedule, and timely submittal of data to prime contractor.

Ecoplexus California State Prison Centinela Solar Project, City of Imperial, Imperial County, California. Cultural and Paleontological Assessments (August 2017 – April 2018). Belcourt provided oversight and project management for this project, involving cultural and paleontological resource desktop reviews, Native American outreach, coordinated AB52 consultation between the State of California and local tribes, arranged for the records searches and coordinated field surveys. She also oversaw production of the final technical report, project schedule, and timely submittal of data to prime contractor.

Ecoplexus Calipatiria State Prison Solar Project, City of Calipatria, Imperial County, California. Cultural and Paleontological Assessments (August 2017 – April 2018). Belcourt provided oversight and project management for this project, involving cultural and paleontological resource desktop reviews, Native American outreach, coordinated AB52 consultation between the State of California and local tribes, arranged for the records searches and coordinated field surveys. She also oversaw production of the final technical report, project schedule, and timely submittal of data to prime contractor.

Ecoplexus RJ Donovan State Prison Solar Project, San Diego, San Diego County, California. Cultural and Paleontological Assessments (March 2018 – April 2018). Belcourt provided oversight and project management for this project, involving cultural and paleontological resource desktop reviews, Native American outreach, arranged for the records searches and coordinated field surveys. She also oversaw production of the final technical report, project schedule, and timely submittal of data to prime contractor.

Ecoplexus Salinas Valley State Prison Solar Project, City of Soledad, Monterey County, California. Cultural and Paleontological Assessments (March 2018 – April 2018). Belcourt provided oversight and project management for this project, involving cultural and paleontological resource desktop reviews, Native American outreach, arranged for the records searches and coordinated field surveys. She also oversaw production of the final technical report, project schedule, and timely submittal of data to prime contractor.

Ecoplexus Correctional Training Facility Soledad Project, City of Soledad, Monterey County, California. Cultural and Paleontological Assessments (March 2018 – April 2018). Belcourt provided oversight and project management for this project, involving cultural and paleontological resource desktop reviews, Native American outreach, arranged for the records searches and coordinated field surveys. She also oversaw production of the final technical report, project schedule, and timely submittal of data to prime contractor.

SDG&E Cameron Substation Photovoltaic Project, San Diego, San Diego County, California. Cultural and Paleontological Assessments (September 2017 – present). Belcourt provided oversight and project management for this project, involving cultural and paleontological resource desktop reviews, Native American outreach, facilitated Native American consultation between County of San Diego and local tribes, arranged for the records searches and coordinated field surveys. She also oversaw production of the final technical report, project schedule, and timely submittal of data to prime contractor.

Forefront Power Beard Solar Project, Dustin Acres, Kern County, California. Cultural and Paleontological Assessments (March 2018- April 2018). Belcourt provided oversight and project management for this project, involving cultural and paleontological resource desktop reviews, Native American outreach, arranged for the records searches and coordinated field surveys. She also oversaw production of the final technical report, project schedule, and timely submittal of data to prime contractor.

Forefront Power Broadman Solar Project, Livermore, Alameda County, California. Cultural and Paleontological Assessments (February 2018- March 2018). Belcourt provided oversight and project management for this project, involving cultural and paleontological resource desktop reviews, Native American outreach, arranged for the records searches and coordinated field surveys. She also oversaw production of the final technical report, project schedule, and timely submittal of data to prime contractor.

Forefront Power Nachtigall Solar Project, Wasco, Kern County, California. Cultural and Paleontological Assessments (March 2018-April 2018). Belcourt provided oversight and project management for this project, involving cultural and paleontological resource desktop reviews, Native American outreach, arranged for the records searches and coordinated field surveys. She also oversaw production of the final technical report, project schedule, and timely submittal of data to prime contractor.

Forefront Power Rocha Solar Project, Fuller Acres, Kern County, California. Cultural and Paleontological Assessments (March 2018-April 2018). Belcourt provided oversight and project management for this project, involving cultural and paleontological resource desktop reviews, Native American outreach, arranged for the records searches and coordinated field surveys. She also oversaw production of the final technical report, project schedule, and timely submittal of data to prime contractor.

Forefront Power Shafter Solar Project, City of Shafter, Kern County, California. Cultural and Paleontological Assessments (March 2018-present). Belcourt provided oversight and project management for this project, involving cultural and paleontological resource desktop reviews, Native American outreach, arranged for the records searches and coordinated field surveys. She also oversaw production of the final technical report, project schedule, and timely submittal of data to prime contractor.

Forefront Power Anderson Twisselman Solar Project, Lost Hills, Kern County, California. California. Cultural and Paleontological Assessments (March 2018-April 2018). Belcourt provided oversight and project management for this project, involving cultural and paleontological resource desktop reviews, Native American outreach, arranged for the records searches and coordinated field surveys. She also oversaw production of the final technical report, project schedule, and timely submittal of data to prime contractor.

Forefront Power Weedpatch Solar Project, Kern County, California. Cultural and Paleontological Assessments (March 2018-present). Belcourt provided oversight and project management for this project, involving cultural and paleontological resource desktop reviews, Native American outreach, arranged for the records searches and coordinated field surveys. She also oversaw production of the final technical report, project schedule, and timely submittal of data to prime contractor.

Jennifer Kelly, M.Sc.
Paleontological Principal Investigator and Project Manager

MATERIAL CULTURE
CONSULTING

Jennifer Kelly has experience in all aspects of paleontology. She has extensive experience with monitoring, salvage, fieldwork, project management, and report writing, as well as volunteer experience from the La Brea Tar Pits/Page Museum and the Cooper Center of Orange County (Paleontology department) and field experience as a Staff Geologist for Leighton Geotechnical. Her expertise is Geology, and she has her M.S. in Geological Sciences, emphasis in Geochemistry.

Jennifer has taught lab courses in paleontology and general geology, and also assisted with field mapping classes. Jennifer is HAZWOPER 40-hour certified and a registered Orange County paleontologist. She has authored and co-authored more than 100 paleontological compliance documents, including PRMPs, EIR, EIS, PEA, treatment plans, final monitoring reports, survey reports, and other compliance documents, in compliance with NEPA, CEQA, Caltrans and city and county laws, ordinances, regulations, and statutes.

Education

2012 M.Sc. in Geology, California State University, Long Beach, California
2005 B.S., Geology (preliminary work for entry to M.S. Geology Program), California State University, Long Beach
2004 B.A., Theater Arts, California State University, Long Beach

Certifications and Training

- 40 Hour Certification for HAZWOPER training under 29 CFR 1910. 120, CA (2013 – 2014)
- Orange County Certified Paleontologist
- San Diego County Certified Paleontologist

Recent Professional Experience in California

Paleontological Principal Investigator and Project Manager, Harvill Industrial Project, City of Jurupa Valley, Riverside County, California (2017-present). Ms. Kelly coordinated all surveying, preparation of compliance and environmental documentation for this project, and prepared the Paleontological Resources Impact Mitigation Plan (PRIMP). Kelly also oversees the paleontological monitoring program for this Project. This project is ongoing and is scheduled to be complete in 2020.

Paleontological Principal Investigator and Project Manager, Rider Commerce Center Project, Unincorporated Riverside County, California (2018-present). Ms. Kelly coordinated all surveying, preparation of compliance and environmental documentation for this project, and prepared the Paleontological Resources Impact Mitigation Plan (PRIMP). Kelly also oversees the paleontological monitoring program for this Project. This project is ongoing and is scheduled to be complete in 2020.

Paleontological Principal Investigator and Project Manager, Ontario Ranch Logistic Center, City of Ontario, County of San Bernardino, California (2018-present) Ms. Kelly coordinated all surveying, preparation of compliance and environmental documentation for this project, and authored the PRIMP for this project. Kelly also oversees the paleontological monitoring program for this Project. This project is ongoing and is scheduled to be complete in 2021.

Paleontological Principal Investigator and Project Manager, Saddleback College, City of Mission Viejo, Orange County (2018-present) Ms. Kelly coordinated all surveying, preparation of compliance and environmental documentation for this project, prepared the Paleontological Resources Impact Mitigation Plan (PRIMP), and

oversaw the paleontological monitoring program detailed in the PRIMP. Kelly is currently co-authoring the final paleontological mitigation report This project is in the final stages and is scheduled to be completed 2020.

Private Development Sector Experience

Paleontological Principal Investigator and Project Manager, Proposed Alta Vista Specific Plan Project, SC Development, City of Placentia, Orange County (2017). Ms. Kelly coordinated all surveying, preparation of compliance and environmental documentation relating to Paleontological resources for this project**.**

Paleontological Principal Investigator and Project Manager, Magnolia Tank Farm Project, SLF-HB Magnolia, LLC, City of Huntington Beach, Orange County (2017). Ms. Kelly coordinated all surveying, preparation of compliance and environmental documentation relating to Paleontological resources for this project**.**

Paleontological Principal Investigator and Project Manager, Santa Fe Springs Apartment Project, Clearwater Communities, City of Whittier, Los Angeles County (2017). Ms. Kelly coordinated all surveying, preparation of compliance and environmental documentation relating to Paleontological resources for this project**.**

Paleontological Principal Investigator and Project Manager, Rider Business Center Project, Capstone Advisor, Unincorporated Riverside County (2017). Ms. Kelly coordinated all surveying, preparation of compliance and environmental documentation relating to Paleontological resources for this project**.**

Paleontological Principal Investigator and Project Manager, Los Olivos French Valley Project, Newland Homes LLC, Unincorporated Riverside County (2017). Ms. Kelly coordinated all surveying, preparation of compliance and environmental documentation relating to Paleontological resources for this project**.**

Paleontological Principal Investigator and Project Manager, Veteran's Village Community Development Project, UHC LLC, Cathedral City, Riverside County (2017). Ms. Kelly coordinated all surveying, preparation of compliance and environmental documentation relating to Paleontological resources for this project**.**

Paleontological Principal Investigator and Project Manager, Colony Commerce East Project, CapRock Partners, City of Ontario, San Bernardino County (2016). Ms. Kelly coordinated all surveying, preparation of compliance and environmental documentation relating to Paleontological resources for this project**.**

Paleontological Principal Investigator and Project Manager, Jurupa Valley Medical Clinic Project, Boureston Company, City of Jurupa Valley, Riverside County (2016). Ms. Kelly coordinated all surveying, preparation of compliance and environmental documentation relating to Paleontological resources for this project**.**

Renewable Energy Sector Experience

Paleontological Project Manager, Tehachapi Renewable Transmission Project (TRTP), Southern California Edison (SCE), Kern County, Los Angeles County, San Bernardino County (2009-2015). Ms. Kelly conducted and led surveys along this project's right of way. She was also in charge of scheduling monitoring crews during grading in areas of paleontological sensitivity, managing and reviewing log sheets, and tracking data that is incorporated to final reports. Ms. Kelly played a valuable role with scheduling for the project's needs. She monitored, surveyed, and reported on all paleontological facets of this project as the Lead Paleontological Monitor for segment 3B, which was located near Rosamond, and for segments 4-11 which extended into Los Angeles and San Bernardino Counties. She authored more than 10 of the compliance reports for this project. She also performed monitoring on every segment of this Project.

Paleontological Project Manager, West of Devers Transmission Line Project, SCE, Riverside County, California (2009-2016). Ms. Kelly provided all project management and paleontological related services. This included proper BLM authorization and permitting to conduct surveying and a research design for field reconnaissance related to PEA, EIS/EIR documentation for the proposed transmission line. She assisted with managing documentation with laws relating to paleontological resources, among which are CEQA and NEPA compliance.

Appendix B
Cultural Resources
Record Search Results

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
OR-00277		1978	Cottrell, Marie G.	Archaeological Reconnaissance of the Serrano Highlands, Project Area (rancho De Los Alisos, Units 1 & 2)		30-000039, 30-000773
OR-00495		1980	Cottrell, Marie G.	Archaeological Assessment of Rancho De Los Alisos Planning Area 6.		30-000741, 30-000858, 30-000859
OR-00580		1977	Anonymous	The Aliso Creek Watershed, Orange County, California a Proposal for Creating an Archaeological District for the National Register of Historic Places and a Suggested Research and Study Design	Scientific Resource Surveys, Inc.	
OR-00611		1988	Bissell, Ronald M.	Cultural Resources Reconnaissance of the Baker Ranch Property, El Toro Orange County,	RMW Paleo Associates, Inc.	30-000040, 30-000758, 30-001004, 30-001145, 30-001150
OR-00730		1984	Bissell, Ronald M.	Cultural Resources Assessment Tentative Tract 12110 Orange County, California	RMW Paleo Associates, Inc.	30-001057, 30-100438, 30-100439
OR-00738		1984	Bissell, Ronald M.	Cultural Resources Assessment Tentative Tract 11986 Orange County, California	RMW Paleo Associates, Inc.	30-000698, 30-001058, 30-001495, 30-100309, 30-100310, 30-100311
OR-00748		1984	Bissell, Ronald M.	Cultural Resources Assessment Los Alisos Research and Development Park El Toro, Orange County, California	RMW Paleo Associates, Inc.	30-000570, 30-000647, 30-000648, 30-001062, 30-001063, 30-001064, 30-001065, 30-001066
OR-00773		1985	Bissell, Ronald M.	Archaeological Site CA-ORA-1057, a Late Prehistoric Period Hunting Camp in El Toro, Orange County, California	RMW Paleo Associates, Inc.	30-001057
OR-00798		1985	Bissell, Ronald M.	Archaeological Survey of the Canada Apartments Property in El Toro, Orange County, California	RMW Paleo Associates, Inc.	
OR-00799		1985	Bissell, Ronald M.	Archaeological Survey of Property Belonging to the William Lyon Company El Toro, Orange County, California	RMW Paleo Associates, Inc.	30-000176, 30-001100
OR-00875		1987	Bissell, Ronald M.	Cultural Resources Reconnaissance of the Canada Ridge Lane Property, El Toro, Orange County, California	RMW Paleo Associates, Inc.	
OR-00909		1988	Bissell, Ronald M.	Cultural Resources Reconnaissance of Tentative Parcel 83-110, El Toro, Orange County	RMW Paleo Associates, Inc.	
OR-00940		1988	Bissell, Ronald M.	Interim Report Test Excavation of Nine Archaeological Sites on the Pacific Commercentre Property, El Toro Area, Orange County California	RMW Paleo Associates, Inc.	30-000510, 30-000647, 30-000648, 30-001062, 30-001063, 30-001064, 30-001065, 30-001066, 30-001171

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
OR-01022		1989	Del Chario, Kathleen C., V. Drummy-Chapel, and C. R. Demcak	Cultural Resource Assessment for the Allen-mccolloch Pipeline (amp) Flow Augmentation Project Reaches S4b/s5	ARM	30-000244, 30-000643, 30-000647, 30-000651
OR-01088		1990	Brock, James P.	Report on Archaeological Monitoring of Rough Grading of Bake Parkway From Portola Parkway to Station 159+40.81, El Toro, California	Archaeological Advisory Group	30-100444
OR-01372		1994	Brown, Joan C.	Mitigation and Monitoring of Eight Prehistoric Archaeological Sites, CA-ORA-510, CA-ORA-647, CA-ORA-648, CA-ORA-1062, CA-ORA-1063, CA-ORA-1065, CA-ORA-1066, CA-ORA-1171, Located in Southern Orange County, California	RMW Paleo Associates, Inc.	30-000510, 30-000647, 30-000648, 30-001062, 30-001063, 30-001065, 30-001066, 30-001171
OR-01567		1997	Jertberg, Patricia R.	Archaeological Services for 25781 Atlantic Ocean Drive, Lake Forest (permit #w007506)	Petra Resources Inc.	
OR-01583	Paleo -	1974	Nicoll, Gerald A.	Archaeology and Paleontology Report for Rancho De Los Alisos Area, Orange County, California	G.A. Nicoll and Associates	
OR-01678		1998	Jertberg, Patricia R.	Archaeological Services for Tract 13344, Lot 6, 25741 Atlantic Ocean Drive, Pacific Commercentre, Lake Forest, Orange County, California	Petra Resources Inc.	
OR-01679		1998	Jertberg, Patricia R.	Archaeological Services for Tract 13343, Lot 5, Pacific Commercentre, Lake Forest	Petra Resources Inc.	
OR-01696		1998	Jertberg, Patricia R.	Archaeological Services for Tract 13344, Lot 13, 26012 Atlantic Ocean Drive, and Lot 39, 26021 Commercentre Drive, Lake Forest	Petra Resources, Inc.	
OR-01697		1998	Jertberg, Patricia R.	Archaeological Services for Tract 13343, Lot 1, 20571 Crescent Bay Drive, Lake Forest	Petra Resources, Inc.	
OR-02211		2001	Hoover, Anne M.	Cultural Resources Reconnaissance and Monitoring of Pacific Commercentre, and Mitigation of CA-ORA-1581, City of Lake Forest, County of Orange, Ca	RMW Paleo Associates, Inc.	30-001581
OR-02218		2000	Brock, James P.	Archaeological Assessment for the Proposed Comfort Inn Project, 20768 Lake Forest Drive, Orange County, Ca	Archaeological Advisory Group	30-000037, 30-001057, 30-001062, 30-001100, 30-001147, 30-001171

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
OR-02219	Paleo -	2000	White, Robert S., White, Laurie, and Minch, John	Archaeological and Paleontological Assessments of a 12.05 Acre Parcel Located Just East of Dimension Drive and Enterprise Way in Lake Forest, Orange County	Archaeological Associates, Ltd.	30-000037, 30-000039, 30-000040, 30-000176, 30-000510, 30-000647, 30-000648, 30-000758, 30-000773, 30-001004, 30-001057, 30-001058, 30-001062, 30-001063, 30-001064, 30-001065, 30-001066, 30-001100, 30-001146, 30-001147, 30-001148, 30-001149, 30-001150, 30-001171, 30-001496
OR-03063		2001	Bonner, Wayne H.	Records Search Results for Sprint Pcs Facility Og65xc417d (the Pacific World Site), Located at 25791 Commercentre Drive, El Toro in Orange County, California	Michael Brandman Associates	
OR-03744		2009	Carolyn Losee	Cultural Resources Investigation for T-Mobile LA33498A "The Arbors" 26356 Vintage Woods Road, Lake Forest, Orange County, CA 92630	Archaeological Resources Technology	
OR-03748		2009	Patrick O. Maxon	Phase II Archaeological Evaluation CA-ORA-1004 & CA-ORA-1150	Bonterra Consulting	30-001004, 30-001150
OR-03749		2008	Patrick O. Maxon	Phase I Cultural Resources Reconnaissance Survey- Proposed Alton Parkway Extension Project, Including Baker Ranch, Lake Forest, CA	BonTerra Consulting	30-000040, 30-000758, 30-001004, 30-001150
OR-03770		2009	Clark, Fatima	Results of the Cultural Resource Assessment for the Southern Calirornia Edison Replacement of Deteriorated Pole Nos. 2140160E, 2140170E, 2140171E, 2140178E, 2140179E, and 2280425; Orange County, California; WO 4805-0557	PCR Services Corporation	30-000037, 30-000038, 30-000039, 30-000117, 30-000510, 30-000612, 30-000698, 30-000773, 30-001057, 30-001058, 30-001064, 30-001495, 30-100309, 30-100310, 30-100311, 30-100439, 30-156547
OR-03840		2009	Marken, Mitch	Phase I Archaeological Assessment for the IRWD Baker Regional Water Treatment Plant Project, Orange County, CA	ESA	30-000039, 30-000647, 30-000648, 30-000773, 30-001060
OR-03992		2010	Bray, Madeleine	Archaeological Addendum Report for the IRWD Baker Regional Water Treatment Plant Project, Orange County, CA	ESA	30-000039, 30-001495
OR-04358	Paleo -	1999	Gust, Sherrl	Archaeological and Paleontological Monitoring Report for Serrano Creek Business Center, Lake Forest, California	RMW Paleo Associates, Inc.	

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
OR-04574		2011	Brunzell, David	Cultural Resources Assessment of the Crown Castle USA Southern California Metro PCS DAS Project, Orange and Los Angeles Counties, California (BCR Consulting Project No. SYN1007)	BCR Consulting	

Resource List

Primary No.	Trinomial	Other IDs	Type	Age	Attribute codes	Recorded by	Reports
P-30-000037	CA-ORA-000037	Resource Name - CAMP 37 OCAS		Unknown	AP01	1949	OR-00286, OR-01995, OR-02218, OR-02219, OR-03770
P-30-000040	CA-ORA-000040	Resource Name - CAMP 40 OCAS	Site, Other	Prehistoric	AP02	1949	OR-00255, OR-00611, OR-01995, OR-02219, OR-03749
P-30-000510	CA-ORA-000510		Site	Prehistoric	AP02	1975 (Rice, Glen, Archaeological Research, Inc.); 1994 (Brown, Joan, RMW Paleo Asoociates)	OR-00940, OR-01372, OR-01995, OR-02219, OR-03770
P-30-001057	CA-ORA-001057	Resource Name - Signal Landmark I	Site	Prehistoric	AP02; AP08	1984 (Bissell, Ron, RMW Paleo Associates, Inc.)	OR-00730, OR-00773, OR-02218, OR-02219, OR-03747, OR-03770, OR-04336
P-30-001062	CA-ORA-001062	Resource Name - Signal Landmark III	Site	Prehistoric	AP02	1984 (Bissell, Ron); 1994 (Brown, J., RMW Paleo Associates)	OR-00748, OR-00940, OR-01372, OR-02218, OR-02219, OR-02985
P-30-001064	CA-ORA-001064	Resource Name - Signal Landmark V	Site	Prehistoric	AP02	1984 (Bissell, Ron); 1994 (Brown, J., RMW Paleo Associates)	OR-00748, OR-00940, OR-02219, OR-03747, OR-03770
P-30-001065	CA-ORA-001065	Resource Name - Signal Landmark VI	Site	Prehistoric	AP02	1984 (Bissell, Ron); 1994 (Brown, J., RMW Paleo Associates)	OR-00748, OR-00940, OR-01372, OR-02219
P-30-001171	CA-ORA-001171	Resource Name - Site Z	Site	Prehistoric	AP02	1988 (BISSELL, RMW Paleo Associates); 1994 (Brown, J., RMW Paleo Associates)	OR-00940, OR-01372, OR-02218, OR-02219
P-30-001581	CA-ORA-001581	Resource Name - PCC-1	Site	Prehistoric	AP02; AP15	2000 (R. Bissell, RMW Paleo Associates)	OR-02211, OR-03747
P-30-100311		Resource Name - #5 Isolated Chopper/Scraper; Other - Signal Landmark Isolate III	Other	Prehistoric	AP02	1984 (R. Bissell, RMW Paleo Associates, Inc.)	OR-00738, OR-03747, OR-03770, OR-04336
P-30-100438		Resource Name - Signal Landmark Isolate I	Other	Prehistoric	AP02	1984 (R. Bissell)	OR-00730, OR-03747, OR-04336

Resource List

Primary No.	Trinomial	Other IDs	Type	Age	Attribute codes	Recorded by	Reports
P-30-100439		Resource Name - Signal Landmark Isolate II	Other	Prehistoric	AP02	1984 (R. Bissell)	OR-00730, OR-03747, OR-03770

Appendix C
NAHC and Native American Correspondence

NATIVE AMERICAN HERITAGE COMMISSION

CHAIRPERSON
Laura Miranda
Luiseño

VICE CHAIRPERSON
Reginald Pagaling
Chumash

SECRETARY
Merri Lopez-Keifer
Luiseño

PARLIAMENTARIAN
Russell Attebery
Karuk

COMMISSIONER
Marshall McKay
Wintun

COMMISSIONER
William Mungary
Paiute/White Mountain Apache

COMMISSIONER
Julie Tumamait-Stenslie
Chumash

COMMISSIONER
[Vacant]

COMMISSIONER
[Vacant]

EXECUTIVE SECRETARY
Christina Snider
Pomo

NAHC HEADQUARTERS
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Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

August 5, 2020

Tria Belcourt
Material Culture Consulting, Inc.

Via Email to: tria@materialcultureconsulting.com

Re: EPD Great Scott Project, Orange County

Dear Ms. Belcourt:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance, we can assure that our lists contain current information.

If you have any questions or need additional information, please contact me at my email address: Andrew.Green@nahc.ca.gov.

Sincerely,

Andrew Green

Andrew Green
Cultural Resources Analyst

Attachment

Native American Heritage Commission
Native American Contact List
Orange County
8/5/2020

Gabrieleno Band of Mission Indians - Kizh Nation
Andrew Salas, Chairperson
P.O. Box 393 Gabrieleno
Covina, CA, 91723
Phone: (626) 926 - 4131
admin@gabrielenoindians.org

Gabrieleno/Tongva San Gabriel Band of Mission Indians
Anthony Morales, Chairperson
P.O. Box 693 Gabrieleno
San Gabriel, CA, 91778
Phone: (626) 483 - 3564
Fax: (626) 286-1262
GTTribalcouncil@aol.com

Gabrielino /Tongva Nation
Sandonne Goad, Chairperson
106 1/2 Judge John Aiso St., #231 Gabrielino
Los Angeles, CA, 90012
Phone: (951) 807 - 0479
sgoad@gabrielino-tongva.com

Gabrielino Tongva Indians of California Tribal Council
Robert Dorame, Chairperson
P.O. Box 490 Gabrielino
Bellflower, CA, 90707
Phone: (562) 761 - 6417
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La Jolla Band of Luiseno Indians
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This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed EPD Great Scott Project, Orange County.

Native American Heritage Commission
Native American Contact List
Orange County
8/5/2020

Pala Band of Mission Indians
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Cupeno
Luiseno

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Luiseno

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Luiseno

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Cahuilla

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Cahuilla
Luiseno

Soboba Band of Luiseno Indians
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Luiseno

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed EPD Great Scott Project, Orange County.

August 6, 2020

MATERIAL CULTURE
CONSULTING

RE: Proposed Great Scott Project, City of Lake Forest; El Toro USGS Quadrangle, Orange County, California.

Greetings,

Material Culture Consulting, Inc (MCC) is conducting the cultural resources review of the above project to support preparation of the environmental documents. The project proposes the development of a parcel in the City of Lake Forest, CA (see attached map). As part of our background research and forthcoming survey, we would like to invite you to share any knowledge of potential cultural resources within the project area. Please note - this request is **not** part of any formal local, state, or federal consultation process, and all requests for consultation should be directed to the City of Lake Forest as the Lead CEQA Agency.

Our firm contacted the Native American Heritage Commission (NAHC) on August 4, 2020 to request review of the Sacred Lands File and for a list of tribes with traditional lands and/or cultural places within the area. The NAHC responded on August 5, 2020 stating that the Sacred Lands File review resulted in **negative** results and provided your contact information as part of the list. We understand that negative results do not preclude the existence of cultural resources, and that a tribe may be the only source of information regarding the existence of a tribal cultural resource, which is why we are contacting you.

Project Location and Description

The proposed Project Area currently exists as a developed area with a home, barn, and multiple structures associated with various farm animals. It is bounded by commercial development in all cardinal directions. The Project Area is located west of Linear Lane, north of Canada Road, and Is bordered by Serrano Creek to the south and east. The Project consists of remodeling the existing house to an office, removing structures associated with animal keeping, creating gravel parking areas, and clearing some vegetation. The area of potential impact (API) would encompass a total of approximately 6.37 acres. Specifically, the proposed Project is located within Section 11 and 12 of Township 06 South and Range 08 West on the USGS El Toro quadrangle (San Bernardino Base Meridian).

Please respond at your earliest convenience if you wish to share any knowledge of cultural resources within or adjacent to the API. Any information, concerns, or recommendations regarding cultural resources within the API can be shared with me via telephone, email, or via standard mail. Thank you very much for your assistance.

Kindest regards,

Tria Belcourt, M.A., RPA
President and Principal Archaeologist
626-205-8279
tria@materialcultureconsulting.com

Project Area

0 0.25 0.5 1 Miles

0 0.25 0.5 1 Kilometers

1:24,000

MATERIAL CULTURE CONSULTING

Name/Affiliation	Date and Method of 1st Contact	Date of 1st Follow Up Attempt	Date of 2nd Follow-Up Attempt	Results	MCC Response
Andrew Salas, Chairperson Gabrieleno Band of Mission Indians - Kizh Nation P.O. Box 393 Covina, CA, 91723	Letter mailed via USPS on August 6, 2020 [EM]	E-mail sent on August 25, 2020 [EM]	Call placed and voicemail left on September 9, 2020. [EM]	On 8/8, MCC received an email from Brandy Salas requesting the lead agency's contact information.	MCC will include response within report.
Anthony Morales, Chairperson Gabrieleno/Tongva San Gabriel Band of Mission Indians P.O. Box 693 San Gabriel, CA, 91778	Letter mailed via USPS on August 6, 2020 [EM]	E-mail sent on August 25, 2020 [EM]	Call placed on September 9, 2020. [EM]	Mr. Morales stated that due to its location warrants archaeo and Native American monitoring, but would like to be updated with the survey and record search results to provide a positive answer. An update was given on 11/3/20 to Mr. Morales. He stated if arch monitoring is required, he requires a Native American monitor. He would like to be informed as the project continues.	MCC will include response within report.
Sandonne Goad, Chairperson Gabrielino /Tongva Nation 106 1/2 Judge John Aiso St., #231 Los Angeles, CA, 90012	Letter mailed via USPS on August 6, 2020 [EM]	E-mail sent on August 25, 2020 [EM]	Call was placed on September 9, 2020. Mailbox was full. [EM]	n/a	n/a

Robert Dorame, Chairperson **Gabrielino Tongva Indians of California Tribal Council** **P.O. Box 490** **Bellflower, CA, 90707**	Letter mailed via USPS on August 6, 2020 [EM]	E-mail sent on August 25, 2020 [EM]	Call was placed on September 9, 2020. Mailbox was full. [EM]	Mr. Dorame would like to be informed after the survey is completed to give the tribe's response. An update was given on 11/3/20, in the event that cultural resources or human remains are discovered or impacted, the tribe would like to be notify regardless of the coroner's decision. The reasoning is that there has been confusion recently within Orange County when discovering human remains.	MCC will include response within report.
Charles Alvarez **Gabrielino-Tongva Tribe** **23454 Vanowen Street** **West Hills, CA, 91307**	Letter mailed via USPS on August 6, 2020 [EM]	E-mail sent on August 25, 2020 [EM]	Call placed and voicemail left on September 9, 2020 [EM]	n/a	n/a
Sonia Johnston, Chairperson **Juaneno Band of Mission Indians** **P.O. Box 25628 Santa Ana, CA, 92799**	Letter mailed via USPS on August 6, 2020 [EM]	E-mail sent on August 25, 2020 [EM]	E-mail was resent on September 9, 2020. [EM]	n/a	n/a
Matias Belardes, Chairperson **Juaneno Band of Mission Indians** **Acjachemen Nation – Belardes** **32161 Avenida Los Amigos San Juan Capistrano, CA, 92675**	Letter mailed via USPS on August 6, 2020 [EM]	E-mail sent on August 25, 2020 [EM]	Call placed and directed to Joyce Perry. See below.	n/a	n/a

Joyce Perry, Tribal Manager **Juaneno Band of Mission Indians Acjachemen Nation – Belardes** **4955 Paseo Segovia** **Irvine, CA, 92603**	Letter mailed via USPS on August 6, 2020 [EM]	E-mail sent on August 25, 2020 [EM]	Call placed and voicemail left on September 9, 2020. [EM]	n/a	n/a
Heidi Lucero, Cultural Resources Director **Juaneno Band of Mission Indians Acjachemen Nation – Romero** **31411-A La Matanza Street San Juan Capistrano, CA, 92675**	Letter mailed via USPS on August 6, 2020 [EM]	E-mail sent on August 25, 2020 [EM]	Call placed on September 9, 2020. [EM]	n/a	n/a
Teresa Romero, Chairperson **Juaneno Band of Mission Indians Acjachemen Nation – Romero** **31411-A La Matanza Street San Juan Capistrano, CA, 92675**	Letter mailed via USPS on August 6, 2020 [EM]	E-mail sent on August 25, 2020 [EM]	Call was placed and directed to above contact on September 9, 2020. [EM]	n/a	n/a
Fred Nelson, Chairperson **La Jolla Band of Luiseno Indians** **22000 Highway 76** **Pauma Valley, CA, 92061**	Letter mailed via USPS on August 6, 2020 [EM]	Call placed and voicemail left on August 25, 2020 [EM]	Call placed and message left for Cultural Resource Department with secretary Nicole on September 9, 2020. [EM]	n/a	n/a
Shasta Gaughen, Tribal Historic Preservation Officer **Pala Band of Mission Indians** **PMB 50, 35008 Pala Temecula Rd.** **Pala, CA, 9205**	Letter mailed via USPS on August 6, 2020 [EM]	E-mail sent on August 25, 2020 [EM]	Call placed and voicemail left on September 9, 2020. [EM]	n/a	n/a

Temet Aguilar, Chairperson Pauma Band of Luiseno Indians P.O. Box 369 Pauma Valley, CA, 92061	Letter mailed via USPS on August 6, 2020 [EM]	E-mail sent on August 25, 2020 [EM]	Call placed and voicemail left on September 9, 2020.	n/a	n/a
San Luis Rey Band of Mission Indians 1889 Sunset Drive Vista, CA, 92081	Letter mailed via USPS on August 6, 2020 [EM]	E-mail sent on August 25, 2020 [EM]	Call placed and was directed to call Cami at (760)917-1736.	Cami stated the Project Area is out of boundaries and defers to Juaneno Band of Mission Indians Acjachemen Nation – Belardes.	MCC will include response in report.
San Luis Rey, Tribal Council San Luis Rey Band of Mission Indian 1889 Sunset Drive Vista, CA, 92081	Letter mailed via USPS on August 6, 2020 [EM]	E-mail sent on August 25, 2020 [EM]	See above	n/a	n/a
Lovina Redner, Tribal Chair Santa Rosa Band of Cahuilla Indians P.O. Box 391820 Anza, CA, 9253	Letter mailed via USPS on August 6, 2020 [EM]	E-mail sent on August 25, 2020 [EM]	Call placed and directed to send email. Email was sent to Vanessa Minott on September 9, 2020	n/a	n/a
Joseph Ontiveros, Cultural Resource Department Soboba Band of Luiseno Indians P.O. BOX 487 San Jacinto, CA, 92581	Letter mailed via USPS on August 6, 2020 [EM]	E-mail sent on August 25, 2020 [EM]	Call placed on September 9, 2020.	Mr. Ontiveros deferred the Project to tribes in the area.	MCC will include response in report.
Scott Cozart, Chairperson Soboba Band of Luiseno Indians P. O. Box 487 San Jacinto, CA, 92583	Letter mailed via USPS on August 6, 2020 [EM]	E-mail sent on August 25, 2020 [EM]	See above	n/a	n/a

Appendix D
Paleontological Resources
Records Search Results

Natural History Museum
of Los Angeles County
900 Exposition Boulevard
Los Angeles, CA 90007

tel 213.763.DINO
www.nhm.org

Research & Collections

e-mail: paleorecords@nhm.org

7 August 2020

Material Culture Consulting, Inc.
2701-B North Towne Ave
Pomona, CA 91767

Attn: Erika McMullin; erika@materialcultureconsulting.com

re: Paleontological resources for the Great Scott Project, Orange County, CA

Dear Erika:

I have conducted a thorough search of our paleontology collection records for the locality and specimen data for proposed development at Great Scott Project, Orange County, CA project area as outlined on the portion of the El Toro USGS topographic quadrangle map that you sent to me via e-mail on 4 August 2020. We do not have any fossil localities that lie directly within the proposed project area, but we do have fossil localities nearby from the same sedimentary deposits that occur in the proposed project area, either at the surface or at depth.

The following table shows the closest known localities in the collection of the Natural History Museum of Los Angeles County.

Locality Number	Location	Formation	Taxa	Depth
LACM VP 5500	east of Lake Forest Drive between Vintage Road on the north & Pittsford Drive on the south	Capistrano Formation	Seals (Pinnipedia)	unknown
LACM VP 4666-4668	West of El Toro Road & north of Trabuco Road	Capistrano Formation	Mammals, including eared seals (Otariidae)	22 ft bgs
LACM IP 7706	1 mile W.S.W. of El Toro	Topanga Formation	Invertebrates	unknown
LACM VP 7546-7547	N. side of Blake Parkway, W. of state highway 241	Capistrano Formation	Dolphin (Pontoporiidae), seal (Imagotariinae)	unknown
LACM VP 3491	Cheery Street & El Toro Road	Capistrano Formation	Shark (*Carcharodon, Isurus*; teleost fishes (Teleostei); eared seals (Otariidae); toothed whale (Odontoceti)	unknown

VP, Vertebrate Paleontology; IP, Invertebrate Paleontology; bgs, below ground surface

Excavations into fossil-bearing strata may well encounter significant fossils and should be closely monitored to quickly and professionally collect any specimens without impeding development. Also, sediment samples should be collected and processed to determine the small fossil potential in the proposed project area. Any fossils recovered during mitigation should be deposited in an accredited and permanent scientific institution for the benefit of current and future generations.

This records search covers only the records of the Natural History Museum of Los Angeles County. It is not intended to take the place of a thorough paleontological assessment of the proposed project area covering other institutional records, a literature review, or any potential on-site survey.

Sincerely,

Alyssa Bell, Ph.D.
Natural History Museum of Los Angeles County

enclosure: invoice

September 14, 2023 Project No. 19035-01

Mr. Sam Juarez
EPD Solutions, Inc.
2030 Main Street, Suite 1200
Irvine, CA 92614

Subject: ***Preliminary Geotechnical Evaluation and Design Recommendations for Proposed Great Scott Tree Service Commercial Development, APNs 610-301-07, -20, and -21, 20865 Canada Road, Lake Forest, California***

In accordance with your request and authorization, LGC Geotechnical, Inc. has performed a preliminary geotechnical evaluation for the proposed Great Scott Tree Service commercial development, APNs 610-301-07, -20, and -21, located at 20865 Canada Road in the City of Lake Forest, California. The purpose of our study was to evaluate the existing onsite geotechnical conditions and to provide preliminary geotechnical recommendations relative to the proposed development.

Should you have any questions regarding this report, please do not hesitate to contact our office. We appreciate this opportunity to be of service.

Respectfully Submitted,

LGC Geotechnical, Inc.

Ryan Douglas, PE, GE 3147
Project Engineer

REGISTERED PROFESSIONAL ENGINEER
RYAN L. DOUGLAS
No. 3147
GEOTECHNICAL
STATE OF CALIFORNIA

Katie Maes, CEG 2216
Project Geologist

CERTIFIED ENGINEERING GEOLOGIST
KATHERIN M. MAES
No. 2216
STATE OF CALIFORNIA

RLD/KTM/amm

Distribution: (1) Addressee (electronic copy)

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Appendix D – Infiltration Test Data
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1.0 INTRODUCTION

1.1 Purpose and Scope of Services

This report presents the results of our preliminary geotechnical evaluation for the proposed commercial development located at 20865 Canada Road in the City of Lake Forest, California. Refer to the Site Location Map (Figure 1).

The purpose of our study was to provide a preliminary geotechnical evaluation relative to the proposed development. As part of our scope of work, we have: 1) reviewed available geotechnical background information including in-house regional geologic maps and published geotechnical literature pertinent to the site (Appendix A); 2) performed a limited subsurface geotechnical evaluation of the site consisting of the excavation of three small-diameter borings ranging in depth from approximately 5 to 50 feet below existing ground surface; 3) performed one field infiltration test; 4) performed laboratory testing of select soil samples obtained during our subsurface evaluation; and 5) prepared this geotechnical summary report presenting our preliminary findings, conclusions and recommendations for the development of the proposed project.

1.2 Existing Conditions

The approximately 6.72-acre project site is comprised of three parcels (APNs 610-301-07, -20, and -21) and is currently developed with one single-family residence, along with a second residence that was converted for office use which has since been demolished, and a barn with multiple structures. Open unpaved (dirt) areas within the site are used for parking and storage. Serrano Creek forms the project site's northern boundary. There are several trees with brush and vegetation distributed throughout the site. The Project site is currently accessed from two driveways on Linear Lane and a driveway on Canada Road.

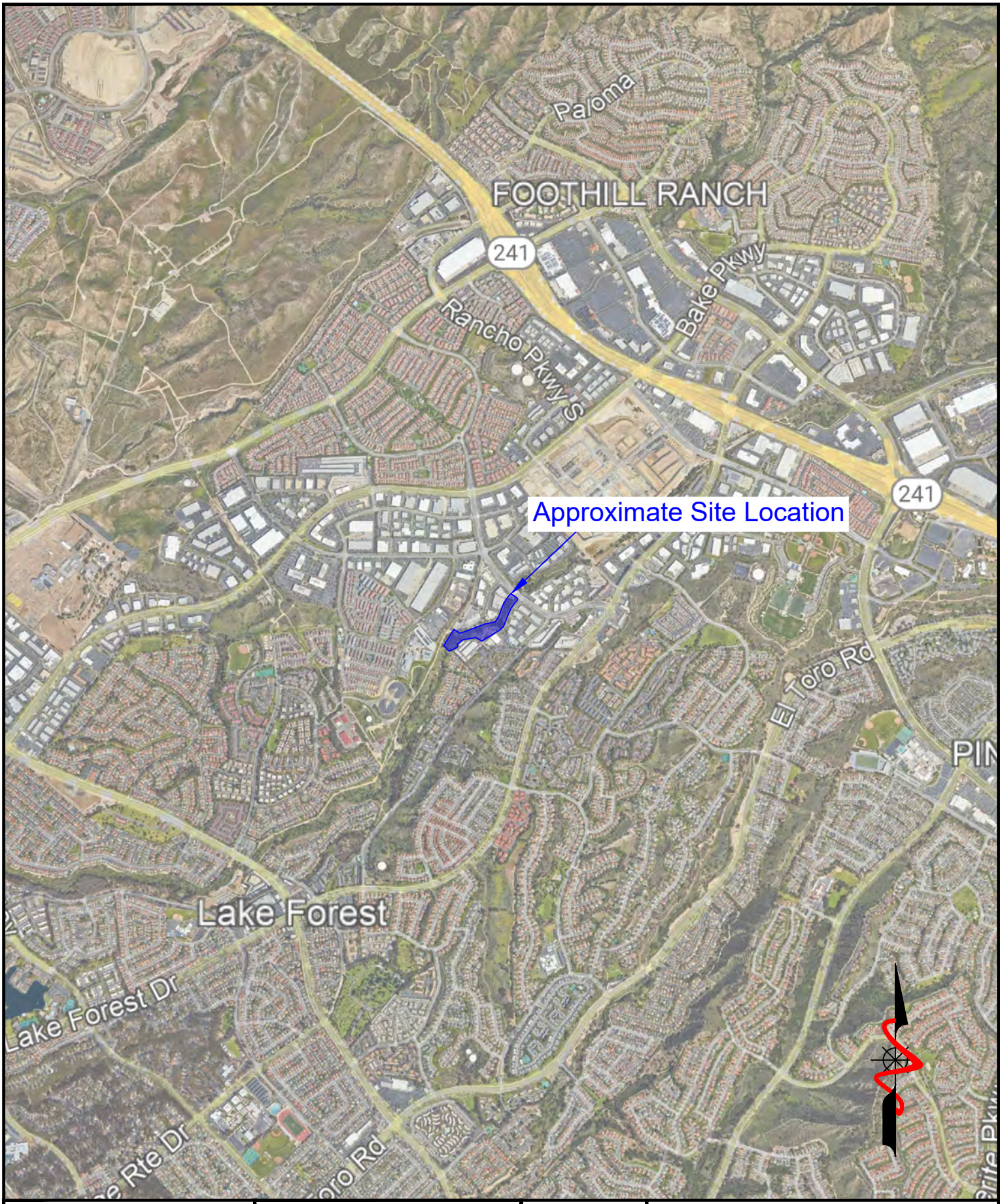
Based on review of historic aerials, it appears the barn structure was constructed some time before the year 1938 and the residential structure was constructed sometime between the years 1946 and 1952.

1.3 Project Description

Based on the preliminary grading plan (Huitt-Zollars, 2023), the proposed improvements include the construction of a gravel road and gravel parking areas, building remodels, a new trash enclosure, retaining walls, and water quality improvements. The proposed development is located on the southern side of the existing Serrano Creek alignment. Design cuts and fills (not including required remedial grading) are anticipated to be on the order of 2 to 4 feet. The proposed building remodels are anticipated to be relatively light with maximum column and wall loads of approximately 20 kips and 2 kips per linear foot, respectively. Please note no structural loads were provided to us at the time of this report.

Some of the existing structures including the barn (storage building) and residence (office) are anticipated to remain in-place and keep the same building footprint that currently exists.

The recommendations given in this report are based upon the estimated structural loading, grading and layout information above. We understand that the project plans are currently being developed at this time; LGC Geotechnical should be provided with updated project plans and any changes to structural loads when they become available, in order to either confirm or modify the recommendations provided herein.



LGC Geotechnical, Inc.

FIGURE 1
Site Location Map

PROJECT NAME	Great Scott - Lake Forest
PROJECT NO.	19035-01
ENG. / GEOL.	RLD / KTM
SCALE	Not to Scale
DATE	September 2023

1.4 Subsurface Geotechnical Evaluation

LGC Geotechnical performed a limited subsurface geotechnical evaluation of the site consisting of the excavation of three hollow-stem auger borings to evaluate onsite geotechnical conditions.

Three hollow-stem borings (HS-1, HS-2 & I-1) were drilled to depths ranging from approximately 5 to 50 feet below existing grade. An LGC Geotechnical staff engineer observed the drilling operations, logged the borings, and collected soil samples for laboratory testing. The borings were excavated by Calpac Drilling under subcontract to LGC Geotechnical using a truck-mounted drill rig equipped with 8-inch-diameter hollow-stem augers. Driven soil samples were collected by means of the Standard Penetration Test (SPT) and Modified California Drive (MCD) sampler generally obtained at 2.5 to 5-foot vertical increments. The MCD is a split-barrel sampler with a tapered cutting tip and lined with a series of 1-inch-tall brass rings. The SPT sampler (1.4-inch ID) and MCD sampler (2.4-inch ID, 3.0-inch OD) were driven using a 140-pound automatic hammer falling 30 inches to advance the sampler a total depth of 18 inches. The raw blow counts for each 6-inch increment of penetration were recorded on the boring logs. Bulk samples of the near-surface soils were also collected and logged at select borings for laboratory testing. At the completion of drilling, the borings were backfilled with the native soil cuttings and tamped. Some settlement of the backfill soils may occur over time.

Infiltration testing was performed within one of the borings (I-1) to a depth of 5 feet below existing grade. An LGC Geotechnical staff engineer installed standpipe, backfilled the boring with crushed rock and pre-soaked the infiltration hole prior to testing. Infiltration testing was performed per the County of Orange testing guidelines. The location was subsequently backfilled with native soils at the completion of testing.

The approximate locations of our subsurface explorations are provided on the Geotechnical Exploration Location Map (Figure 2). The boring logs are provided in Appendix B.

1.5 Laboratory Testing

Representative bulk and driven (relatively undisturbed) samples were obtained for laboratory testing during our field evaluation. Laboratory testing included in-situ moisture content and in-situ dry density, Atterberg Limits, fines content, expansion index, consolidation, R-value and corrosion (sulfate, chloride, pH and minimum resistivity).

The following is a summary of the laboratory test results:

- Dry density of the samples collected ranged from approximately 91 pounds per cubic foot (pcf) to 117 pcf, with an average of 106 pcf. Field moisture contents ranged from approximately 1 to 26 percent, with an average of 13 percent.
- Four fines content tests were performed and indicated a fines content (passing No. 200 sieve) ranging from approximately 6 to 37 percent. Based on the Unified Soils Classification System (USCS), the tested samples would be classified as “coarse-grained.”
- One Atterberg Limit (liquid limit and plastic limit) test was performed. Results indicated a Plasticity Index (PI) value of 17.
- One consolidation test was performed. The load versus deformation plot is provided in

Appendix C.

- Expansion potential testing indicated an expansion index value of 8, corresponding to "Very Low" expansion potential.
- One R-value test was performed on a bulk sample collected and resulted in an R-Value of 66.
- Corrosion testing indicated soluble sulfate contents of approximately 0.02 percent, a chloride content of 103 parts per million (ppm), pH of 8.2, and a minimum resistivity of 857 ohm-centimeters.

A summary of the laboratory test results is presented in Appendix C. The moisture and dry density results are presented on the boring logs in Appendix B.

2.0 GEOTECHNICAL CONDITIONS

2.1 Geologic Conditions

The subject site is located within the foothills of the Santa Ana Mountains, part of the Peninsular Ranges Geomorphic Province. The region consists of dissected foothills bordering the Los Angeles Basin to the northwest and the granite-core Santa Ana Mountains to the east. The Southern California Batholith forms the core of the Santa Ana Mountains, which is overlain by a thick sequence of sedimentary units, which comprise the foothills including the subject site. Late Miocene to Early Pliocene bedrock materials of the Oso Member of the Capistrano Formation that underlie the subject site at depth are primarily composed of sandstone and silty sandstone (USGS, 2004).

The site is specifically located within the Serrano Creek drainage course and the area just southeast of the active drainage. The southwest-flowing creek has deposited variable alluvial materials as observed during our subsurface investigation.

2.2 Generalized Subsurface Conditions

The subsurface evaluation performed at the subject site indicated that site soils consist of variable alluvium ranging from very moist to wet, moderate to dark brown clayey sand and sand, to an alluvial deposit consisting of light gray, relatively dry, medium to coarse sand with few pebbles. The material is labelled "younger alluvium" on boring logs. Bedrock of the Capistrano Formation, Oso Member was encountered at depth below the alluvium, consisting of light yellowish brown, silty sandstone, moist, very dense, observed to the maximum explored depth of approximately 50 feet below existing grade.

It should be noted that the borings are only representative of the location and time where/when they are performed and varying subsurface conditions may exist outside of the performed location. In addition, subsurface conditions can change over time. The soil descriptions provided above should not be construed to mean that the subsurface profile is uniform, and that soil is homogeneous within the project area. For details on the stratigraphy at the exploration locations, refer to Appendix B.

2.3 Groundwater

Groundwater was encountered in our boring HS-1 at a depth of approximately 15 feet below existing grade. Historic high groundwater is estimated to be about 10 feet below existing grade (CDMG, 2000).

Seasonal fluctuations of groundwater elevations should be expected over time. In general, groundwater levels fluctuate with the seasons and local zones of perched groundwater may be present due to local seepage caused by irrigation and/or recent precipitation. Local perched groundwater conditions or surface seepage may develop once site development is completed.

2.4 Field Infiltration Testing

One field percolation test was performed in the area of the proposed infiltration trench and the location is depicted on Figure 2 – Geotechnical Exploration Location Map. Test well installation consisted of placing a 3-inch diameter perforated PVC pipe in the excavated borehole and backfilling the annulus with crushed rock including the placement of approximately 2 inches of crushed rock at the bottom of the borehole. The infiltration test well was presoaked the day of installation and testing took place within 24 hours of presoaking. During the pre-test, the water level was observed to drop less than 6 inches in 25 minutes for two consecutive readings. Therefore, the test procedure for fine-grained soils or "slow test" was followed. Test well installation and the estimation of infiltration rates were accomplished in general accordance with the guidelines set forth by the County of Orange (2013). In general, three-dimensional flow out of the test well (*percolation*), as observed in the field, is mathematically reduced to one-dimensional flow out of the bottom of the test well (*infiltration*). Infiltration tests are performed using relatively clean water, free of particulates, silt, etc. The results of our recent field infiltration testing are presented in Appendix D and summarized below.

TABLE 1

Summary of Field Infiltration Testing

Infiltration Test Identification	Approx. Depth Below Existing Grade (ft)	Observed Infiltration Rate* (in./hr.)	Measured Infiltration Rate** (in./hr.)
I-1	5	0.7	0.35

*Observed Infiltration Rates Do Not Include Factor of Safety.

**Measured Infiltration Rates Include a Factor of Safety of 2 in Order to Evaluate Feasibility. The actual design Factor of Safety could be higher and should be verified by the civil engineer.

The tested infiltration rates provided in this report are considered a general representation of the infiltration rates at the location of the proposed infiltration trench. Please note, the testing of infiltration rates is highly dependent upon the materials encountered at the point of testing (i.e. location and depth of testing). Varying subsurface conditions may exist outside of the test location which could alter the calculated infiltration rate. Please refer to Section 4.7 for subsurface water infiltration recommendations.

2.5 Seismic Design Criteria

The site seismic characteristics were evaluated per the guidelines set forth in Chapter 16, Section 1613 of the 2022 California Building Code (CBC) and applicable portions of ASCE 7-16 which has been adopted by the CBC. Since the site contain soils that are susceptible to liquefaction (refer to section below "Liquefaction and Dynamic Settlement"), ASCE 7-16 which has been adopted by the CBC requires that site soils be assigned Site Class "F" and a site-specific response spectrum be performed. However, in accordance with Section 20.3.1 of ASCE 7-16, if the fundamental periods of vibration of the planned structure are equal to or less than 0.5 seconds, a site-specific response spectrum is not required and ASCE 7-16/2022 CBC site class and seismic parameters may be used in lieu of a site-specific response spectrum. **It**

should be noted that the seismic parameters provided herein are not applicable for any structure having a fundamental period of vibration greater than 0.5 seconds. Additionally, the following seismic parameters are only applicable for code-based acceleration response spectra and are not applicable for where site-specific ground motion procedures are required by ASCE 7-16. Representative site coordinates of latitude 33.6606 degrees north and longitude -117.6751 degrees west were utilized in our analyses. The maximum considered earthquake (MCE) spectral response accelerations (S_{MS} and S_{M1}) and adjusted design spectral response acceleration parameters (S_{DS} and S_{D1}) for Site Class D are provided in Table 2 on the following page. The structural designer should contact the geotechnical consultant if structural conditions (e.g., number of stories, seismically isolated structures, etc.) require site-specific ground motions.

A deaggregation of the PGA based on a 2,475-year average return period (MCE) indicates that an earthquake magnitude of 6.57 at a distance of approximately 15.98 km from the site would contribute the most to this ground motion. A deaggregation of the PGA based on a 475-year average return period (Design Earthquake) indicates that an earthquake magnitude of 6.57 at a distance of approximately 21.89 km from the site would contribute the most to this ground motion (USGS, 2014).

Section 1803.5.12 of the 2022 CBC (per Section 11.8.3 of ASCE 7) states that the maximum considered earthquake geometric mean (MCE_G) Peak Ground Acceleration (PGA) should be used for liquefaction potential. The PGA_M for the site is equal to 0.570 (SEAOC, 2022).

TABLE 2

Seismic Design Parameters

Selected Parameters from 2022 CBC, Section 1613 - Earthquake Loads	Seismic Design Values	Notes/Exceptions
Distance to applicable faults classifies the site as a "Near-Fault" site.		Section 11.4.1 of ASCE 7
Site Class	D*	Chapter 20 of ASCE 7
Ss (Risk-Targeted Spectral Acceleration for Short Periods)	1.250g	From SEAOC, 2022
S_1 (Risk-Targeted Spectral Accelerations for 1-Second Periods)	0.446g	From SEAOC, 2022
F_a (per Table 1613.2.3(1))	1.000	For Simplified Design Procedure of Section 12.14 of ASCE 7, F_a shall be taken as 1.4 (Section 12.14.8.1)
F_v (per Table 1613.2.3(2))	1.854	Value is only applicable per requirements/exceptions per Section 11.4.8 of ASCE 7
S_{MS} for Site Class D [Note: $S_{MS} = F_aS_S$]	1.250g	-
S_{M1} for Site Class D [Note: $S_{M1} = F_vS_1$]	0.827g	Value is only applicable per requirements/exceptions per Section 11.4.8 of ASCE 7
S_{DS} for Site Class D [Note: $S_{DS} = (^2/_3)S_{MS}$]	0.833g	-
S_{D1} for Site Class D [Note: $S_{D1} = (^2/_3)S_{M1}$]	0.551g	Value is only applicable per requirements/exceptions per Section 11.4.8 of ASCE 7
C_{RS} (Mapped Risk Coefficient at 0.2 sec)	0.940	ASCE 7 Chapter 22
C_{R1} (Mapped Risk Coefficient at 1 sec)	0.932	ASCE 7 Chapter 22
*Since site soils are Site Class D and S_1 is greater than or equal to 0.2, the seismic response coefficient Cs is determined by Eq. 12.8-2 for values of $T \leq 1.5T_s$ and taken equal to 1.5 times the value calculated in accordance with either Eq. 12.8-3 for $T_L \geq T > T_s$, or Eq. 12.8-4 for $T > T_L$. Refer to ASCE 7-16.		

2.6 Faulting

The subject site is not located within a State of California Earthquake Fault Zone (Alquist-Priolo) and no faults were identified on the site during our site evaluation (CGS, 2018). The possibility of damage due to ground rupture is considered low since no active faults are known to cross the site. The closest known active faults are associated with the San Joaquin Hills Fault, located approximately 3.1 miles from the site; the Elsinore Fault Zone, approximately 12.6 miles northeast of the site; and the Newport Inglewood Fault Zone, approximately 12.7 miles southwest of the site.

Secondary effects of seismic shaking resulting from large earthquakes on the major faults in the Southern California region, which may affect the site, include ground lurching and shallow ground rupture, soil liquefaction, and dynamic settlement. These secondary effects of seismic shaking are a possibility throughout the Southern California region and are dependent on the distance between the site and causative fault and the onsite geology. A discussion of these secondary effects is provided in the following sections.

2.6.1 Liquefaction and Dynamic Settlement

Liquefaction is a seismic phenomenon in which loose, saturated, granular soils behave similarly to a fluid when subject to high-intensity ground shaking. Liquefaction occurs when three general conditions coexist: 1) shallow groundwater; 2) low density non-cohesive (granular) soils; and 3) high-intensity ground motion. Studies indicate that saturated, loose near-surface cohesionless soils exhibit the highest liquefaction potential, while dry, dense, cohesionless soils and cohesive soils exhibit low to negligible liquefaction potential. In general, cohesive soils are not considered susceptible to liquefaction, depending on their plasticity and moisture content (Bray & Sancio, 2006). Effects of liquefaction on level ground include settlement, sand boils, and bearing capacity failures below structures. Dynamic settlement of dry loose sands can occur as the sand particles tend to settle and densify as a result of a seismic event.

Based on our review of the State of California Seismic Hazard Zone for liquefaction potential (CDMG, 2001), the site is located within a liquefaction hazard zone. In general, site soils are medium dense to dense and not susceptible to liquefaction. However, isolated loose sand layers are present and considered susceptible to liquefaction. The recent encountered in-situ groundwater depth of 15 feet below existing grade and historic high groundwater depth of 10 feet below existing grade were both used in the liquefaction analysis. The liquefaction evaluation was performed using data from boring HS-1. Liquefaction potential was evaluated using the procedures outlined by Special Publication 117A (SCEC, 1999 & CGS, 2008) and based on the seismic criteria of the 2022 California Building Code (CBC) and historic high groundwater depth. Liquefaction induced settlement was estimated using the PGA_M per the 2022 CBC and a moment magnitude of 6.9 (USGS, 2008).

Results indicate total seismic settlement on the order of 2-inches or less. Differential seismic settlement can be estimated as half of the total estimated settlement over a horizontal span of about 40 feet (i.e., 1-inch over a horizontal span of 40 feet). Seismically induced settlements were estimated by the procedure outlined by Tokimatsu and Seed (1987). Liquefaction calculations are provided in Appendix E.

2.6.2 Lateral Spreading

Lateral spreading is a type of liquefaction-induced ground failure associated with the lateral displacement of surficial blocks of sediment resulting from liquefaction in a subsurface layer. Once liquefaction transforms the subsurface layer into a fluid mass, gravity plus the earthquake inertial forces may cause the mass to move downslope towards a free face (such as a river channel or an embankment). Lateral spreading may

cause large horizontal displacements and such movement typically damages pipelines, utilities, bridges, and structures.

Based on site liquefaction potential, lateral spreading and consequently zones of instability (horizontal displacements) near the banks of the adjacent creek are possible during the design basis earthquake ground motion. A corrected $(N_1)_{60}$ blow count of less than 15 is typically used for screening of potential lateral spreading (Youd, Hansen, Bartlett, 2002). Based on the obtained data, the soils within the lateral zone of the creek generally have corrected $(N_1)_{60}$ values of at least 15. Based on the obtained apparent density (i.e., blow counts) obtained from our field evaluation the potential for lateral spreading is generally considered low.

*2.7 **Expansion Potential***

Based on the results of our recent laboratory testing, site soils are anticipated to have a "Very Low" expansion potential. Final expansion potential of site soils should be determined at the completion of grading. Results of expansion testing at finish grades will be utilized to confirm final foundation design.

3.0 CONCLUSIONS

Based on the results of our geotechnical evaluation, it is our opinion that the proposed development is feasible from a geotechnical standpoint, provided the following conclusions and recommendations are implemented.

The following is a summary of the primary geotechnical factors that may affect future development of the site:

- Groundwater was encountered during our subsurface evaluation at a depth of approximately 15 feet below existing ground surface. Historic high groundwater is estimated to be about 10 feet below existing grade (CDMG, 2000).
- The subject site is not located within a State of California Earthquake Fault Zone (Alquist-Priolo). The main seismic hazard that may affect the site is ground shaking from one of the active regional faults. The subject site will likely experience strong seismic ground shaking during its design life.
- Site soils are considered susceptible to liquefaction. The site is located in a State of California Seismic Hazard Zone for liquefaction. Total dynamic settlement is estimated to be on the order of 2-inches or less. Differential dynamic settlement can be estimated at half of the total settlement over a horizontal span of 40 feet for design of foundations.
- Based on the results of preliminary laboratory testing, site soils are anticipated to have "Very Low" expansion potential. Final design expansion potential must be determined at the completion of grading.
- From a geotechnical perspective, the existing onsite soils are suitable material for use as general fill (not retaining wall backfill), provided that they are relatively free from oversized material (larger than 8 inches in maximum dimension), construction debris, and significant organic material.
- Some portions of the onsite soils have high fines content and are not suitable for backfill of site retaining walls. Therefore, import and/or select grading and stockpiling of onsite sandy soils meeting project recommendations may be required.
- Excavations into the existing site soils should be feasible with heavy construction equipment in good working order.
- The proposed grading and construction are not anticipated to pose a significant adverse geotechnical impact on the existing and surrounding improvements and adjoining sites, provided the recommendations presented in this report are implemented during design and construction of the site.

4.0 PRELIMINARY RECOMMENDATIONS

The following recommendations are to be considered preliminary and should be confirmed upon completion of grading and earthwork operations. In addition, they should be considered minimal from a geotechnical viewpoint, as there may be more restrictive requirements from the architect, structural engineer, building codes, governing agencies, or the owner.

It should be noted that the following geotechnical recommendations are intended to provide sufficient information to develop the site in general accordance with the 2022 CBC requirements. With regard to the potential occurrence of potentially catastrophic geotechnical hazards such as fault rupture, earthquake-induced landslides, liquefaction, etc. the following geotechnical recommendations should provide adequate protection for the proposed development to the extent required to reduce seismic risk to an "acceptable level." The "acceptable level" of risk is defined by the California Code of Regulations as "that level that provides reasonable protection of the public safety, though it does not necessarily ensure continued structural integrity and functionality of the project" [Section 3721(a)]. Therefore, repair and remedial work of the proposed improvements may be required after a significant seismic event. With regards to the potential for less significant geologic hazards to the proposed development, the recommendations contained herein are intended as a reasonable protection against the potential damaging effects of geotechnical phenomena such as expansive soils, fill settlement, groundwater seepage, etc. It should be understood, however, that although our recommendations are intended to maintain the structural integrity of the proposed development and structures given the site geotechnical conditions, they cannot preclude the potential for some cosmetic distress or nuisance issues to develop as a result of the site geotechnical conditions.

The geotechnical recommendations contained herein must be confirmed to be suitable or modified based on the actual as-graded conditions.

4.1 Site Earthwork

We anticipate that earthwork at the site will consist of demolition of the existing site improvements, required earthwork removals, subgrade preparation, precise grading and construction of the proposed new improvements including the remodeled buildings, parking areas, subsurface utilities, water quality facilities, etc.

We recommend that earthwork be performed in accordance with the following recommendations, future grading plan review report(s), the 2022 CBC/City of Lake Forest grading requirements, and the General Earthwork and Grading Specifications included in Appendix F. In case of conflict, the following recommendations shall supersede those included in Appendix F. The following recommendations should be considered preliminary and may be revised based upon future evaluation and review of the project plans and/or based on the actual conditions encountered during site grading/construction.

4.1.1 Site Preparation

Prior to grading of areas to receive structural fill or engineered improvements, the areas should be cleared of existing building structures, asphalt, surface obstructions, and

demolition debris. Vegetation and debris should be removed and properly disposed of off-site. Holes resulting from the removal of buried obstructions, which extend below proposed finish grades, should be replaced with suitable compacted fill material. Any abandoned sewer or storm drain lines should be completely removed and replaced with properly placed compacted fill. Deeper demolition may be required in order to remove existing foundations. We recommend the trenches associated with demolition which extend below the remedial grading depth be backfilled and properly compacted prior to the demolition contractor leaving the site.

If cesspools or septic systems are encountered during earthwork, they should be removed in their entirety. The resulting excavation should be backfilled with properly compacted fill soils. As an alternative, cesspools can be backfilled with lean sand-cement slurry. Any encountered wells should be properly abandoned in accordance with regulatory requirements. At the conclusion of the clearing operations, a representative of LGC Geotechnical should observe and accept the site prior to further grading.

4.1.2 Removal and Recompaction Depths and Limits

In order to provide a relatively uniform bearing condition for the planned building structures and improvements, we recommend the site soils be removed and recompacted.

New Buildings: We recommend that soils within new building pads be removed and recompacted to a minimum depth of 4 feet below existing grade or 3 feet beneath the base of the foundations, whichever is deeper. Where adequate space is available, the base of removal and recompaction bottoms should extend laterally a minimum distance equal to the depth of removal and recompaction below finish grade or at a minimum distance of 4 feet beyond the edges of the proposed building foundations, whichever is larger.

Building Remodel Areas: We recommend that soils supporting new footings/slabs within the existing building remodel areas be removed and recompacted to a minimum depth of 2 feet below existing grade. Where adequate space is available, the base of removal and recompaction bottoms should extend laterally a minimum distance equal to the depth of removal and recompaction below finish grade or at a minimum distance of 2 feet beyond the edges of the proposed building foundations, whichever is larger.

Minor Site Structures: For minor site structures such as free-standing, screen walls, trash enclosures, etc., removal and recompaction should extend at least 3 feet beneath the existing grade or 2 feet beneath the base of foundations, whichever is deeper. In general, the envelope for removal and recompaction should extend laterally a minimum distance of 3 feet beyond the edges of the proposed improvements mentioned above, where space permits.

Pavement and Hardscape: Within pavement areas, removal and recompaction should extend to a depth of at least 1 foot below the existing grade or 1 foot beneath the finished subgrade (i.e., beneath planned aggregate base/asphalt concrete or gravel). Within hardscape areas, removal and recompaction should extend to a depth of at least 1 foot

below the existing grade or 1 foot beneath the finished subgrade (i.e., beneath planned concrete).

Local conditions may be encountered during excavation that could require deep remedial grading beyond the above noted minimum in order to obtain an acceptable subgrade. The actual depths and lateral extents of grading will be determined by the geotechnical consultant, based on subsurface conditions encountered during grading. Removal and recompaction areas should be accurately staked in the field by the Project Surveyor.

4.1.3 Temporary Excavations

Temporary excavations should be performed in accordance with project plans, specifications, and all Occupational Safety and Health Administration (OSHA) requirements. Excavations should be laid back or shored in accordance with OSHA requirements before personnel or equipment are allowed to enter. Based on our field investigation, the majority of site soils are anticipated to be OSHA Type "B" soils (refer to the attached boring logs). Sandy soils are present and should be considered susceptible to caving. Raveling of the sandy soils should be anticipated for temporary slopes. Flatter slope inclinations should be considered if raveling cannot be tolerated. The exposed slope surface may be kept surficially moist (but not saturated) during construction to reduce (not eliminate) potential sloughing. Soil conditions should be regularly evaluated during construction to verify conditions are as anticipated. The contractor shall be responsible for providing the "competent person" required by OSHA standards to evaluate soil conditions. Close coordination with the geotechnical consultant should be maintained to facilitate construction while providing safe excavations. Excavation safety is the sole responsibility of the contractor.

Surcharge loads (vehicular traffic, soil stockpiles, construction equipment, etc.) should be set back from the perimeter of excavations a minimum distance equivalent to a 1:1 projection from the bottom of the excavation or 5 feet, whichever is greater, unless the cut is properly shored and designed for the applicable surcharge load. Once an excavation has been initiated, it should be backfilled as soon as practical. Prolonged exposure of temporary excavations may result in some localized instability. Excavations should be planned so that they are not initiated without sufficient time to shore/fill them prior to weekends, holidays, or forecasted rain.

It should be noted that any excavation that extends below a 1:1 (horizontal to vertical) projection of an existing foundation will remove existing support of the structure foundation. If requested, temporary shoring parameters will be provided.

4.1.4 Removal Bottoms and Subgrade Preparation

In general, removal bottoms and areas to receive compacted fill should be scarified to a minimum depth of 6 inches, brought to a near-optimum moisture condition (generally within optimum and 2 percent above optimum moisture content), and re-compacted per project recommendations.

Removal bottoms and areas to receive fill should be observed and accepted by the geotechnical consultant prior to subsequent fill placement. Soil subgrade for planned footings and improvements (e.g., slabs, etc.) should be firm and competent.

4.1.5 Material for Fill

From a geotechnical perspective, the onsite soils are generally considered suitable for use as general compacted fill, provided they are screened of significant organic materials, construction debris and oversized material (8 inches in greatest dimension).

From a geotechnical viewpoint, any required import soils for general fill (i.e., non-retaining wall backfill) should consist of soils of "Very Low" expansion potential (expansion index 20 or less based on American Society for Testing and Materials [ASTM] D 4829), and free of significant organic materials, construction debris and any material greater than 3 inches in maximum dimension. Import for any required retaining wall backfill should meet the criteria outlined in the following paragraph. Source samples should be provided to the geotechnical consultant for laboratory testing a minimum of four working days prior to any planned importation.

Retaining wall backfill should consist of imported or onsite free draining, clean granular (sandy) soils with a maximum of 35 percent fines (passing the No. 200 sieve) per ASTM Test Method D1140 (or ASTM D6913/D422) and a "Very Low" expansion potential (EI of 20 or less per ASTM D4829). Soils should also be screened of significant organic materials, construction debris, and any material greater than 3 inches in maximum dimension. The site contains soils that are not suitable for retaining wall backfill due to their fines content; therefore, select grading and stockpiling and/or import of soils meeting the criteria outlined above will be required by the contractor for obtaining suitable retaining wall backfill soil. These preliminary findings should be confirmed during grading.

Aggregate base (crushed aggregate base or crushed miscellaneous base) should conform to the requirements of Section 200-2 of the most recent version of the Standard Specifications for Public Works Construction ("Greenbook") for untreated base materials (except processed miscellaneous base) and/or City of Lake Forest requirements.

The placement of inert demolition materials in compacted fill is acceptable from a geotechnical viewpoint provided the demolition material is broken up into pieces not larger than typically used for aggregate base (approximately 1 to 3 inch in maximum dimension) and well blended into fill soils with essentially no resulting voids. Demolition material placed in fills must be free of construction debris (wood, organics, etc.) and reinforcing steel. If asphalt concrete fragments will be incorporated into the demolition materials, approval from an environmental viewpoint may be required and is not the purview of the geotechnical consultant. From our previous experience, we recommend that asphalt concrete fragments be limited to fill areas within planned parking and drive aisle areas (i.e., not within building pad areas).

4.1.6 Placement and Compaction of Fills

Material to be placed as fill should be brought to near-optimum moisture content (generally within optimum and 2 percent above optimum moisture content) and recompacted to at least 90 percent relative compaction (per ASTM D1557). Moisture conditioning of site soils will be required in order to achieve adequate compaction. Drying and or mixing of very moist soils will be required prior to reusing the materials in compacted fills. Soils are also present that will require additional moisture in order to achieve the required compaction.

The optimum lift thickness to produce a uniformly compacted fill will depend on the type and size of compaction equipment used. In general, fill should be placed in uniform lifts not exceeding 8 inches in compacted thickness. Each lift should be thoroughly compacted and accepted prior to subsequent lifts. Generally, placement and compaction of fill should be performed in accordance with local grading ordinances and with observation and testing performed by the geotechnical consultant. Oversized material as previously defined should be removed from site fills. During backfill of excavations, the fill should be properly benched into firm and competent soils of temporary backcut slopes as it is placed in lifts.

Aggregate base material should be compacted to at least 95 percent relative compaction at or slightly above optimum moisture content per ASTM D1557. Subgrade below aggregate base should be compacted to at least 90 percent relative compaction per ASTM D1557 at or slightly above optimum moisture content (generally within optimum and 2 percent above optimum moisture content).

If gap-graded ¾-inch rock is used for backfill (around storm drain storage chambers, retaining wall backfill, etc.) it will require compaction. Rock shall be placed in thin lifts (typically not exceeding 6 inches) and mechanically compacted with observation by geotechnical consultant. Backfill rock shall meet the requirements of ASTM D2321. Gap-graded rock is required to be wrapped in filter fabric (Mirafi 140N or approved alternative) or at the very minimum to be vertically separated from the trench backfill with filter fabric to prevent the migration of fines into the rock backfill.

4.1.7 Trench and Retaining Wall Backfill and Compaction

Bedding material used within the pipe zone should conform to the requirements of the current Greenbook and the pipe manufacturer. Where applicable, sand having a sand equivalent (SE) of 20 or greater (per Caltrans Test Method [CTM] 217) may be used to bed and shade the pipes within the bedding zone. Sand backfill should be densified by jetting or flooding and then tamped to ensure adequate compaction. Bedding sand should be from a natural source, manufactured sand from recycled material is not suitable for jetting. The onsite soils may generally be considered suitable as trench backfill (zone defined as 12 inches above the pipe to subgrade), provided the soils are screened of rocks greater than 6 inches in maximum dimension, construction debris and organic material. Trench backfill should be compacted in uniform lifts (as outlined above in Section "Material for Fill") by mechanical means to at least 90 percent relative compaction (per ASTM D1557). If gap-graded rock is used for trench backfill, refer to the above Section.

Utility trenches running parallel to footings should not be excavated within a 1:1 (horizontal to vertical) downward projection from adjacent footings ("footing influence zone") to avoid potential undermining. Depending on the utility line and structural loading of the footing, utility trenches running perpendicular to footings may require special provisions such as sand-cement slurry backfill of the utility trench in this zone or flexible sleeves through the footings. These conditions should be evaluated on a case-by-case basis.

Retaining wall backfill should consist of sandy soils as outlined in preceding Section 4.1.5. The limits of select sandy backfill should extend at minimum ½ the height of the retaining wall or the width of the heel (if applicable), whichever is greater (Figure 3). Retaining wall backfill soils should be compacted in relatively uniform thin lifts to at least 90 percent relative compaction (per ASTM D1557). Jetting or flooding of retaining wall backfill materials should not be permitted.

In backfill areas where mechanical compaction of soil backfill is impractical due to space constraints, typically sand-cement slurry may be substituted for compacted backfill. The slurry should contain about one sack of cement per cubic yard. When set, such a mix typically has the consistency of compacted soil. Sand cement slurry placed near the surface within landscape areas should be evaluated for potential impacts on planned improvements.

A representative from LGC Geotechnical should observe, probe, and test the backfill to verify compliance with the project recommendations.

4.2 Preliminary Foundation Recommendations

The proposed building additions and modular structures may be supported on a conventional slab and spread footings or a mat slab, provided earthwork is performed in accordance with the recommendations presented in this report. All footings should be supported on properly compacted fill. Please note that the following foundation recommendations are preliminary and must be confirmed by LGC Geotechnical at the completion of grading.

Preliminary foundation recommendations are provided in the following sections. The foundation design must be performed by the structural engineer based on the following geotechnical parameters and minimum values provided.

4.2.1 Slab Design and Construction

We recommend buildings be founded on a conventional slab with a minimum thickness of 4 inches. Prefabricated modular buildings (office structures, etc.) may also be founded on a mat slab with a minimum thickness of 6 inches. Conventional slabs and mat slabs are to be supported on compacted fill soils properly prepared in accordance with the recommendations provided in this report. Minimum slab reinforcement should be determined by the structural engineer based on the imposed loading, crack control, estimated static settlement and seismic settlement, etc.

It is recommended that subgrade soils below mat slabs be moisture conditioned in order to maintain the recommended moisture content up to the time of concrete placement. The recommended moisture content of the mat slab subgrade soils should be approximately 0 to 2 percent above optimum moisture content to a minimum depth of 12 inches. The moisture content of the mat slab subgrade should be verified by the geotechnical engineer within 1 to 2 days prior to concrete placement. In addition, this moisture content should be maintained around the immediate perimeter of the mat slabs during construction.

4.2.2 Slab Underlayment Guidelines

The following is for informational purposes only since slab underlayment (e.g., moisture retarder, sand or gravel layers for concrete curing and/or capillary break) is unrelated to the geotechnical performance of the foundation and thereby not the purview of the geotechnical consultant. Post-construction moisture migration should be expected below the foundation. The foundation engineer should determine whether the use of a capillary break (sand or gravel layer), in conjunction with the vapor retarder, is necessary or required by code. Sand layer thickness and location (above and/or below vapor retarder) should also be determined by the foundation engineer/architect.

4.3 Soil Bearing and Lateral Resistance

Provided our earthwork recommendations are implemented, an allowable soil bearing pressure of 2,000 pounds per square foot (psf) may be used for the design of footings having a minimum width of 12 inches and minimum embedment of 12 inches below lowest adjacent ground surface. These allowable bearing pressures are applicable for level (ground slope equal to or flatter than 5H:1V) conditions only. Bearing values indicated are for total dead loads and frequently applied live loads and may be increased by ⅓ for short duration loading (i.e., wind or seismic loads).

In utilizing the above-mentioned allowable bearing capacity and provided our earthwork recommendations are implemented, foundation settlement due to structural loads is anticipated to be ½-inch or less. Differential settlement may be taken as half of the total settlement (i.e., ¼-inch over a horizontal span of 40 feet). Seismic settlement recommendations are presented in Section 2.6.1.

Resistance to lateral loads can be provided by friction acting at the base of foundations and by passive earth pressure. For concrete/soil frictional resistance, an allowable coefficient of friction of 0.3 may be assumed with dead-load forces. For slabs constructed over a moisture retarder, the allowable friction coefficient should be provided by the manufacturer. An allowable passive lateral earth pressure of 225 psf per foot of depth (or pcf) to a maximum of 2,250 psf may be used for lateral resistance. Allowable passive pressure may be increased to 300 pcf to a maximum of 3,000 psf for short duration seismic or wind loading. These passive pressures are applicable for level (ground slope equal to or flatter than 5H:1V) conditions only. For a 2:1 (horizontal to vertical) downward sloping condition, a reduced allowable passive lateral earth pressure of 100 pcf to a maximum of 1,000 psf may be used. We recommend that the upper foot of passive resistance be neglected if finished grade will not be covered with concrete or asphalt. Frictional resistance and passive pressure may be used in combination without

reduction. The provided allowable passive pressures are based on a factor of safety of 1.5 and 1.1 for static and seismic loading conditions, respectively. The structural designer should incorporate appropriate factors of safety and/or load factors in their design.

4.4 Lateral Earth Pressures for Retaining Walls

The following may be used for design of site retaining walls. Lateral earth pressures are provided as equivalent fluid unit weights, in psf per foot of depth (or pcf). These values do not contain an appreciable factor of safety, so the retaining wall designer should apply the applicable factors of safety and/or load factors during design. A soil unit weight of 120 pcf may be assumed for calculating the actual weight of soil over the wall footing.

The following lateral earth pressures are presented in Table 3 for approved import or onsite free draining, clean granular (sandy) soils with a maximum of 35 percent fines (passing the No. 200 sieve per ASTM D-421/422) and a "Very Low" expansion potential (EI of 20 or less per ASTM D4829). Portions of the onsite soils are not suitable for retaining wall backfill due to their fines content. Therefore, select grading and stockpiling and/or import of soils meeting the criteria outlined above will be required by the contractor for obtaining suitable retaining wall backfill soil. The wall designer should clearly indicate on the retaining wall plans the required select sandy soil backfill criteria. These preliminary findings should be confirmed during grading.

TABLE 3

Lateral Earth Pressures – Approved Sandy Soils

Conditions	**Equivalent Fluid Unit Weight (pcf)**	**Equivalent Fluid Unit Weight (pcf)**
	Level Backfill	**2:1 Sloped Backfill**
	Approved Sandy Soils	**Approved Sandy Soils**
Active	35	55
At-Rest	55	70

If the wall can yield enough to mobilize the full shear strength of the soil, it can be designed for "active" pressure. If the wall cannot yield under the applied load, the earth pressure will be higher. This would include 90-degree corners of retaining walls. Such walls should be designed for "at-rest." The equivalent fluid pressure values assume free-draining conditions and a drainage system will be installed and maintained to prevent the build-up of hydrostatic pressures. If conditions other than those assumed above are anticipated, the equivalent fluid pressure values should be provided on an individual-case basis by the geotechnical engineer.

Retaining wall structures should be provided with appropriate drainage and appropriately waterproofed. To reduce, but not eliminate, saturation of near-surface (upper approximate 1-foot) soils in front of the retaining walls, the perforated subdrain pipe should be located as low as possible behind the retaining wall. The outlet pipe should be sloped to drain to a suitable

outlet. In general, we do not recommend retaining wall outlet pipes be connected to area drains. If subdrains are connected to area drains, special care should be taken to maintain these drains. Typical conventional retaining wall drainage is shown on Figure 3. It should be noted that the recommended subdrain does not provide protection against seepage through the face of the wall and/or efflorescence. Waterproofing and outlet systems are not the purview of the geotechnical consultant.

Surcharge loading effects from any adjacent structures should be evaluated by the retaining wall designer. In general, structural loads within a 1:1 (horizontal: vertical) upward projection from the bottom of the proposed retaining wall footing will surcharge the proposed retaining wall. In addition to the recommended earth pressure, retaining walls adjacent to streets should be designed to resist a uniform lateral pressure of 85 pounds per square foot (psf) due to normal street vehicle traffic, if applicable. Uniform lateral surcharges may be estimated using the applicable coefficient of lateral earth pressure using a rectangular distribution. A factor of 0.45 and 0.3 may be used for at-rest and active conditions, respectively. The retaining wall designer should contact the geotechnical consultant for any required geotechnical input in estimating surcharge loads.

If required, the retaining wall designer may use a seismic lateral earth pressure increment of 10 pcf for a level backfill condition. This increment should be applied in addition to the provided static lateral earth pressure using a triangular distribution with the resultant acting at H/3 in relation to the base of the retaining structure (where H is the retained height). Per Section 1803.5.12 of the 2022 CBC, the seismic lateral earth pressure is applicable to structures assigned to Seismic Design Category D through F for retaining wall structures supporting more than 6 feet of backfill height. The provided seismic lateral earth pressure should not be used for retaining walls exceeding 10 feet in height. If a retaining wall greater than 10 feet in height is proposed or a retaining wall with a sloping backfill condition, the retaining wall designer should contact the geotechnical engineer for specific seismic lateral earth pressure increments based on the configuration of the planned retaining wall structures. This seismic lateral earth pressure is estimated using the procedure outlined by the Structural Engineers Association of California (Lew, et al, 2010).

Soil bearing and lateral resistance (friction coefficient and passive resistance) are provided in Section 4.3 (Soil Bearing and Lateral Resistance). Earthwork considerations (temporary backcuts, backfill, compaction, etc.) for retaining walls are provided in Section 4.1 (Site Earthwork) and the subsequent earthwork related sub-sections.

4.5 Soil Corrosivity

Although not corrosion engineers (LGC Geotechnical is not a corrosion consultant), several governing agencies in Southern California require the geotechnical consultant to determine the corrosion potential of soils to buried concrete and metal facilities. We therefore present the results of our testing with regard to corrosion for the use of the client and other consultants, as they determine necessary.

Corrosion testing of a near-surface bulk sample indicated a soluble sulfate content less than approximately 0.02 percent, a chloride content of 103 parts per million (ppm), pH of 8.2, and a minimum resistivity of 857 ohm-centimeters. Based on Caltrans Corrosion Guidelines

(Caltrans, 2021), soils are considered corrosive to structural elements if the pH is 5.5 or less, or the chloride concentration is 500 ppm or greater, or the sulfate concentration is 1500 ppm (0.2 percent) or greater. Based on the preliminary test results, soils are not considered corrosive using Caltrans criteria.

Based on laboratory sulfate test results, the near surface soils are designated to a class "S0" per ACI 318, Table 19.3.1.1 with respect to sulfates. Concrete in direct contact with the onsite soils can be designed according to ACI 318, Table 19.3.2.1 using the "S0" sulfate classification.

Laboratory testing may need to be performed at the completion of grading by the project corrosion engineer to further evaluate the as-graded soil corrosivity characteristics. Accordingly, revision of the corrosion potential may be needed, should future test results differ substantially from the conditions reported herein. The client and/or other members of the development team should consider this during the design and planning phase of the project and formulate an appropriate course of action.

4.6 Control of Surface Water and Drainage Control

From a geotechnical perspective, we recommend that compacted finished grade soils adjacent to the proposed warehouse structures be sloped away from the proposed structures towards an approved drainage device or unobstructed swale. Drainage swales, wherever feasible, should not be constructed within 5 feet of buildings. Where lot and building geometry necessitates that the drainage swales be routed closer than 5 feet to structural foundations, we recommend the use of area drains together with drainage swales. Drainage swales used in conjunction with area drains should be designed by the project civil engineer so that a properly constructed and maintained system will prevent ponding within 5 feet of the foundation. Code compliance of grades is not the purview of the geotechnical consultant.

Planters with open bottoms adjacent to buildings should be avoided. Planters should not be designed adjacent to buildings unless provisions for drainage, such as catch basins, liners, and/or area drains, are made. Overwatering must be avoided.

4.7 Subsurface Water Infiltration

Recent regulatory changes in some jurisdictions have recommended that low flow runoff be infiltrated rather than discharged via conventional storm drainage systems. In general, the vast majority of geotechnical distress issues are directly related to improper drainage. In general, distress in the form of movement of improvements could occur as a result of soil saturation and loss of soil support, expansion, internal soil erosion, collapse and/or settlement. Infiltrated water may enter underground utility pipe zones and migrate along the pipe backfill, potentially impacting other improvements located far away from the point of infiltration.

Geotechnical stability and integrity of the project site is reliant upon appropriate handling of surface water. Due to the low infiltration rate, shallow groundwater and site liquefaction potential, we strongly recommend against the intentional infiltration of storm water.

4.8 Preliminary Asphalt Concrete Pavement Sections

The following provisional minimum asphalt concrete (AC) street sections are provided in Table4 for Traffic Indices (TI) of 5.5, 6.0 and 6.5 to be utilized in the design of the auto and truck parking/circulation areas. These sections are based on an assumed R-value of 50. These recommendations must be confirmed with R-value testing of representative near-surface soils at the completion of grading and after underground utilities have been installed and backfilled. Final pavement sections should be confirmed by the project civil engineer based upon the final design Traffic Index. If requested, LGC Geotechnical will provide sections for alternate TI values.

TABLE 4

Preliminary Asphalt Concrete Pavement Section Options

Assumed Traffic Index	5.0 (or less)	6.5
R -Value Subgrade	50	50
AC Thickness	4.0 inches	4.0 inches
Aggregate Base Thickness	4.0 inches	4.5 inches

The pavement section thicknesses provided above are considered minimum thicknesses. Increasing the thickness of any or all of the above layers will reduce the likelihood of the pavement experiencing distress during its service life. The above recommendations are based on the assumption that proper maintenance and irrigation of the areas adjacent to the roadway will occur throughout the design life of the pavement. Failure to maintain a proper maintenance and/or irrigation program may jeopardize the integrity of the pavement.

Earthwork recommendations regarding aggregate base and subgrade are provided in the previous Section "Site Earthwork" and the related sub-sections of this report.

4.9 Preliminary Gravel Parking Area Recommendations

It is our understanding that the equipment parking areas will consist of compacted gravel (1-inch to 1 ½-inch in maximum dimension) over compacted subgrade and asphalt concrete paving is not desired. A minimum gravel pavement section of 4 inches of compacted gravel, over 6 inches of compacted aggregate base, over compacted subgrade is recommended. This parking surface is suitable for a traffic index of 5.0. It should be noted that gravel parking surfaces will require ongoing maintenance during the life of the pavement. Occasional re-grading should also be expected as a result of traffic loading and shifting of the unconfined gravel material.

The thickness shown is a minimum thickness. Increasing the thickness of the above will reduce the likelihood of the equipment parking area experiencing distress during its service life. The above recommendations are based on the assumption that proper maintenance and irrigation of the areas adjacent to the equipment parking areas will occur through the design life of the pavement. Failure to maintain a proper maintenance and/or irrigation program may jeopardize the integrity of the equipment parking areas.

Earthwork recommendations regarding aggregate base and subgrade are provided in the previous Section "Site Earthwork" and the related sub-sections of this report.

4.10 Nonstructural Concrete Flatwork

Nonstructural concrete flatwork (such as walkways, patio slabs, etc.) has a potential for cracking due to changes in soil volume related to soil-moisture fluctuations. To reduce the potential for excessive cracking and lifting, concrete may be designed in accordance with the minimum guidelines outlined in Table 5. These guidelines will reduce the potential for irregular cracking and promote cracking along construction joints, but will not eliminate all cracking or lifting. Thickening the concrete and/or adding additional reinforcement will further reduce cosmetic distress.

TABLE 5

Preliminary Geotechnical Parameters for Nonstructural Concrete Flatwork Placed on Very Low Expansion Potential Subgrade

	Sidewalks	**Private Drives**	**Patios/ Entryways**	**City Sidewalk Curb and Gutters**
Minimum Thickness (in.)	4 (nominal)	4 (full)	4 (full)	City/Agency Standard
Presoaking	Wet down prior to placing	Wet down prior to placing	Wet down prior to placing	City/Agency Standard
Reinforcement	—	No. 3 at 24 inches on centers	No. 3 at 24 inches on centers	City/Agency Standard
Thickened Edge (in.)	—	8 x 8	—	City/Agency Standard
Crack Control Joints	Saw cut or deep open tool joint to a minimum of $^1/_3$ the concrete thickness	Saw cut or deep open tool joint to a minimum of $^1/_3$ the concrete thickness	Saw cut or deep open tool joint to a minimum of $^1/_3$ the concrete thickness	City/Agency Standard
Maximum Joint Spacing	5 feet	10 feet or quarter cut whichever is closer	6 feet	City/Agency Standard
Aggregate Base Thickness (in.)	—	—	—	City/Agency Standard

4.11 Geotechnical Plan Review

When available, project plans (grading, foundation, retaining wall, etc.) should be reviewed by this office prior to construction to verify that our geotechnical recommendations have been incorporated. Additional fieldwork and/or modified geotechnical recommendations may be necessary.

4.12 Geotechnical Observation and Testing During Construction

The recommendations provided in this report are based on limited subsurface observations and geotechnical analysis. The interpolated subsurface conditions should be checked in the field during construction by a representative of LGC Geotechnical. Geotechnical observation and testing is required per Section 1705 of the 2022 California Building Code (CBC).

Geotechnical observation and/or testing should be performed by LGC Geotechnical at the following stages:

- During grading (removal and recompaction bottoms, fill placement, etc.);
- During retaining wall backfill and compaction;
- During utility trench backfill and compaction;
- After moisture conditioning building pads and other concrete-flatwork subgrades, and prior to placement of aggregate base or concrete;
- Preparation of pavement subgrade and placement of aggregate base;
- After building and wall footing excavation and prior to placing steel reinforcement and/or concrete; and
- When any unusual soil conditions are encountered during any construction operation subsequent to issuance of this report.

5.0 LIMITATIONS

Our services were performed using the degree of care and skill ordinarily exercised, under similar circumstances, by reputable soils engineers and geologists practicing in this or similar localities. No other warranty, expressed or implied, is made as to the conclusions and professional advice included in this report.

This report is based on data obtained from limited observations of the site, which have been extrapolated to characterize the site. While the scope of services performed is considered suitable to adequately characterize the site geotechnical conditions relative to the proposed development, no practical evaluation can completely eliminate uncertainty regarding the anticipated geotechnical conditions in connection with a subject site. Variations may exist and conditions not observed or described in this report may be encountered during grading and construction.

This report is issued with the understanding that it is the responsibility of the owner, or of his/her representative, to ensure that the information and recommendations contained herein are brought to the attention of the other consultants (at a minimum the civil engineer, structural engineer, landscape architect) and incorporated into their plans. The contractor should properly implement the recommendations during construction and notify the owner if they consider any of the recommendations presented herein to be unsafe, or unsuitable.

The findings of this report are valid as of the present date. However, changes in the conditions of a site can and do occur with the passage of time, whether they be due to natural processes or the works of man on this or adjacent properties. The findings, conclusions, and recommendations presented in this report can be relied upon only if LGC Geotechnical has the opportunity to observe the subsurface conditions during grading and construction of the project, in order to confirm that our preliminary findings are representative for the site. This report is intended exclusively for use by the client, any use of or reliance on this report by a third party shall be at such party's sole risk.

In addition, changes in applicable or appropriate standards may occur, whether they result from legislation or the broadening of knowledge. Accordingly, the findings of this report may be invalidated wholly or partially by changes outside our control. Therefore, this report is subject to review and modification.

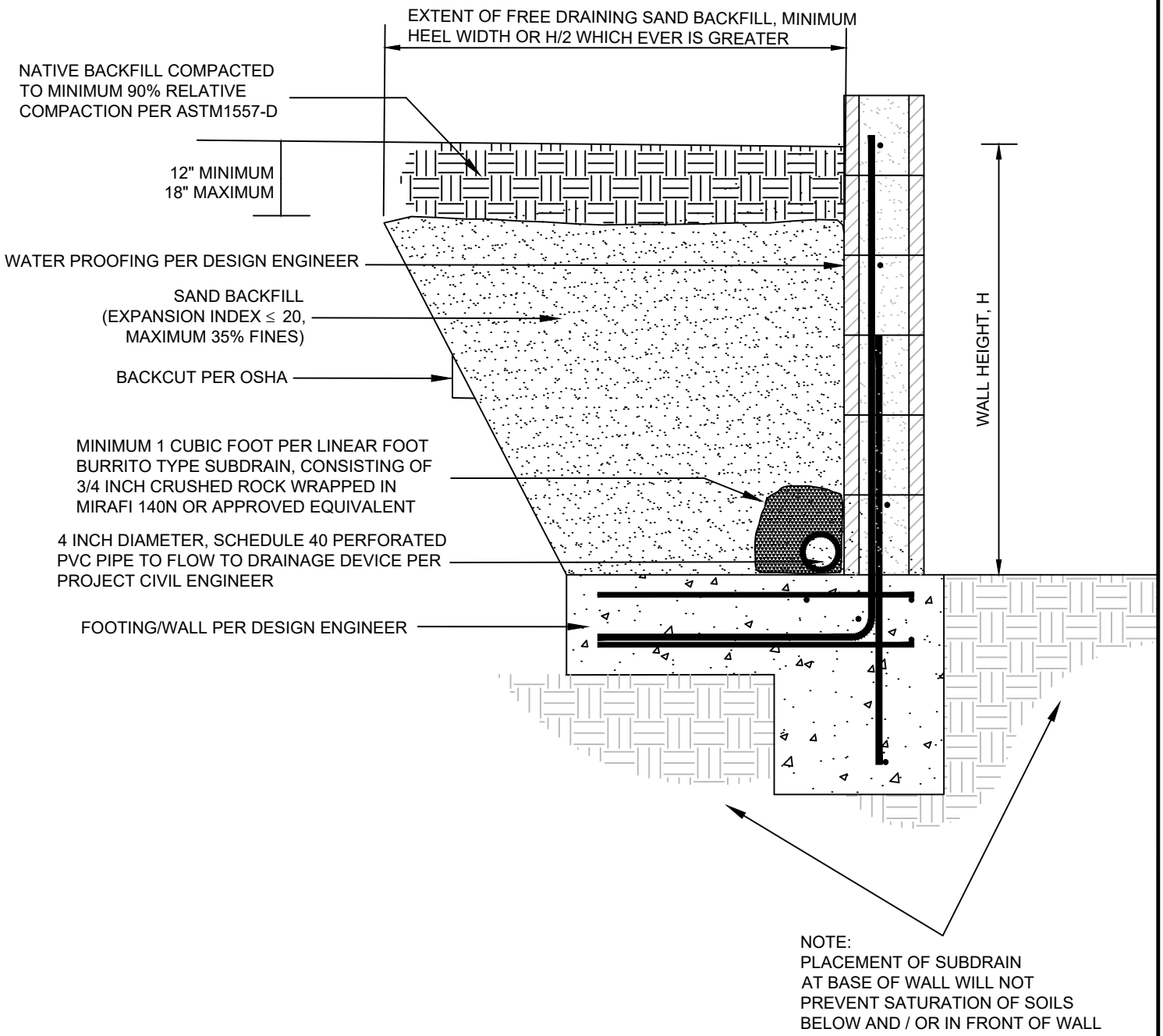


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FIGURE 2
Retaining Wall Detail

PROJECT NAME	Great Scott - Lake Forest
PROJECT NO.	19035-01
ENG. / GEOL.	RLD / KTM
SCALE	Not to Scale
DATE	September 2023

Appendix A
References

APPENDIX A

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Appendix B
Field Exploration Logs

Geotechnical Boring Log Borehole HS-1

Date: 4/8/2019 | **Drilling Company:** Cal Pac

Project Name: Great Scott - Lake Forest | **Type of Rig:** Track Rig

Project Number: 19035-01 | **Drop:** 30" | **Hole Diameter:** 8"

Elevation of Top of Hole: ~631' MSL | **Drive Weight:** 140 pounds

Hole Location: See Geotechnical Map

Logged By BPP
Sampled By BPP
Checked By RLD

Elevation (ft)	Depth (ft)	Graphic Log	Sample Number	Blow Count	Dry Density (pcf)	Moisture (%)	USCS Symbol	DESCRIPTION	Type of Test
630	0	B-1					SP-SC	**@0' to 30' - <u>Quaternary Alluvium (Qal)</u>** @0' - Silty SAND: dark brown, slightly moist	EI,CR
			R-1	5 6 6	111.8	12.1	SM	@2.5' - Silty SAND: gray, moist, loose	
625	5		R-2	2 3 3	98.2	14.2		@5' - Silty SAND: brown, very moist, loose	
			R-3	2 4 7	112.2	14.6	SC	@7.5' - Clayey SAND: dark olive brown, very moist, loose	CN
620	10		R-4	2 2 3	101.8	21.8		@10' - Clayey SAND: brown, very moist, loose	-#200
615	15	▽	SPT-1	2 2 3		26.2	CL	@15' - Sandy CLAY: brown, wet, medium stiff; groundwater	AL
610	20		R-5	11 12 11	112.7	15.1	SP-SM	@20' - SAND with Silt: light brown, wet, medium dense	-#200
605	25		SPT-2	5 11 12		18.4	SM	@25' - Silty SAND: brown, wet, medium dense	-#200
	30							**@30' to T.D. - <u>Tertiary Capistrano Formation, Oso Member (Tco)</u>**	

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THIS SUMMARY APPLIES ONLY AT THE LOCATION OF THIS BORING AND AT THE TIME OF DRILLING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH THE PASSAGE OF TIME. THE DATA PRESENTED IS A SIMPLIFICATION OF THE ACTUAL CONDITIONS ENCOUNTERED. THE DESCRIPTIONS PROVIDED ARE QUALITATIVE FIELD DESCRIPTIONS AND ARE NOT BASED ON QUANTITATIVE ENGINEERING ANALYSIS.

SAMPLE TYPES:

B	BULK SAMPLE
R	RING SAMPLE (CA Modified Sampler)
G	GRAB SAMPLE
SPT	STANDARD PENETRATION TEST SAMPLE
▽	GROUNDWATER TABLE

TEST TYPES:

DS	DIRECT SHEAR
MD	MAXIMUM DENSITY
SA	SIEVE ANALYSIS
S&H	SIEVE AND HYDROMETER
EI	EXPANSION INDEX
CN	CONSOLIDATION
CR	CORROSION
AL	ATTERBERG LIMITS
CO	COLLAPSE/SWELL
RV	R-VALUE
-#200	% PASSING # 200 SIEVE

Last Edited: 4/25/2019

Geotechnical Boring Log Borehole HS-1

Date: 4/8/2019 | **Drilling Company:** Cal Pac

Project Name: Great Scott - Lake Forest | **Type of Rig:** Track Rig

Project Number: 19035-01 | **Drop:** 30" | **Hole Diameter:** 8"

Elevation of Top of Hole: ~631' MSL | **Drive Weight:** 140 pounds

Hole Location: See Geotechnical Map

Logged By BPP
Sampled By BPP
Checked By RLD

Elevation (ft)	Depth (ft)	Graphic Log	Sample Number	Blow Count	Dry Density (pcf)	Moisture (%)	USCS Symbol	DESCRIPTION	Type of Test
600	30		R-6	9 11 22	117.0	14.5	SC	@30' - Clayey SAND with some gravel: gray-brown, wet, medium dense; extremely weathered bedrock	-#200
595	35		SPT-3	3 11 27		17.2	SM	@35' - Silty SAND: yellowish brown, wet, dense	
590	40		R-7	50/2"	105.4	24.8	SC	@40' - Clayey SAND: gray-brown with iron oxide staining, wet, very dense; slightly weathered bedrock	
585	45		SPT-4	50/6"		17.5		@45' - Clayey SAND: gray with iron oxide staining, wet, very dense @47' - Auger Refusal	
580	50							Total Depth = 50' Groundwater Encountered at Approximately 15' Backfilled with Cuttings on 4/8/2019	
575	55								
	60								

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SPT	STANDARD PENETRATION TEST SAMPLE
▽	GROUNDWATER TABLE

TEST TYPES:

DS	DIRECT SHEAR
MD	MAXIMUM DENSITY
SA	SIEVE ANALYSIS
S&H	SIEVE AND HYDROMETER
EI	EXPANSION INDEX
CN	CONSOLIDATION
CR	CORROSION
AL	ATTERBERG LIMITS
CO	COLLAPSE/SWELL
RV	R-VALUE
-#200	% PASSING # 200 SIEVE

Geotechnical Boring Log Borehole HS-2

Date: 4/8/2019	**Drilling Company:** Cal Pac
Project Name: Great Scott - Lake Forest	**Type of Rig:** Track Rig
Project Number: 19035-01	**Drop:** 30" **Hole Diameter:** 8"
Elevation of Top of Hole: ~646' MSL	**Drive Weight:** 140 pounds
Hole Location: See Geotechnical Map	Page 1 of 1

Logged By BPP
Sampled By BPP
Checked By N/A

Elevation (ft)	Depth (ft)	Graphic Log	Sample Number	Blow Count	Dry Density (pcf)	Moisture (%)	USCS Symbol	DESCRIPTION	Type of Test
645	0	B-1					SM	**@0' to T.D. - <u>Quaternary Young Alluvium (Qya)</u>** @0' - Silty SAND with Gravel: brown and dry	RV
			R-1	8 8 12	105.6	0.8	SP	@2.5' - SAND: pinkish-brown, dry, medium dense	
640	5		R-2	7 7 9	100.0	2.4		@5' - SAND: light brown, dry, medium dense	
			R-3	7 9 12	103.0	1.1		@7.5' - SAND: yellowish brown, dry, medium dense	
635	10		R-4	7 13 14	91.4	0.7		@10' - SAND: pinkish gray, dry, medium dense	
630	15							Total Depth = 10' Groundwater Not Encountered Backfilled with Cuttings on 4/8/2019	
625	20								
620	25								
	30								

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SAMPLE TYPES:

B	BULK SAMPLE
R	RING SAMPLE (CA Modified Sampler)
G	GRAB SAMPLE
SPT	STANDARD PENETRATION TEST SAMPLE
▽	GROUNDWATER TABLE

TEST TYPES:

DS	DIRECT SHEAR
MD	MAXIMUM DENSITY
SA	SIEVE ANALYSIS
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EI	EXPANSION INDEX
CN	CONSOLIDATION
CR	CORROSION
AL	ATTERBERG LIMITS
CO	COLLAPSE/SWELL
RV	R-VALUE
-#200	% PASSING # 200 SIEVE

Last Edited: 4/25/2019

Geotechnical Boring Log Borehole I-1

Date: 4/8/2019 | **Drilling Company:** Cal Pac

Project Name: Great Scott - Lake Forest | **Type of Rig:** Track Rig

Project Number: 19035-01 | **Drop:** 30" | **Hole Diameter:** 8"

Elevation of Top of Hole: ~630' MSL | **Drive Weight:** 140 pounds

Hole Location: See Geotechnical Map

Logged By BPP
Sampled By BPP
Checked By N/A

Elevation (ft)	Depth (ft)	Graphic Log	Sample Number	Blow Count	Dry Density (pcf)	Moisture (%)	USCS Symbol	DESCRIPTION	Type of Test
	0		R-1	2 2 3	110.6	10.2	SM	**@0' to T.D. - <u>Quaternay Alluvium (Qal)</u>** @0' - Silty SAND: brown and moist @2.5' - Silty SAND: gray-brown, wet, very loose	
625	5							Total Depth = 5' Groundwater Not Encountered Backfilled with Cuttings on 4/8/2019	
620	10								
615	15								
610	20								
605	25								
	30								

LGC Geotechnical, Inc.

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SPT	STANDARD PENETRATION TEST SAMPLE
▽	GROUNDWATER TABLE

TEST TYPES:

DS	DIRECT SHEAR
MD	MAXIMUM DENSITY
SA	SIEVE ANALYSIS
S&H	SIEVE AND HYDROMETER
EI	EXPANSION INDEX
CN	CONSOLIDATION
CR	CORROSION
AL	ATTERBERG LIMITS
CO	COLLAPSE/SWELL
RV	R-VALUE
-#200	% PASSING # 200 SIEVE

Last Edited: 4/25/2019

Appendix C
Laboratory Test Results

APPENDIX C

Laboratory Test Results

The laboratory testing program was directed towards providing quantitative data relating to the relevant engineering properties of the soils. Samples considered representative of site conditions were tested in general accordance with American Society for Testing and Materials (ASTM) procedure and/or California Test Methods (CTM), where applicable. The following summary is a brief outline of the test type and a table summarizing the test results.

Moisture and Density Determination Tests: Moisture content (ASTM D2216) and dry density determinations (ASTM D2937) were performed on driven samples obtained from the test borings. The results of these tests are presented in the boring logs. Where applicable, only moisture content was determined from SPT or disturbed samples.

Grain Size Distribution/Fines Content: Representative samples were dried, weighed, and soaked in water until individual soil particles were separated (per ASTM D421) and then washed on a No. 200 sieve (ASTM D1140). Where applicable, the portion retained on the No. 200 sieve was dried and then sieved on a U.S. Standard brass sieve set in accordance with ASTM D6913 (sieve) or ASTM D422 (sieve and hydrometer).

Sample Location	Description	% Passing # 200 Sieve
HS-1 @ 10 ft	Clayey Sand	37
HS-1 @ 20 ft	Sand with Silt	6
HS-1 @ 25 ft	Silty Sand	16
HS-1 @ 30 ft	Clayey Sand with some Gravel	37

Atterberg Limits: The liquid and plastic limits ("Atterberg Limits") were determined per ASTM D4318 for engineering classification of fine-grained material and presented in the table below. The USCS soil classification indicated in the table below is based on the portion of sample passing the No. 40 sieve and may not necessarily be representative of the entire sample. The plot is provided in this Appendix.

Sample Location	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	USCS Soil Classification
HS-1 @ 15 ft	35	18	17	CL

Laboratory Test Results

Consolidation: One consolidation test was performed per ASTM D2435. A sample (2.4 inches in diameter and 1 inch in height) was placed in a consolidometer and increasing loads were applied. The sample was allowed to consolidate under "double drainage" and total deformation for each loading step was recorded. The percent consolidation for each load step was recorded as the ratio of the amount of vertical compression to the original sample height. The consolidation pressure curve is provided in this Appendix.

Expansion Index: The expansion potential of a selected representative sample was evaluated by the Expansion Index Test per ASTM D4829.

Sample Location	Expansion Index	Expansion Potential*
HS-1 @ 1-5 ft	8	Very Low

* Per ASTM D4829

R-value Test: R-value test was performed in general accordance with California Test Method 301. The plot is included in the Appendix.

Sample Location	R-value
HS-2 @ 1-5 ft	66

Soluble Sulfates: The soluble sulfate content of a selected sample was determined by standard geochemical methods (CTM 417). The test results are presented in the table below.

Sample Location	Sulfate Content (%)
HS-1 @ 1-5 ft	< 0.02

Chloride Content: Chloride content was tested per CTM 422. The results are presented below.

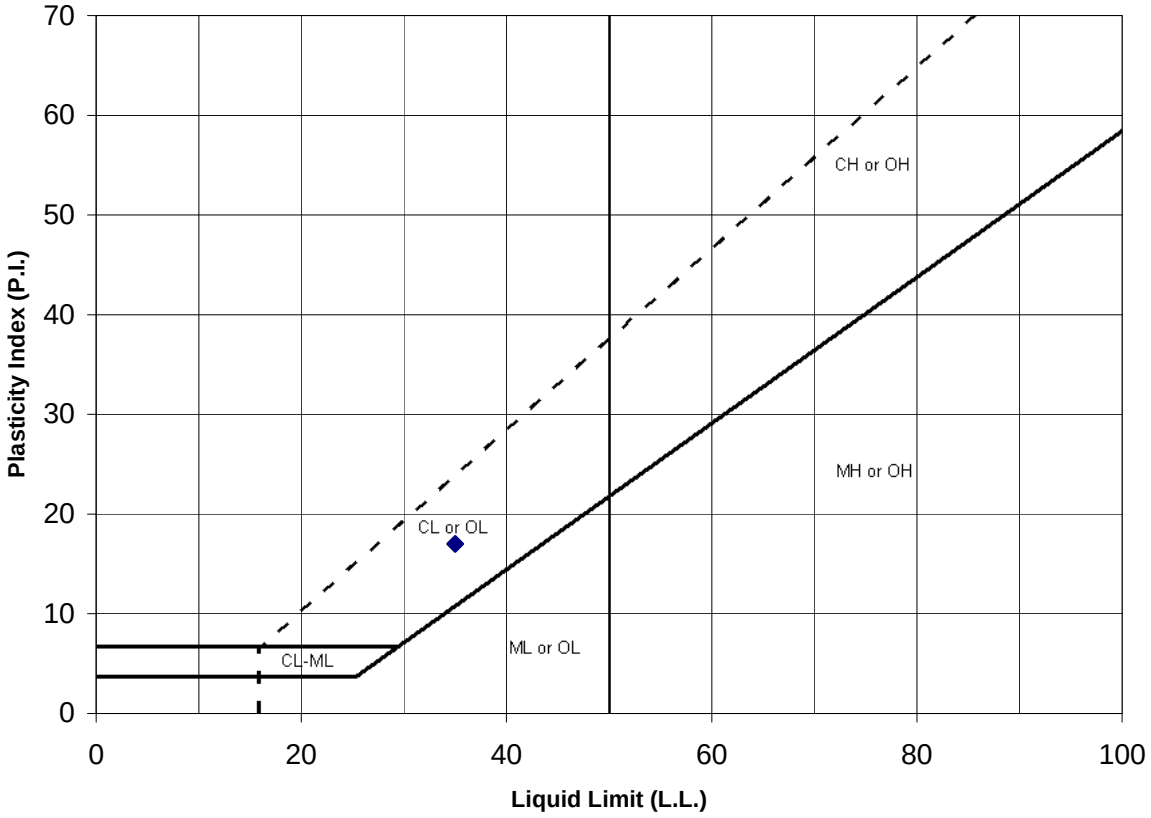
Sample Location	Chloride Content (ppm)
HS-1 @ 1-5 ft	103

Laboratory Test Results

Minimum Resistivity and pH Tests: Minimum resistivity and pH tests were performed in general accordance with CTM 643 and standard geochemical methods. The results are presented in the table below.

Sample Location	pH	Minimum Resistivity (ohms-cm)
HS-1 @ 1-5 ft	8.2	857

PLASTICITY CHART - CLASSIFICATION OF FINE-GRAINED SOILS



Symbol	Location.:	Sample No.:	Depth (ft)	Passing No. 200 Sieve (%)	Liquid Limit (%) LL	Plastic Limit (%) PL	Plasticity Index (%) PI	USCS
◆	HS-1	SPT-1	15	-	35	18	17	CL

LGC Geotechnical, Inc.

ATTERBERG LIMITS
(ASTM D 4318)

Project Number: 19035-01
Date: Apr-19

Great Scott - Lake Forest

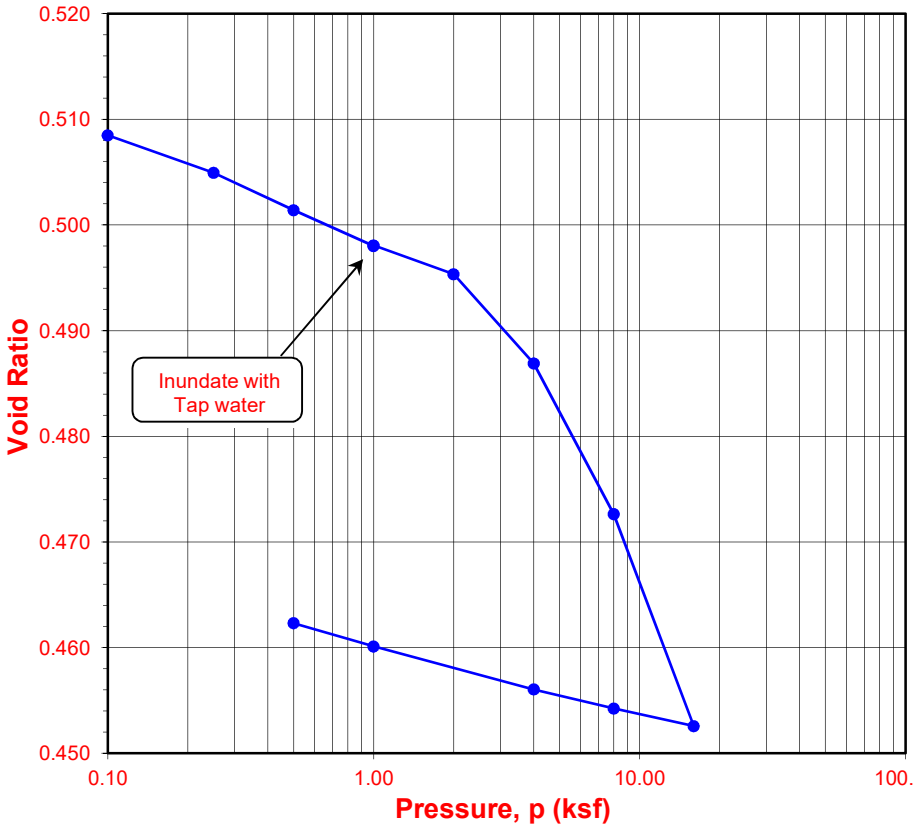
ONE-DIMENSIONAL CONSOLIDATION PROPERTIES of SOILS

ASTM D 2435

Project Name: Lake Forest
Project No.: 19035-01
Boring No.: HS-1
Sample No.: R-3
Soil Identification: Dark olive brown clayey sand (SC)

Tested By: G. Bathala Date: 04/10/19
Checked By: J. Ward Date: 04/24/19
Depth (ft.): 7.5
Sample Type: Ring

Sample Diameter (in.)	2.415
Sample Thickness (in.)	1.000
Wt. of Sample + Ring (g)	199.51
Weight of Ring (g)	45.62
Height after consol. (in.)	0.9688
Before Test	
Wt.Wet Sample+Cont. (g)	208.34
Wt.of Dry Sample+Cont. (g)	190.23
Weight of Container (g)	66.23
Initial Moisture Content (%)	14.6
Initial Dry Density (pcf)	111.7
Initial Saturation (%)	77
Initial Vertical Reading (in.)	0.3164
After Test	
Wt.of Wet Sample+Cont. (g)	269.38
Wt. of Dry Sample+Cont. (g)	250.41
Weight of Container (g)	71.40
Final Moisture Content (%)	14.22
Final Dry Density (pcf)	114.5
Final Saturation (%)	81
Final Vertical Reading (in.)	0.2809
Specific Gravity (assumed)	2.70
Water Density (pcf)	62.43

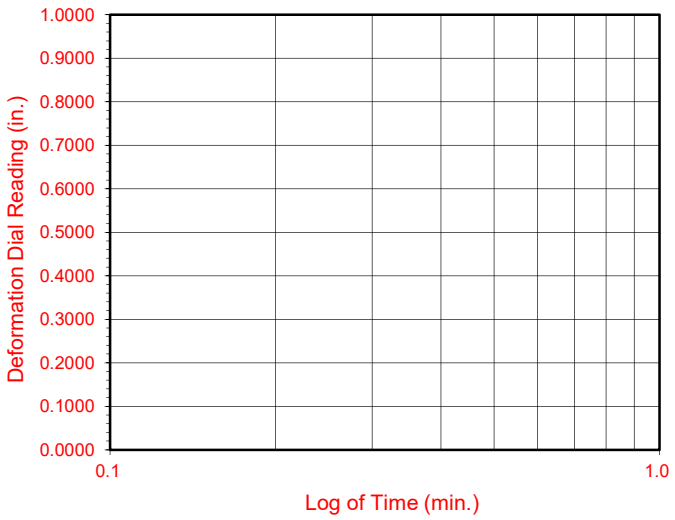


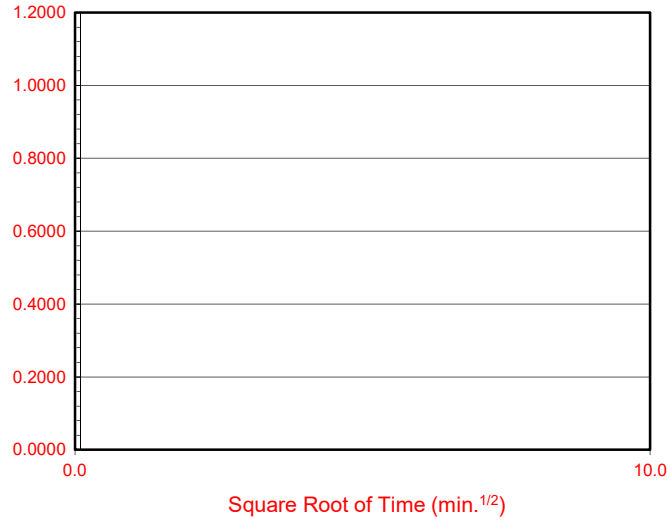
Pressure (p) (ksf)	Final Reading (in.)	Apparent Thickness (in.)	Load Compliance (%)	Deformation % of Sample Thickness	Void Ratio	Corrected Deformation (%)
0.10	0.3158	0.9994	0.00	0.06	0.508	0.06
0.25	0.3128	0.9964	0.07	0.37	0.505	0.30
0.50	0.3098	0.9934	0.13	0.66	0.501	0.53
1.00	0.3068	0.9904	0.21	0.96	0.498	0.75
1.00	0.3068	0.9904	0.21	0.96	0.498	0.75
2.00	0.3038	0.9874	0.33	1.26	0.495	0.93
4.00	0.2969	0.9805	0.46	1.95	0.487	1.49
8.00	0.2857	0.9693	0.64	3.08	0.473	2.44
16.00	0.2702	0.9538	0.86	4.63	0.453	3.77
8.00	0.2721	0.9557	0.78	4.44	0.454	3.66
4.00	0.2743	0.9579	0.68	4.22	0.456	3.54
1.00	0.2788	0.9624	0.50	3.77	0.460	3.27
0.50	0.2809	0.9645	0.43	3.55	0.462	3.12

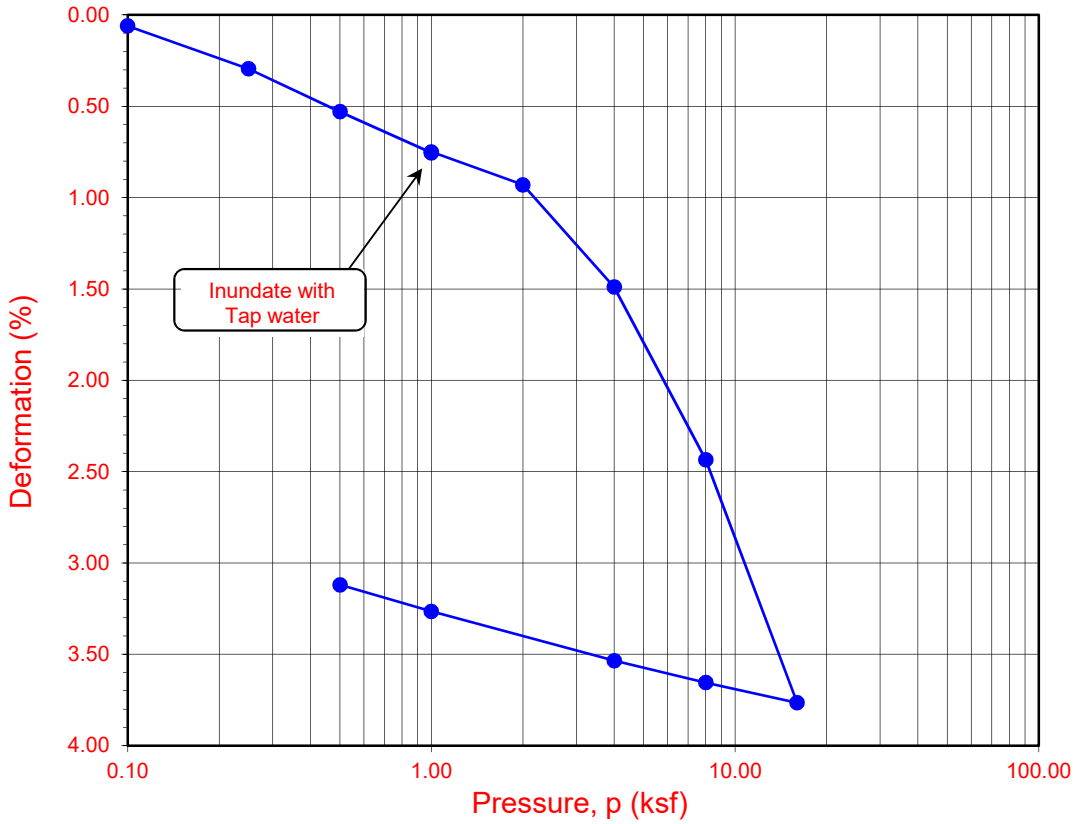
Time Readings

Date	Time	Elapsed Time (min)	Square Root of Time	Dial Rdgs. (in.)

Time Readings







Boring No.	Sample No.	Depth (ft.)	Moisture Content (%)		Dry Density (pcf)		Void Ratio		Degree of Saturation (%)	
			Initial	Final	Initial	Final	Initial	Final	Initial	Final
HS-1	**R-3**	**7.5**	**14.6**	**14.2**	**111.7**	**114.5**	**0.509**	**0.462**	**77**	**81**

Soil Identification: Dark olive brown clayey sand (SC)

ONE-DIMENSIONAL CONSOLIDATION PROPERTIES of SOILS
ASTM D 2435

Project No.: 19035-01

Lake Forest

04-19

R-VALUE TEST RESULTS

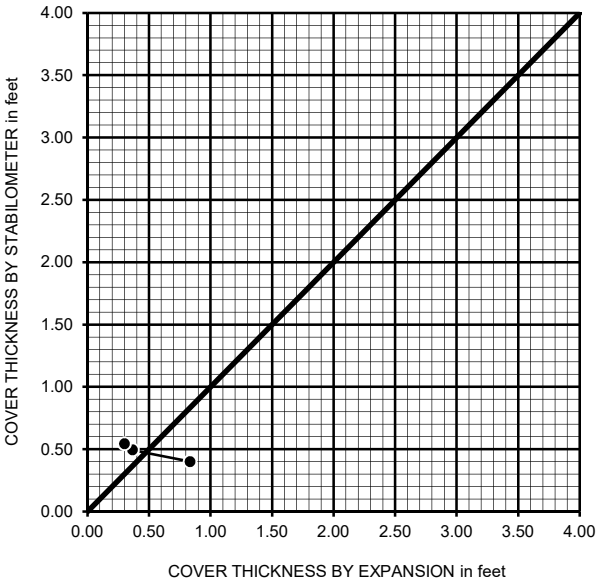
DOT CA Test 301

PROJECT NAME:	Lake Forest	PROJECT NUMBER:	19035-01
BORING NUMBER:	HS-2	DEPTH (FT.):	1-5
SAMPLE NUMBER:	B-1	TECHNICIAN:	S. Felter
SAMPLE DESCRIPTION:	Brown silty sand with Gravel (SM)	DATE COMPLETED:	4/16/2019

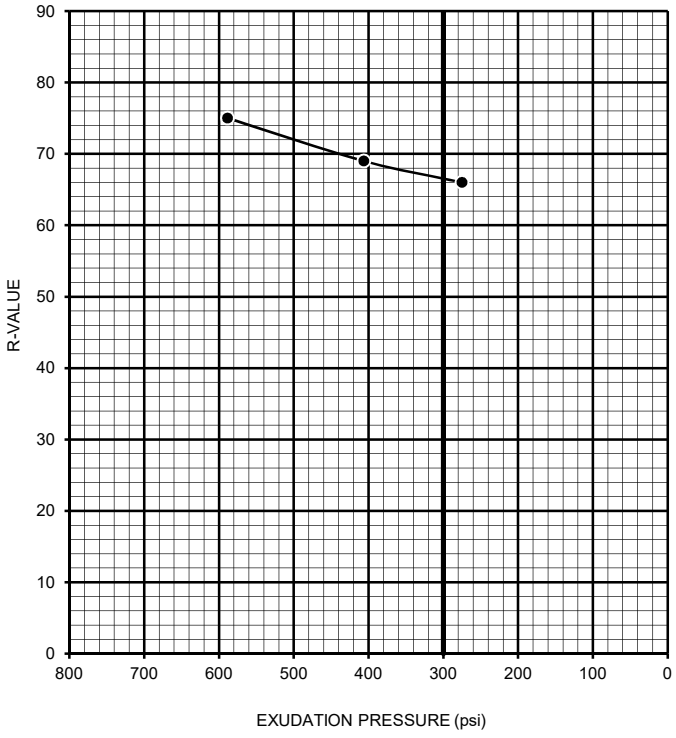
TEST SPECIMEN	a	b	c
MOISTURE AT COMPACTION %	11.0	11.4	11.8
HEIGHT OF SAMPLE, Inches	2.49	2.50	2.59
DRY DENSITY, pcf	118.4	120.3	116.5
COMPACTOR PRESSURE, psi	350	300	250
EXUDATION PRESSURE, psi	588	406	275
EXPANSION, Inches x 10exp-4	25	11	9
STABILITY Ph 2,000 lbs (160 psi)	26	33	38
TURNS DISPLACEMENT	4.26	4.32	4.42
R-VALUE UNCORRECTED	75	69	64
R-VALUE CORRECTED	75	69	66

DESIGN CALCULATION DATA	a	b	c
GRAVEL EQUIVALENT FACTOR	1.0	1.0	1.0
TRAFFIC INDEX	5.0	5.0	5.0
STABILOMETER THICKNESS, ft.	0.40	0.50	0.54
EXPANSION PRESSURE THICKNESS, ft.	0.83	0.37	0.30

EXPANSION PRESSURE CHART



EXUDATION PRESSURE CHART



R-VALUE BY EXPANSION:	70
R-VALUE BY EXUDATION:	66
EQUILIBRIUM R-VALUE:	66

Appendix D
Infiltration Test Data

Infiltration Test Data Sheet

LGC Geotechnical, Inc

131 Calle Iglesia Suite 200, San Clemente, CA 92672 tel. (949) 369-6141

Project Name: Great Scott - Lake Forest

Project Number: 19035-01

Date: 4/4/2019

Boring Number: I-1

Test hole dimensions (if circular)	
Boring Depth (feet)*:	5
Boring Diameter (inches):	8
Pipe Diameter (inches):	2

*measured at time of test

Test pit dimensions (if rectangular)	
Pit Depth (feet):	
Pit Length (feet):	
Pit Breadth (feet):	

Minimum test Head (D_o):

(What the sounder tape should read)

Boring Depth - (5 x Boring Radius) 3.4 ft

(Shallow) The value on the sounder tape should be close to this value during testing for **DEEP** testing fill to 4 feet below top of hole

*Pre-Test (Sandy Soil Criteria)**

Trial No.	Start Time (24:HR)	Stop Time (24:HR)	Time Interval (min)	Initial Depth to Water (feet)	Final Depth to Water (feet)	Total Change in Water Level (feet)	Greater Than or Equal to 0.5 feet (yes/no)
1	8:37	9:02	25.0	2.54	2.92	0.38	No
2	9:02	9:27	25.0	2.60	2.93	0.33	No

*If two consecutive measurements show that six inches of water seeps away in less than 25 minutes, the test shall be run for an additional hour with measurements taken every 10 minutes. Otherwise, pre-soak (fill) overnight, and then obtain at least twelve measurements per hole over at least six hours (approximately 30 minute intervals) with a precision of at least 0.25 inches

Main Test Data

Trial No.	Start Time (24:HR)	Stop Time (24:HR)	Time Interval, Δt (min)	Initial Depth to Water, D_o (feet)	Final Depth to Water, D_f (feet)	Change in Water Level, ΔD (feet)	Calculated Infiltration Rate(in/hr)
1	9:28	9:58	30.0	2.50	2.88	0.38	0.6
2	9:59	10:29	30.0	2.47	2.88	0.41	0.7
3	10:30	11:00	30.0	2.53	2.91	0.38	0.6
4	11:01	11:31	30.0	2.53	2.93	0.4	0.7
5	11:32	12:02	30.0	2.54	2.95	0.41	0.7
6	12:03	12:33	30.0	2.49	2.91	0.42	0.7
7	12:34	13:04	30.0	2.58	3.00	0.42	0.7
8	13:05	13:35	30.0	2.52	2.93	0.41	0.7
9	13:36	14:06	30.0	2.53	2.95	0.42	0.7
10	14:07	14:37	30.0	2.48	2.89	0.41	0.7
11	14:38	15:08	30.0	2.45	2.90	0.45	0.7
12	15:09	15:39	30.0	2.53	2.98	0.45	0.7

Calculated Infiltration Rate (No factors of safety)	**0.7**
Factor of Safety	**2.0**
Calculated Infiltration Rate (With Factor of Safety)	**0.35**

Sketch:

Notes:

Based on Guidelines from: Orange County 05/19/2011

Spreadsheet Revised on: 10/26/2016

LGC Geotechnical, Inc.

Appendix E
Liquefaction Analysis

LIQUEFACTION EVALUATION

Based on *Proceeding of the NCEER Workshop on Evaluation of Liquefaction Resistance of Soils* , Technical Report NCEER-97-0022, December 31, 1997
and *Evaluation of Settlments in Sand due to Earthquake Shaking* , Tokimatsu and Seed, 1987

Seismic Event		**Profile Constants**		**Depth to GWT**		**Project Name**	Great Scott M.V.
Moment Magnitude	6.57	Total Unit Weight (lb/ft^3)	120	During Investigation (ft)	15	**Project Number**	19035-01
Peak Ground Acceleration	0.57 g (2022 CBC)	Unit Weight of Water (lbs/ft^3	62.4	During Design Event (ft)	10	**Boring**	HS- 1

Determination of Cyclic Resitance Ratio

Sampling Data					During Investigation			Sampling Correction Factors											
		Blow Count		Thickness	Total Stress	Pore Pressure	Effective	Sampler	SPT	Overburden	Energy	Borehole	Rod Length	Sampler Type		Fines			
Depth (ft)	Depth (m)	SPT	Rings	(ft)	Stress (psf)	Pressure (psf)	Stress (psf)	Diameter	N_m	C_N	C_E	C_B	C_R	C_S	$(N_1)_{60}$	Content	$(N_1)_{60cs}$	K_σ	$CRR_{7.5}$
2.5	0.8		12	3.75	420	0	420	0.62	7.44	1.70	1.25	1.00	0.75	1.00	11.86	5	**11.86**	1.000	0.128
5	1.5		6	2.5	720	0	720	0.62	3.72	1.70	1.25	1.00	0.75	1.00	5.94	25	**10.91**	1.000	0.118
7.5	2.3		11	3.75	1020	0	1020	0.62	6.82	1.43	1.25	1.00	0.75	1.00	9.15	25	**14.49**	1.000	0.157
10	3.0		5	2.5	1320	0	1320	0.62	3.10	1.26	1.25	1.00	0.75	1.00	3.66	**37**	**9.39**	1.000	0.102
15	4.6	5		5	1920	0	1920	1.00	5.00	1.04	1.25	1.00	0.85	1.10	6.09	50	**12.31**	1.000	0.133
20	6.1		23	5	2520	312	2208	0.62	14.26	0.97	1.25	1.00	0.95	1.00	16.47	**6**	**16.57**	0.986	0.176
25	7.6	23		5	3120	624	2496	1.00	23.00	0.91	1.25	1.00	0.95	1.10	27.48	**16**	**31.73**	0.965	SPT >30 NF
30	9.1		33	5	3720	936	2784	0.62	20.46	0.87	1.25	1.00	0.95	1.00	21.04	**37**	**30.25**	0.946	SPT >30 NF
35	10.7	38		5	4320	1248	3072	1.00	38.00	0.82	1.25	1.00	1.00	1.10	43.08	15	**47.65**	0.927	SPT >30 NF
40	12.2		100	5	4920	1560	3360	0.62	62.00	0.79	1.25	1.00	1.00	1.00	61.09	15	**66.53**	0.910	SPT >30 NF
45	13.7	100		2.5	5520	1872	3648	1.00	100.00	0.76	1.25	1.00	1.00	1.10	104.03	15	**111.53**	0.893	SPT >30 NF
				45															

Determination of Cyclic Stress Ratio

Sampling Data					During Design Event						
		Blow Count			Total Stress	Pore Pressure	Effective				
Depth (ft)	Depth (m)	SPT	Rings	Thickness	Stress (psf)	Pressure (psf)	Stress (psf)	r_d	CSR	MSF	FS
2.5	0.76		12	3.75	300	0	300	0.99615	0.369074	1.403	Above GWT
5	1.52		6	2.5	600	0	600	0.99024	0.366883	1.403	Above GWT
7.5	2.29		11	3.75	900	0	900	0.98456	0.36478	1.403	Above GWT
10	3.05		5	2.5	1200	0	1200	0.97914	0.362772	1.403	0.40
15	4.57	5		5	1800	312	1488	0.96856	0.434094	1.403	**Bray-Clay**
20	6.10		23	5	2400	624	1776	0.9569	0.479095	1.403	0.52
25	7.62	23		5	3000	936	2064	0.94183	0.507194	1.403	Corr. SPT>30
30	9.14		33	5	3600	1248	2352	0.92058	0.522052	1.403	Corr. SPT>30
35	10.67	38		5	4200	1560	2640	0.89062	0.524959	1.403	Corr. SPT>30
40	12.19		100	5	4800	1872	2928	0.85103	0.516899	1.403	Corr. SPT>30
45	13.72	100		2.5	5400	2184	3216	0.80363	0.499945	1.403	Corr. SPT>30

Appendix F
General Earthwork and Grading Specifications for Rough Grading

General Earthwork and Grading Specifications for Rough Grading

1.0 General

1.1 Intent

These General Earthwork and Grading Specifications are for the grading and earthwork shown on the approved grading plan(s) and/or indicated in the geotechnical report(s). These Specifications are a part of the recommendations contained in the geotechnical report(s). In case of conflict, the specific recommendations in the geotechnical report shall supersede these more general Specifications. Observations of the earthwork by the project Geotechnical Consultant during the course of grading may result in new or revised recommendations that could supersede these specifications or the recommendations in the geotechnical report(s).

1.2 The Geotechnical Consultant of Record

Prior to commencement of work, the owner shall employ a qualified Geotechnical Consultant of Record (Geotechnical Consultant). The Geotechnical Consultant shall be responsible for reviewing the approved geotechnical report(s) and accepting the adequacy of the preliminary geotechnical findings, conclusions, and recommendations prior to the commencement of the grading.

Prior to commencement of grading, the Geotechnical Consultant shall review the "work plan" prepared by the Earthwork Contractor (Contractor) and schedule sufficient personnel to perform the appropriate level of observation, mapping, and compaction testing.

During the grading and earthwork operations, the Geotechnical Consultant shall observe, map, and document the subsurface exposures to verify the geotechnical design assumptions. If the observed conditions are found to be significantly different than the interpreted assumptions during the design phase, the Geotechnical Consultant shall inform the owner, recommend appropriate changes in design to accommodate the observed conditions, and notify the review agency where required.

The Geotechnical Consultant shall observe the moisture-conditioning and processing of the subgrade and fill materials and perform relative compaction testing of fill to confirm that the attained level of compaction is being accomplished as specified. The Geotechnical Consultant shall provide the test results to the owner and the Contractor on a routine and frequent basis.

1.3 The Earthwork Contractor

The Earthwork Contractor (Contractor) shall be qualified, experienced, and knowledgeable in earthwork logistics, preparation and processing of ground to receive fill, moisture-conditioning and processing of fill, and compacting fill. The Contractor shall review and accept the plans, geotechnical report(s), and these Specifications prior to commencement of grading. The Contractor shall be solely responsible for performing the grading in accordance with the project plans and specifications. The Contractor shall prepare and submit to the owner and the Geotechnical Consultant a work plan that indicates the sequence of earthwork grading, the number of “equipment” of work and the estimated quantities of daily earthwork

contemplated for the site prior to commencement of grading. The Contractor shall inform the owner and the
Geotechnical Consultant of changes in work schedules and updates to the work plan at least 24 hours in advance of such changes so that appropriate personnel will be available for observation and testing. The Contractor shall not assume that the Geotechnical Consultant is aware of all grading operations.

The Contractor shall have the sole responsibility to provide adequate equipment and methods to accomplish the earthwork in accordance with the applicable grading codes and agency ordinances, these Specifications, and the recommendations in the approved geotechnical report(s) and grading plan(s). If, in the opinion of the Geotechnical Consultant, unsatisfactory conditions, such as unsuitable soil, improper moisture condition, inadequate compaction, insufficient buttress key size, adverse weather, etc., are resulting in a quality of work less than required in these specifications, the Geotechnical Consultant shall reject the work and may recommend to the owner that construction be stopped until the conditions are rectified. It is the contractor's sole responsibility to provide proper fill compaction.

2.0 Preparation of Areas to be Filled

2.1 Clearing and Grubbing

Vegetation, such as brush, grass, roots, and other deleterious material shall be sufficiently removed and properly disposed of in a method acceptable to the owner, governing agencies, and the Geotechnical Consultant.

The Geotechnical Consultant shall evaluate the extent of these removals depending on specific site conditions. Earth fill material shall not contain more than 1 percent of organic materials (by volume). Nesting of the organic materials shall not be allowed.

If potentially hazardous materials are encountered, the Contractor shall stop work in the affected area, and a hazardous material specialist shall be informed immediately for proper evaluation and handling of these materials prior to continuing to work in that area.

As presently defined by the State of California, most refined petroleum products (gasoline, diesel fuel, motor oil, grease, coolant, etc.) have chemical constituents that are considered to be hazardous waste. As such, the indiscriminate dumping or spillage of these fluids onto the ground may constitute a misdemeanor, punishable by fines and/or imprisonment, and shall not be allowed. The contractor is responsible for all hazardous waste relating to his work. The Geotechnical Consultant does not have expertise in this area. If hazardous waste is a concern, then the Client should acquire the services of a qualified environmental assessor.

2.2 Processing

Existing ground that has been declared satisfactory for support of fill by the Geotechnical Consultant shall be scarified to a minimum depth of 6 inches. Existing ground that is not satisfactory shall be over-excavated as specified in the following section. Scarification shall continue until soils are broken down and free of oversize material and the working surface is reasonably uniform, flat, and free of uneven features that would inhibit uniform compaction.

2.3 Over-excavation

In addition to removals and over-excavations recommended in the approved geotechnical report(s) and the grading plan, soft, loose, dry, saturated, spongy, organic-rich, highly fractured or otherwise unsuitable ground shall be over-excavated to competent ground as evaluated by the Geotechnical Consultant during grading.

2.4 Benching

Where fills are to be placed on ground with slopes steeper than 5:1 (horizontal to vertical units), the ground shall be stepped or benched. Please see the Standard Details for a graphic illustration. The lowest bench or key shall be a minimum of 15 feet wide and at least 2 feet deep, into competent material as evaluated by the Geotechnical Consultant. Other benches shall be excavated a minimum height of 4 feet into competent material or as otherwise recommended by the Geotechnical Consultant. Fill placed on ground sloping flatter than 5:1 shall also be benched or otherwise over-excavated to provide a flat subgrade for the fill.

2.5 Evaluation/Acceptance of Fill Areas

All areas to receive fill, including removal and processed areas, key bottoms, and benches, shall be observed, mapped, elevations recorded, and/or tested prior to being accepted by the Geotechnical Consultant as suitable to receive fill. The Contractor shall obtain a written acceptance from the Geotechnical Consultant prior to fill placement. A licensed surveyor shall provide the survey control for determining elevations of processed areas, keys, and benches.

3.0 Fill Material

3.1 General

Material to be used as fill shall be essentially free of organic matter and other deleterious substances evaluated and accepted by the Geotechnical Consultant prior to placement. Soils of poor quality, such as those with unacceptable gradation, high expansion potential, or low strength shall be placed in areas acceptable to the Geotechnical Consultant or mixed with other soils to achieve satisfactory fill material.

3.2 Oversize

Oversize material defined as rock, or other irreducible material with a maximum dimension greater than 8 inches, shall not be buried or placed in fill unless location, materials, and placement methods are specifically accepted by the Geotechnical Consultant. Placement operations shall be such that nesting of oversized material does not occur and such that oversize material is completely surrounded by compacted or densified fill. Oversize material shall not be placed within 10 vertical feet of finish grade or within 2 feet of future utilities or underground construction.

3.3 Import

If importing of fill material is required for grading, proposed import material shall meet the requirements of the geotechnical consultant. The potential import source shall be given to the Geotechnical Consultant at least 48 hours (2 working days) before importing begins so that its suitability can be determined and appropriate tests performed.

4.0 Fill Placement and Compaction

4.1 Fill Layers

Approved fill material shall be placed in areas prepared to receive fill (per Section 3.0) in near-horizontal layers not exceeding 8 inches in loose thickness. The Geotechnical Consultant may accept thicker layers if testing indicates the grading procedures can adequately compact the thicker layers. Each layer shall be spread evenly and mixed thoroughly to attain relative uniformity of material and moisture throughout.

4.2 Fill Moisture Conditioning

Fill soils shall be watered, dried back, blended, and/or mixed, as necessary to attain a relatively uniform moisture content at or slightly over optimum. Maximum density and optimum soil moisture content tests shall be performed in accordance with the American Society of Testing and Materials (ASTM Test Method D1557).

4.3 Compaction of Fill

After each layer has been moisture-conditioned, mixed, and evenly spread, it shall be uniformly compacted to not less than 90 percent of maximum dry density (ASTM Test Method D1557). Compaction equipment shall be adequately sized and be either specifically designed for soil compaction or of proven reliability to efficiently achieve the specified level of compaction with uniformity.

4.4 Compaction of Fill Slopes

In addition to normal compaction procedures specified above, compaction of slopes shall be accomplished by backrolling of slopes with sheepsfoot rollers at increments of 3 to 4 feet in fill elevation, or by other methods producing satisfactory results acceptable to the Geotechnical Consultant. Upon completion of grading, relative compaction of the fill, out to the slope face, shall be at least 90 percent of maximum density per ASTM Test Method D1557.

4.5 Compaction Testing

Field tests for moisture content and relative compaction of the fill soils shall be performed by the Geotechnical Consultant. Location and frequency of tests shall be at the Consultant's discretion based on field conditions encountered. Compaction test locations will not necessarily be selected on a random basis. Test locations shall be selected to verify adequacy of compaction levels in areas that are judged to be prone to inadequate compaction (such as close to slope faces and at the fill/bedrock benches).

4.6 Frequency of Compaction Testing

Tests shall be taken at intervals not exceeding 2 feet in vertical rise and/or 1,000 cubic yards of compacted fill soils embankment. In addition, as a guideline, at least one test shall be taken on slope faces for each 5,000 square feet of slope face and/or each 10 feet of vertical height of slope. The Contractor shall assure that fill construction is such that the testing schedule can be accomplished by the Geotechnical Consultant. The Contractor shall stop or slow down the earthwork construction if these minimum standards are not met.

4.7 Compaction Test Locations

The Geotechnical Consultant shall document the approximate elevation and horizontal coordinates of each test location. The Contractor shall coordinate with the project surveyor to assure that sufficient grade stakes are established so that the Geotechnical Consultant can determine the test locations with sufficient accuracy. At a minimum, two grade stakes within a horizontal distance of 100 feet and vertically less than
5 feet apart from potential test locations shall be provided.

5.0 Subdrain Installation

Subdrain systems shall be installed in accordance with the approved geotechnical report(s), the grading plan, and the Standard Details. The Geotechnical Consultant may recommend additional subdrains and/or changes in subdrain extent, location, grade, or material depending on conditions encountered during grading. All subdrains shall be surveyed by a land surveyor/civil engineer for line and grade after installation and prior to burial. Sufficient time should be allowed by the Contractor for these surveys.

6.0 Excavation

Excavations, as well as over-excavation for remedial purposes, shall be evaluated by the Geotechnical Consultant during grading. Remedial removal depths shown on geotechnical plans are estimates only. The actual extent of removal shall be determined by the Geotechnical Consultant based on the field evaluation of exposed conditions during grading. Where fill-over-cut slopes are to be graded, the cut portion of the slope shall be made, evaluated, and accepted by the Geotechnical Consultant prior to placement of materials for construction of the fill portion of the slope, unless otherwise recommended by the Geotechnical Consultant.

7.0 Trench Backfills

7.1 The Contractor shall follow all OHSA and Cal/OSHA requirements for safety of trench excavations.

7.2 All bedding and backfill of utility trenches shall be done in accordance with the applicable provisions of Standard Specifications of Public Works Construction. Bedding material shall have a Sand Equivalent greater than 30 (SE>30). The bedding shall be placed to 1 foot over

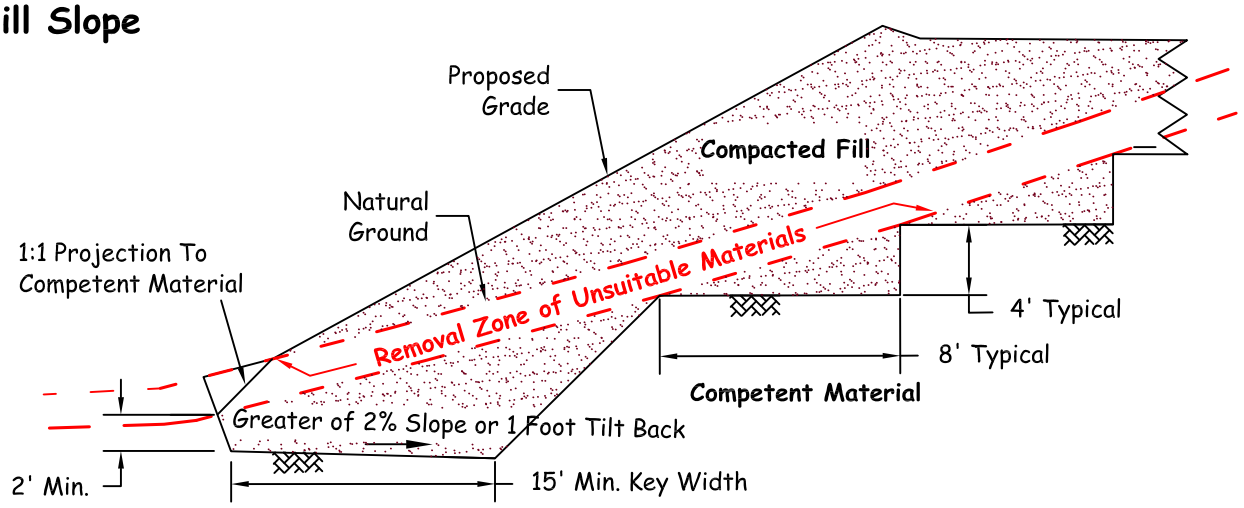
the top of the conduit and densified by jetting. Backfill shall be placed and densified to a minimum of 90 percent of maximum from 1 foot above the top of the conduit to the surface.

7.3 The jetting of the bedding around the conduits shall be observed by the Geotechnical Consultant.

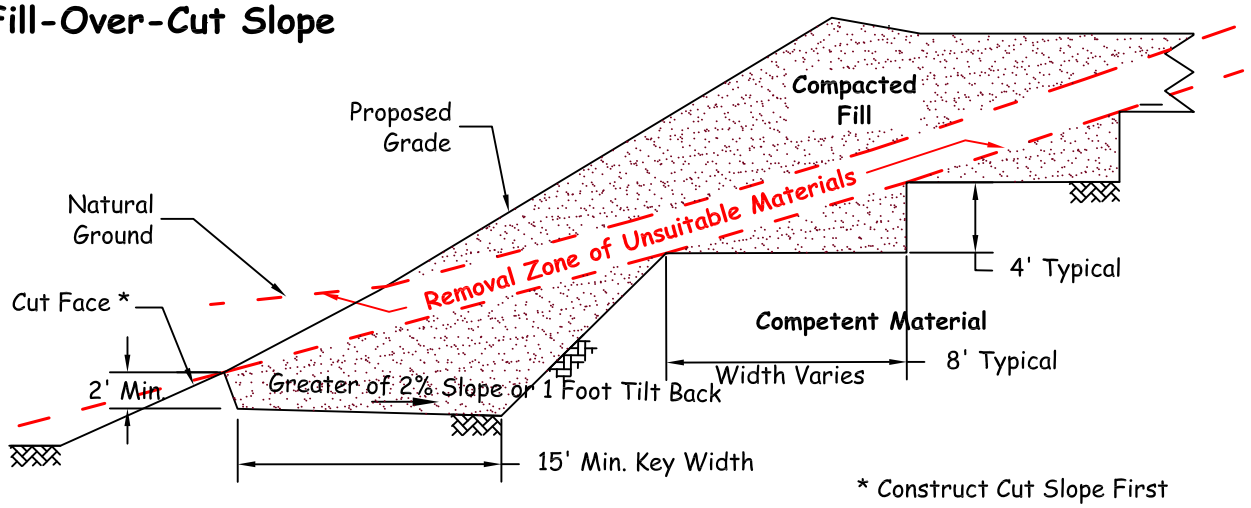
7.4 The Geotechnical Consultant shall test the trench backfill for relative compaction. At least one test should be made for every 300 feet of trench and 2 feet of fill.

7.5 Lift thickness of trench backfill shall not exceed those allowed in the Standard Specifications of Public Works Construction unless the Contractor can demonstrate to the Geotechnical Consultant that the fill lift can be compacted to the minimum relative compaction by his alternative equipment and method.

Fill Slope

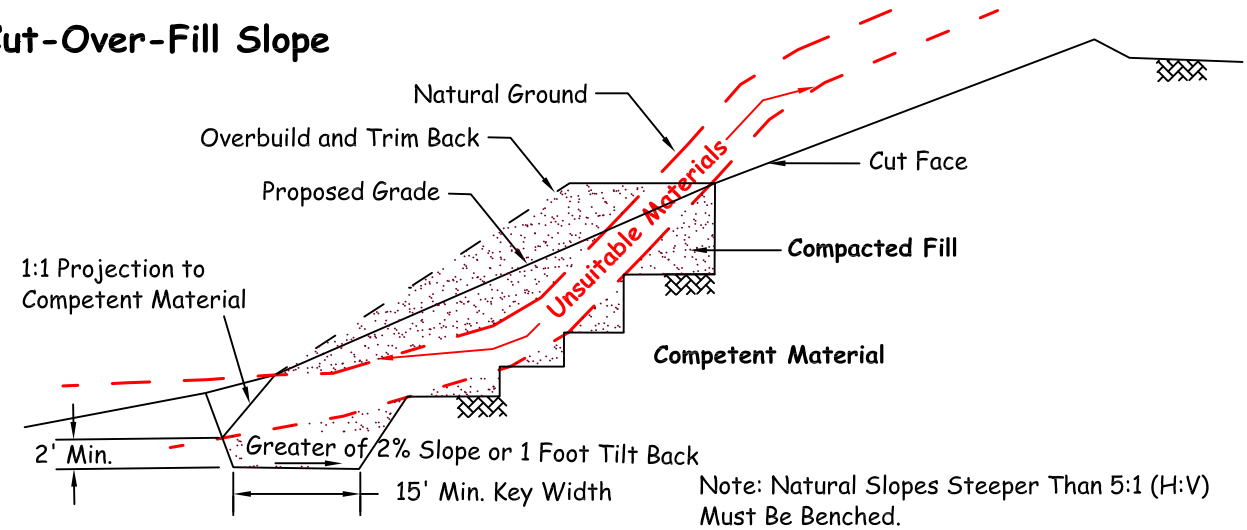


Fill-Over-Cut Slope



* Construct Cut Slope First

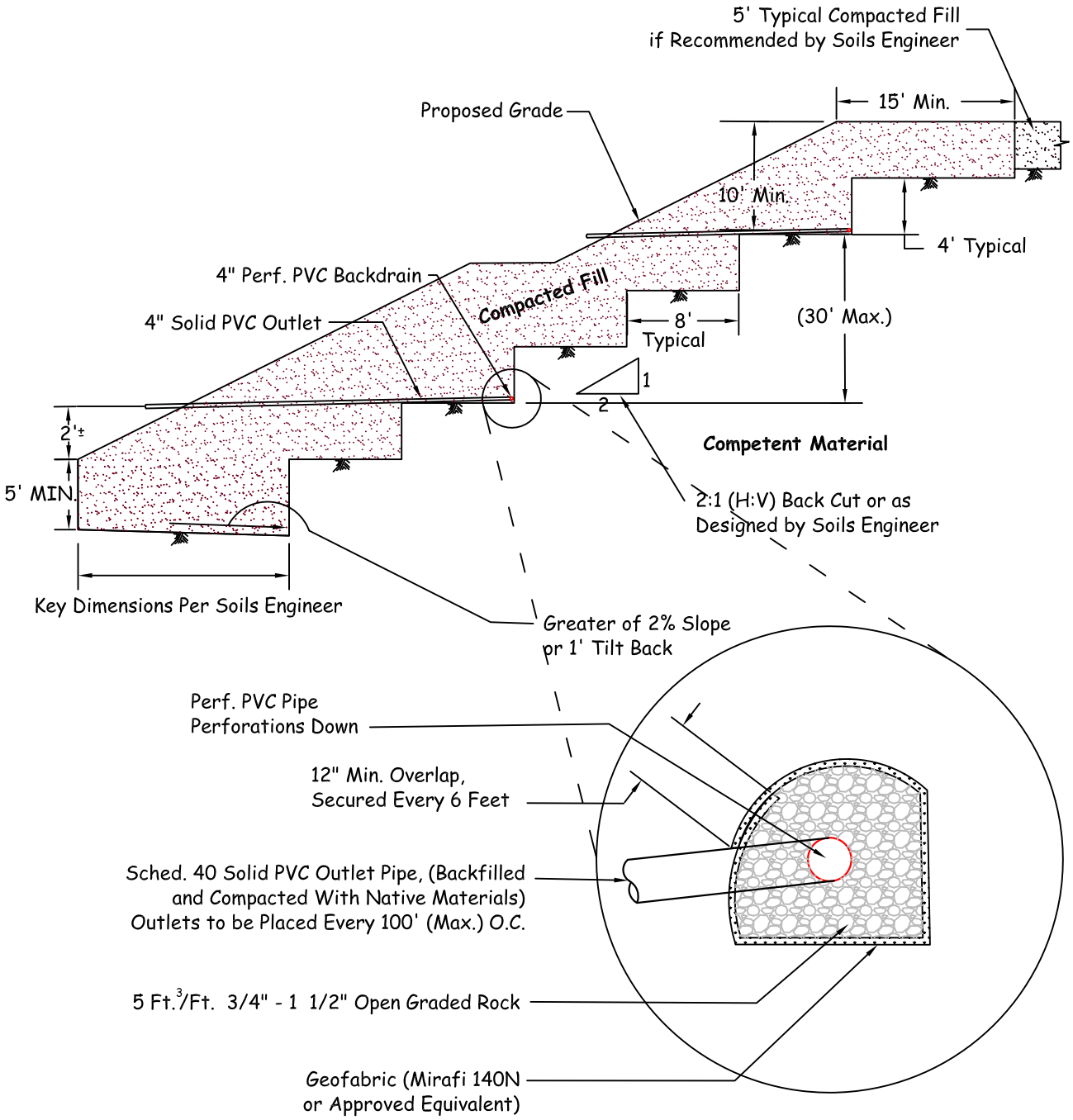
Cut-Over-Fill Slope



Note: Natural Slopes Steeper Than 5:1 (H:V) Must Be Benched.

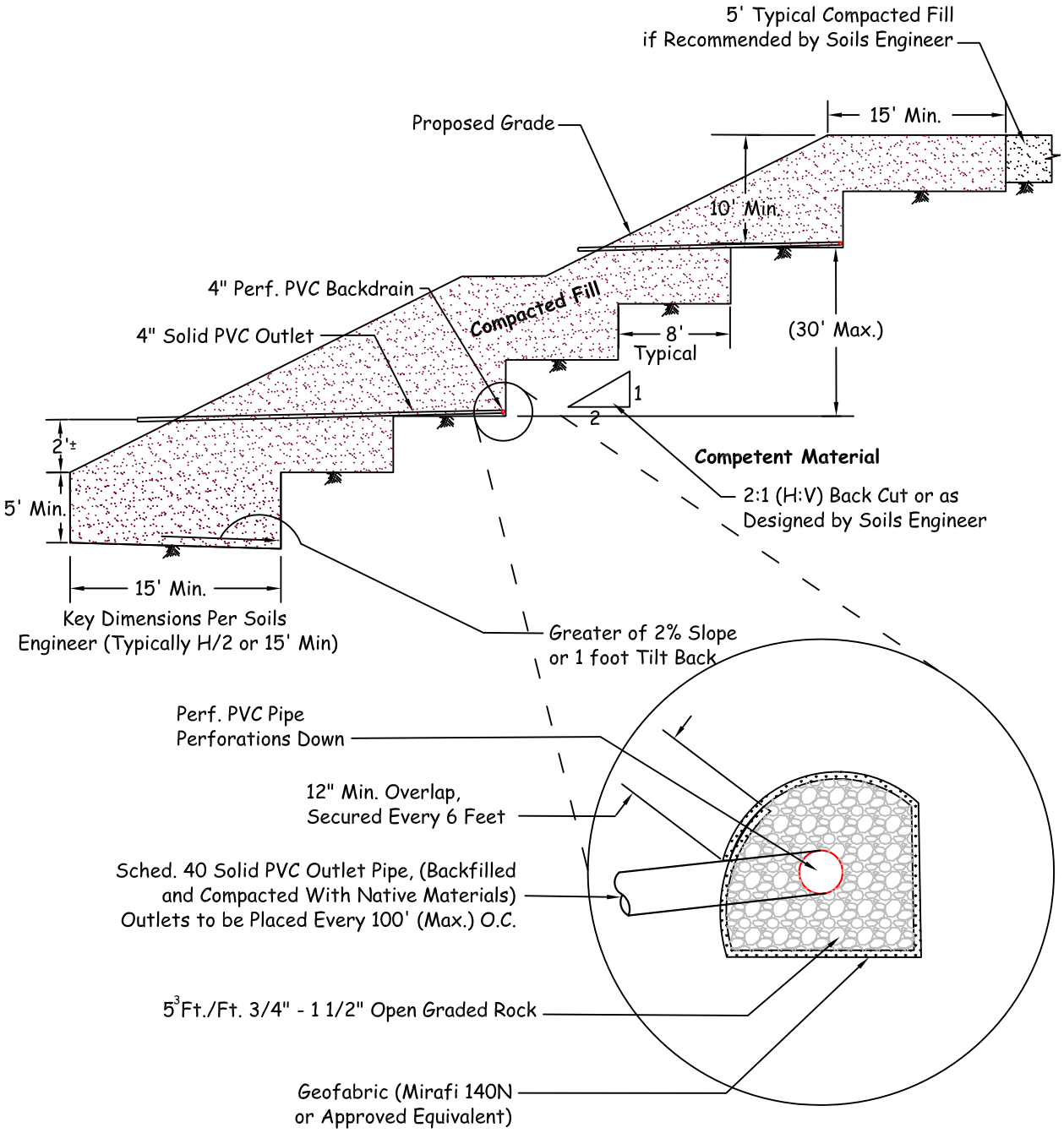
LGC Geotechnical, Inc.

KEYING AND BENCHING



LGC Geotechnical, Inc.

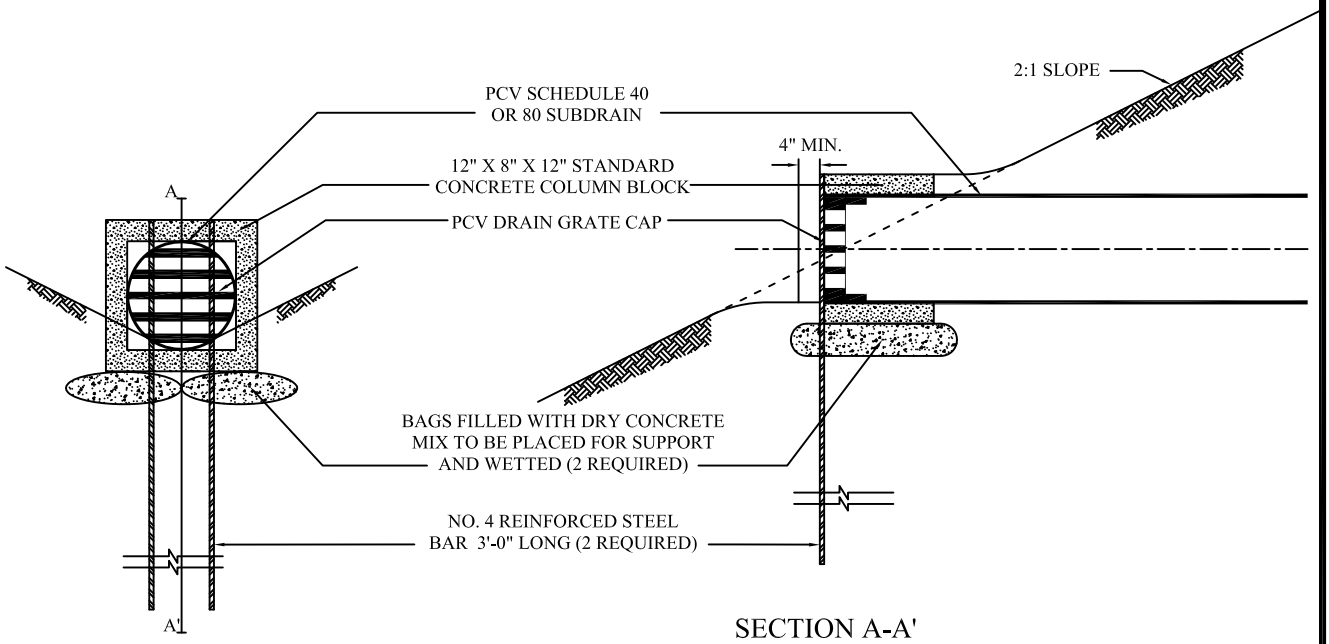
TYPICAL BUTTRESS DETAIL



LGC Geotechnical, Inc.

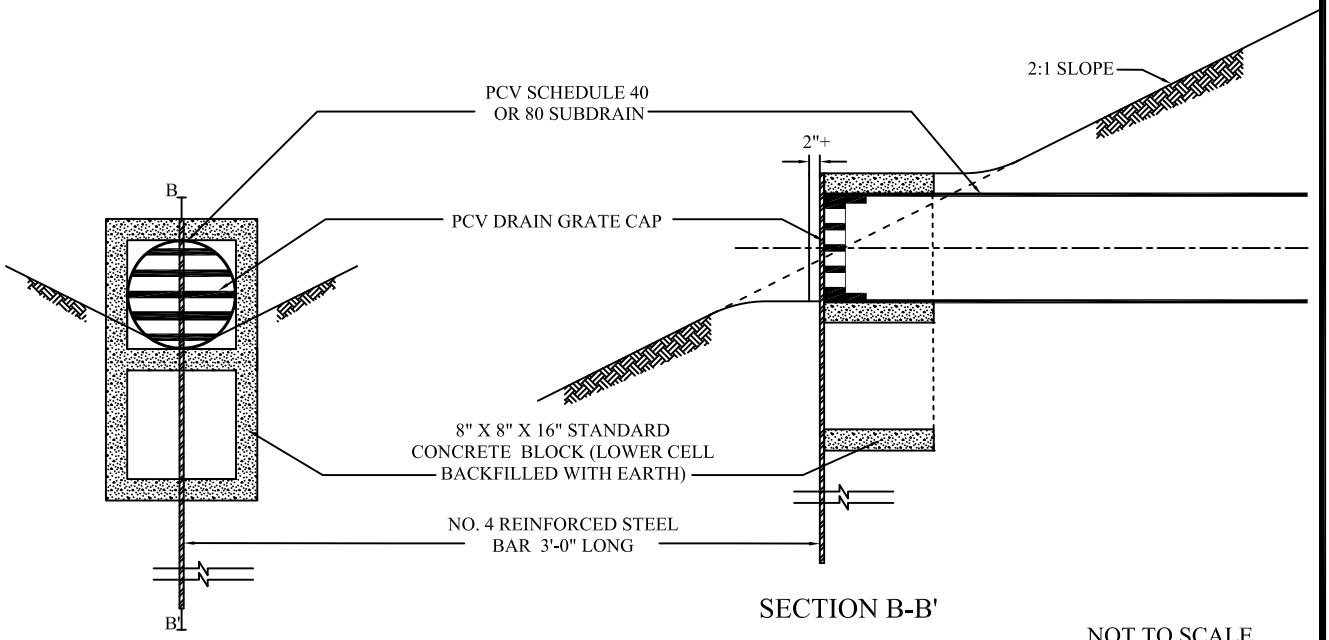
TYPICAL STABILIZATION FILL DETAIL

SUBDRAIN OUTLET MARKER -6" & 8" PIPE



SECTION A-A'

SUBDRAIN OUTLET MARKER -4" PIPE



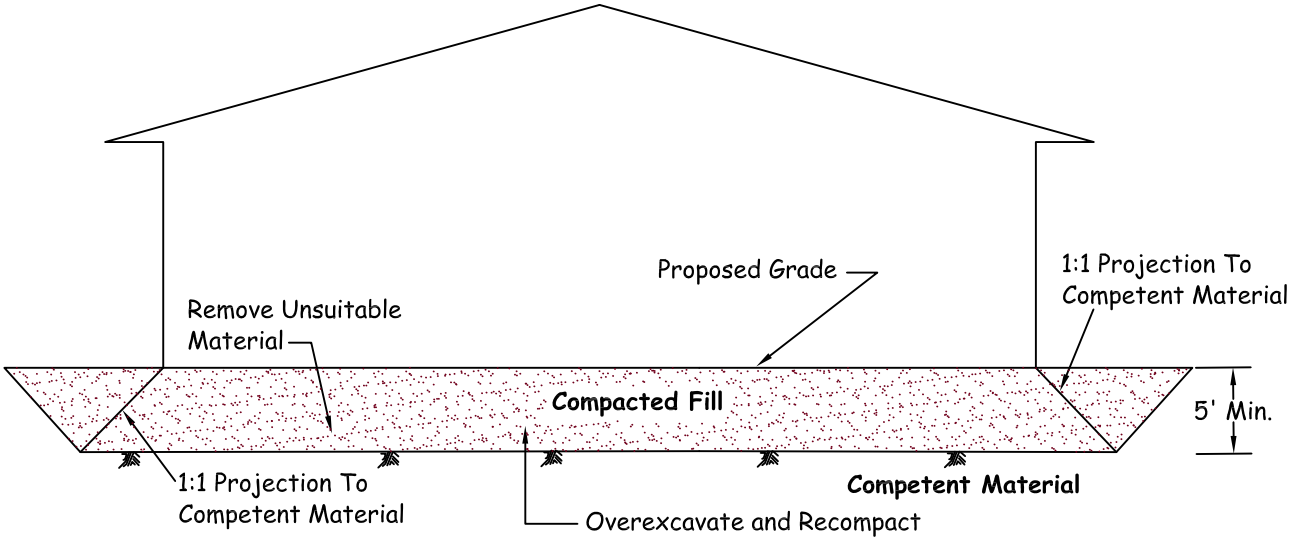
SECTION B-B'

NOT TO SCALE

LGC Geotechnical, Inc.

SUBDRAIN OUTLET MARKER DETAIL

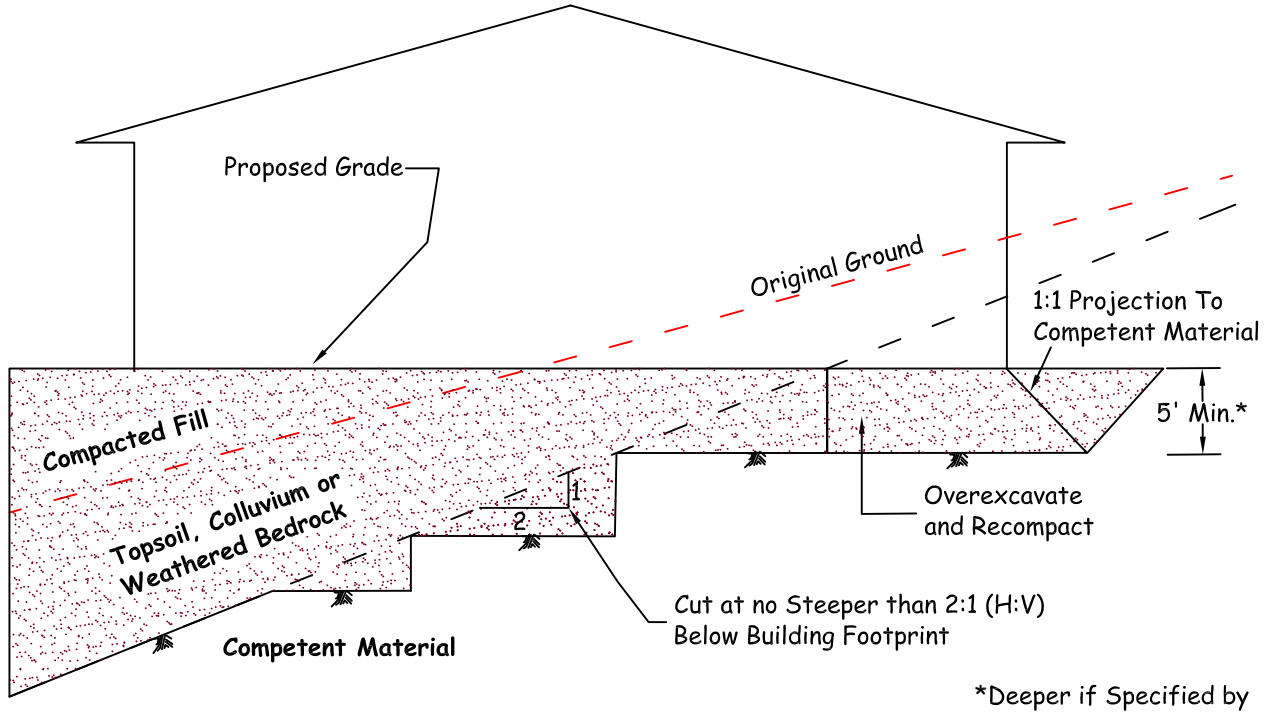
Cut Lot
(Exposing Unsuitable Soils at Design Grade)



Note 1: Removal Bottom Should be Graded With Minimum 2% Fall Towards Street or Other Suitable Area (as Determined by Soils Engineer) to Avoid Ponding Below Building

Note 2: Where Design Cut Lots are Excavated Entirely Into Competent Material, Overexcavation May Still be Required for Hard-Rock Conditions or for Materials With Variable Expansion Characteristics.

Cut/Fill Transition Lot



*Deeper if Specified by Soils Engineer

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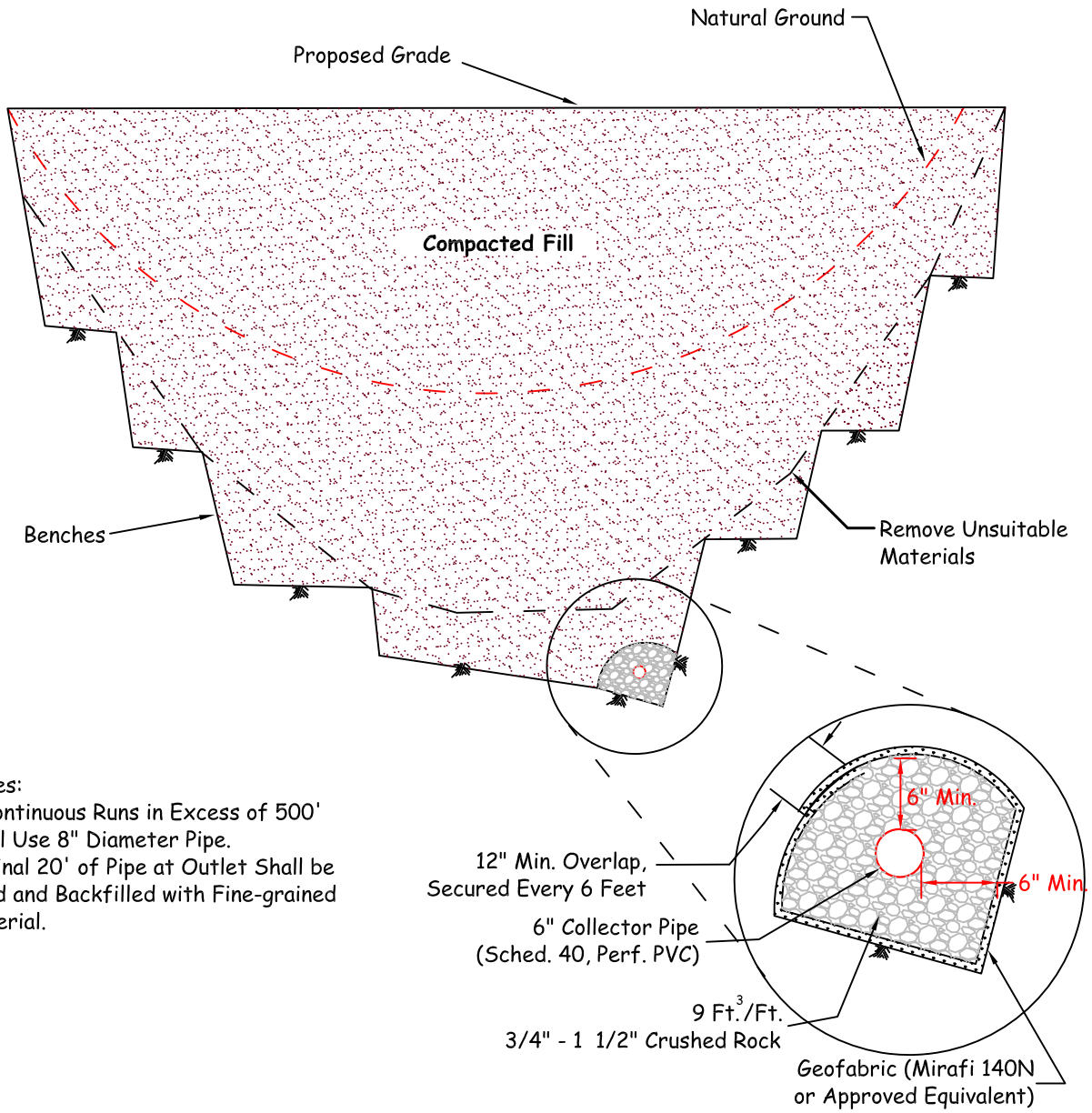
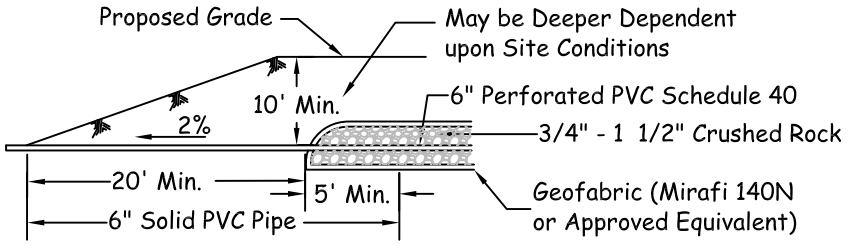
CUT AND TRANSITION LOT OVEREXCAVATION DETAIL



Notes:
1) Continuous Runs in Excess of 500' Shall Use 8" Diameter Pipe.
2) Final 20' of Pipe at Outlet Shall be Solid and Backfilled with Fine-grained Material.

Proposed Outlet Detail



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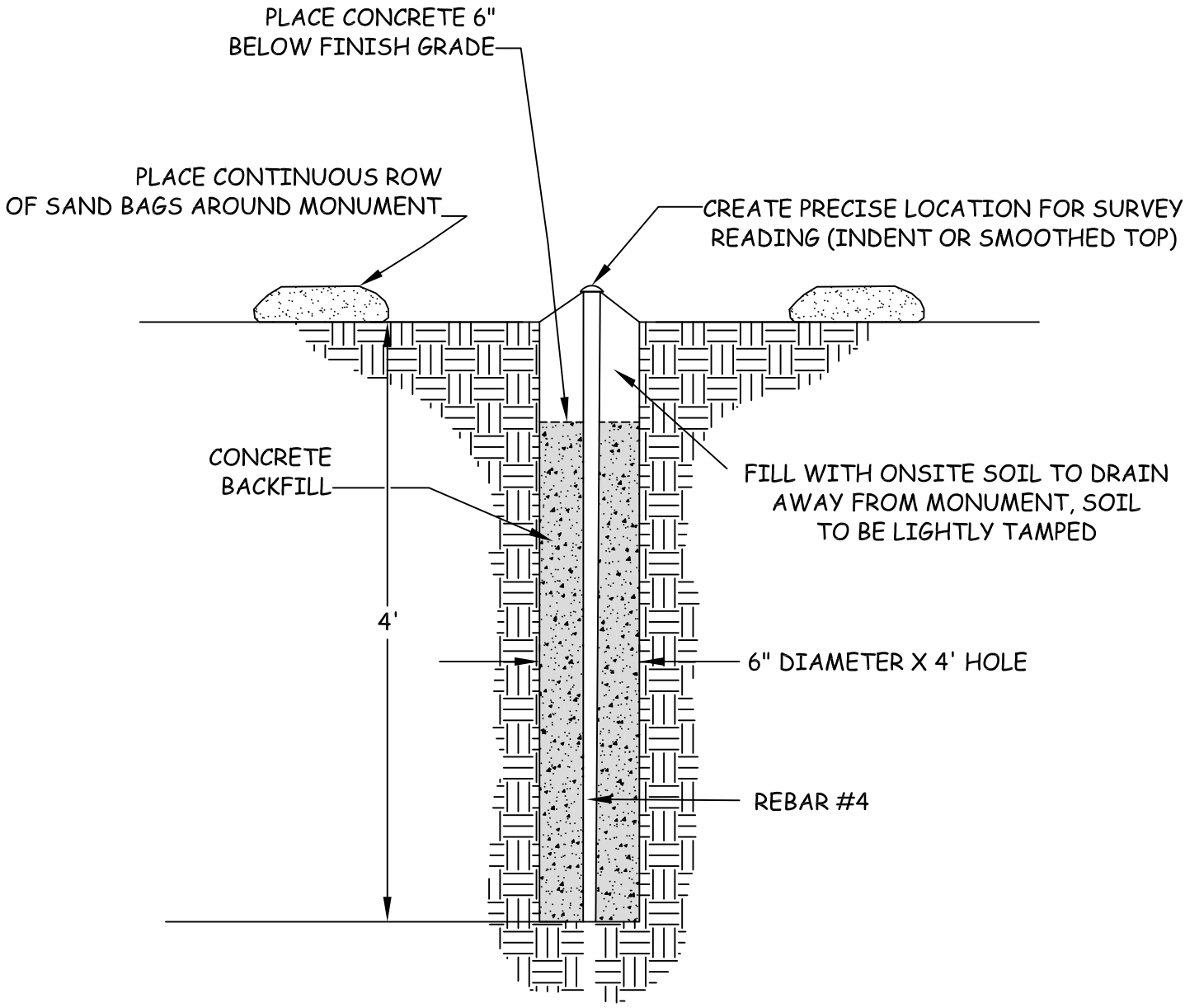
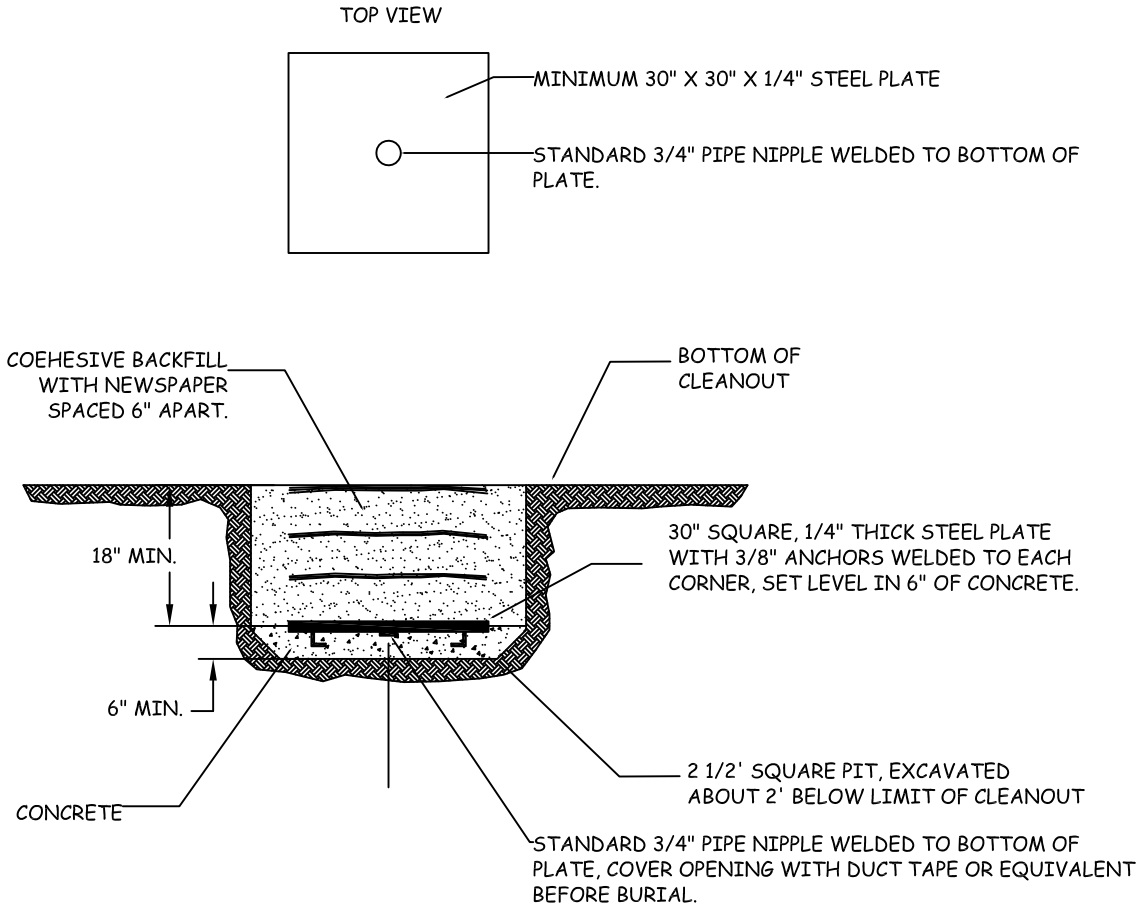
CANYON SUBDRAINS



NO CONSTRUCTION EQUIPMENT WITHIN 25 FEET
OF ANY INSTALLED SETTLEMENT MONUMENTS

LGC Geotechnical, Inc.

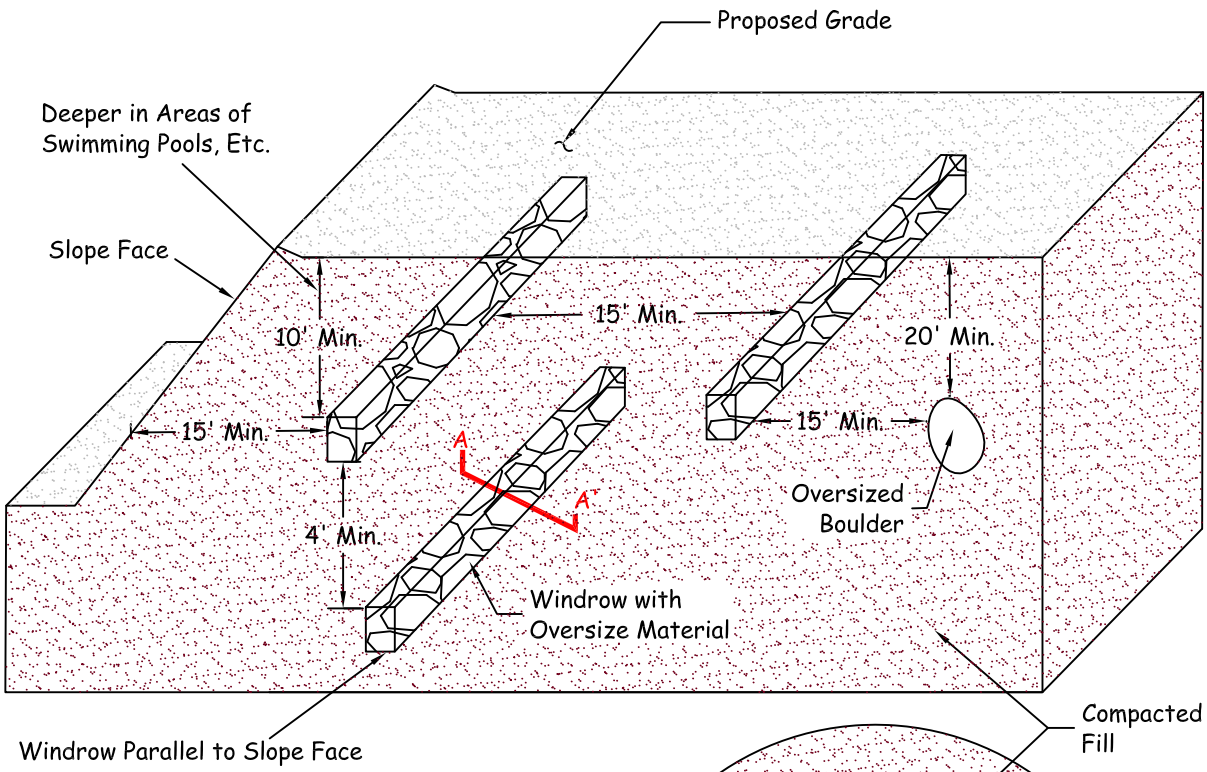
TYPICAL SURFACE SETTLEMENT MONUMENT

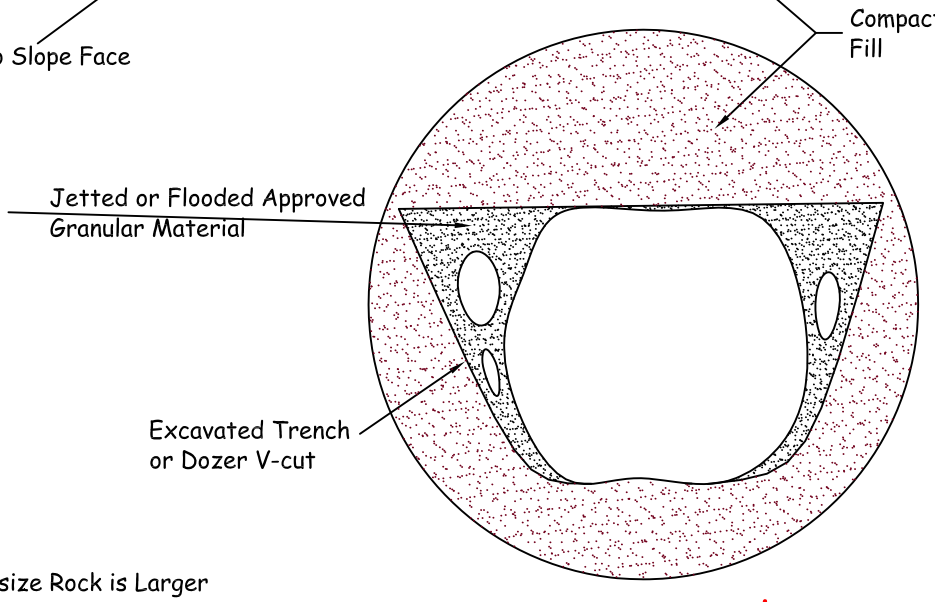


1. SURVEY FOR HORIZONTAL AND VERTICAL LOCATION TO NEAREST .01 INCH PRIOR TO BACKFILL USING KNOW LOCATIONS THAT WILL REMAIN INTACT DURING THE DURATION OF THE MONITORING PROGRAM. KNOW POINTS EXPLICITELY NOT ALLOWED ARE THOSE LOCATED ON FILL OR THAT WILL BE DESTROYED DURING GRADING.
2. IN THE EVENT OF DAMAGE TO SETTLEMENT PLATE DURING GRADING, CONTRACTOR SHALL IMMEDIATELY NOTIFY THE GEOTECHNICAL ENGINEER AND SHALL BE RESPONSIBLE FOR RESTORING THE SETTLEMENT PLATES TO WORKING ORDER.
3. DRILL TO RECOVER AND ATTACH RISER PIPE.

LGC Geotechnical, Inc.

TYPICAL SETTLEMENT PLATE AND RISER





Note: Oversize Rock is Larger
than 8" in Maximum Dimension.

Section A-A'

LGC Geotechnical, Inc.

OVERSIZE ROCK DISPOSAL DETAIL

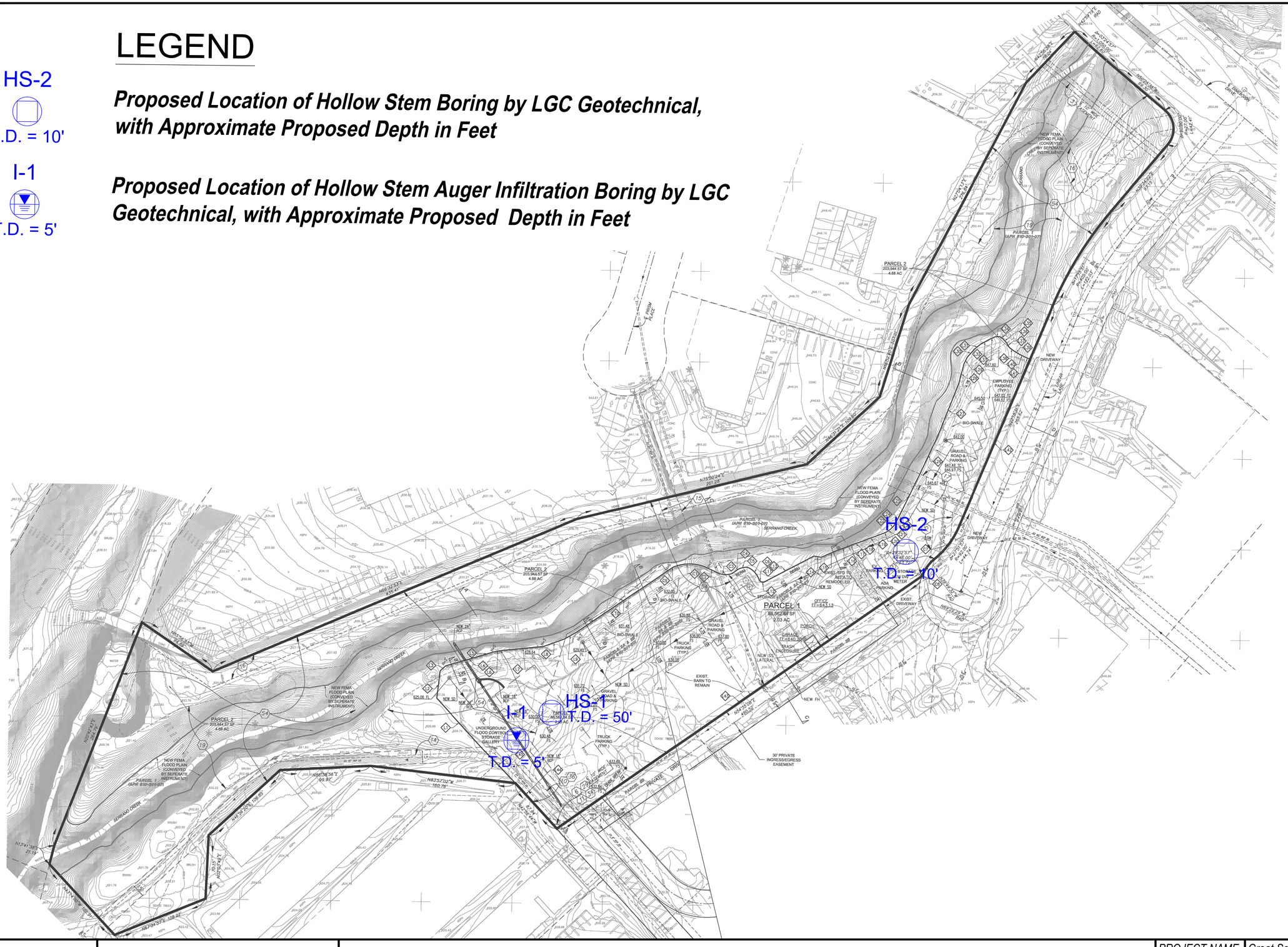
LEGEND

HS-2
T.D. = 10'

I-1
T.D. = 5'

Proposed Location of Hollow Stem Boring by LGC Geotechnical, with Approximate Proposed Depth in Feet

Proposed Location of Hollow Stem Auger Infiltration Boring by LGC Geotechnical, with Approximate Proposed Depth in Feet



LGC Geotechnical, Inc.
131 Calle Iglesia, Ste. 200
San Clemente, CA 92672
TEL (949) 369-6141 FAX (949) 369-6142

Geotechnical Exploration Location Map

PROJECT NAME	Great Scott - Lake Forest
PROJECT NO.	19035-01
ENG. / GEOL.	RLD / KTM
SCALE	1" = 50'
DATE	September 2023

SHEET 1 of 1

JM Research and Consulting

Jennifer Mermilliod, M.A.
4049 Almond Street, Suite 201
Riverside, CA 92501
Phone 951-233-6897
jennifer@jmrc.biz

MEMORANDUM

DATE: April 16, 2021

TO: Jeremy Krout
EPD Solutions, Inc.
2 Park Plaza, Suite 1120
Irvine, CA Orange, CA 92614

FROM: Jennifer Mermilliod, M.A., Principal Historian/Architectural Historian

SUBJECT: Focused Cultural Resources Survey – Historic Resources Assessment for the Great Scott Project, Lake Forest, Orange County, California

Dear Mr. Krout,

JM Research & Consulting (JMRC) completed a focused Cultural Resources Survey – Historic Resources Assessment (HRA) of 20795 & 20865 Canada Road (APN (APN 610-301-07; -20; and -21) in the City of Lake Forest, Orange County for the proposed Great Scott Project, which proposes to convert the approximately 6.37-acre subject property into an office, parking, and wood chip drying area.

The survey was requested by EPD Solutions based on the results of a Phase I-level Cultural Resources study, including archaeological investigation, completed by Material Culture Consultants in September 2020 (MCC 2020), which identified two single-family residences, barn, and ancillary structures on the project site, some of which would be demolished under the proposed project. Therefore, this HRA acts as a companion study to the MCC 2020 report to complete the Cultural Resources investigation as part of the environmental review process in compliance with CEQA (PRC §21000, et seq.) to evaluate the property for significance and eligibility for historic designation and to analyze potential impacts of the proposed project.

Jennifer Mermilliod, M.A., Principal Historian/Architectural Historian, JMRC, who exceeds the Secretary of the Interior's Professional Qualifications Standards, acted as Principal Historic Consultant and both managed and completed the study, which included consultation, coordination, and compliance applicable and relevant to cultural resources planning (see resume, Attachment B). The intensive-level survey was conducted in April 2021 and included field survey and historic and building specific research to supplement the work performed by MCC in accordance with CEQA Guidelines. Research and review of source material included previous cultural resources studies

and reports, Orange County property and assessment records, city directories, historic newspapers and secondary source accounts, and historic aerial photographs.

Once part of the Rancho Cañada de Los Alisos, the 10,668-acre Mexican land grant from Governor Juan Bautista Alvarado to Jose Antonio Fernando Serrano was purchased by Bostonian Dwight Whiting in 1884. Developed as Aliso City, Whiting subdivided the level portions, introduced the railroad, and planted olive trees, grape vineyards, and added approximately 400 acres of eucalyptus trees, some of which may be extant to the area east of the residence at 20795 Canada Road.

Fieldwork and additional historic and building specific archival research under the current HRA revealed that the property was developed from Lot F of Tract 695 as the 44.13-acre Osterman Ranch beginning in 1929. Purchased from The Whiting Company in 1928, Valencia orange trees were planted in 1929, and the easterly residence addressed as 20795 Canada Road was constructed in time for the 1930 assessment. The westerly residence addressed as 20865 Canada Road was added to the property in 1947-1953, and additional ancillary structures were added to the property over time, and both residences are severely altered. A single mature orange tree and three mature avocado trees remain just east of the westerly residence, a wind machine (1953) and early well and plant are not apparent on the site, and the former grove was removed for commercial/industrial development in the 1980s.

Bennie Willis Osterman was one of a large clan of Ostermans in the area and one of several sons of John Osterman, one of the best-known early ranchers in Orange County with a ranch in Tustin and former president of the Orange County Farm Bureau. As documented in historic newspapers, Bennie's Osterman Ranch was established prior to 1928 and this purchase of additional acreage along the Serrano Creek. Accounts describe a large estate with reservoir used partly as a swimming pool (by 1935), badminton court, horseback riding, and other entertainments in the El Toro foothills where Bennie resided with his wife, Cynthia, and two daughters and hosted many social gatherings. Osterman was active in the El Toro Farm Center, conducting research in pest control for orange and walnut trees, and in 1931 he was one of several incorporators of the Pacific Coast Bean Growers Association. Historic accounts do not document the relocation of the Ostermans from their earlier ranch to this property, or anywhere on the 44 acres, which indicates it may have been occupied by a manager for a time; however, it is clear that Mrs. Osterman was living in the easterly residence (20795) upon her death in 1965.

The Osterman Ranch has been extensively altered, and its setting is significantly compromised by reduction of the property from approximately 44.13 acres to 6.37 acres, the removal of the grove, and the modern development of its immediately adjacent former acreage. Both single-family residences have been severely altered with original architectural features enveloped by later alterations and additions. As a secondary structure, the large barn, which is in poor condition but has suffered less alteration, is unable to sufficiently convey its association apart from the context of the reduced and compromised property. Although owned, and likely occupied, by Bennie and Cynthia Osterman, who were engaged in early 20th century agriculture in the area as well as the social and cultural life of the small town, the reduced and compromised property is not strongly associated with events that have made a significant contribution to the broad patterns of our national or state history or with significant persons in our past (NR/CR Criteria A,B/1,2); does not embody distinctive characteristics of a type, period, or represent the work of a master or possess high artistic value (NR/CR C/3); and has not yielded, or is likely to yield, further information important in history or prehistory (NR/CR Criteria D/4). The ranch property does not appear to be eligible for listing in the National Register of Historic Places (NR) or California Register of Historical Resources (CR) at any level, and the City of Lake Forest does not have a local preservation ordinance with criteria for designation or maintain a local inventory. Therefore, the Osterman Ranch is assigned a California Historic Resources (CHR) code of ***6Z – Found ineligible***

for NR, CR, or Local designation through survey evaluation. The property was fully documented on California Department of Parks and Recreation DPR forms (attached). The results of this focused study indicate that no further historic investigation is recommended.

The proposed Great Scott Project includes the demolition of the easterly residence at 20795 Canada Road and conversion of the westerly residence at 20865 Canada Road to an office. The office conversion includes the demolition of the garage and swimming pool as well as interior tenant improvements. Proposed site improvements include removing the orange and avocado trees for parking, removing animal structures, improving areas for wood chip drying flats, providing one-way vehicular access to the property from Linear Lane, and replacing eucalyptus trees in the eastern point of the property with Virginia Live Oak.

As the remains of the Osterman Ranch have been found ineligible for designation, the property is not considered a historic resource under CEQA, and no mitigation measures are recommended. The cluster of mature eucalyptus trees found to the east of the residence at 20795 Canada Road may be some of the 400 acres planted to eucalyptus by The Whiting Company in the late-1890s. It is recommended that retention of these trees be considered in the planning process; however, if removal of the eucalyptus trees does occur, this would not be considered a CEQA impact and no mitigation would be required.

Please contact me should you need any clarification or further assistance.

Regards,

Jennifer Mermilliod, Principal, JMRC

Attachment A

DPR Forms

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI#
Trinomial
CHR Status Code 6Z
Other Listings
Review Code Reviewer Date

*Resource Name or # (Assigned by recorder) Osterman Ranch

P1. Other Identifier:

*P2. Location: ☐ Not for Publication ☒ Unrestricted *a. County Orange

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

*b. USGS 7.5' Quad El Toro Date T 6S ; R 8W ; ¼ of ¼ of Sec 11 & 12 ; S.B. B.M.

c. Address 20795 & 20865 Canada Road City Lake Forest Zip Code 92630

d. UTM: (give more than one for large and/or linear resources) Zone ; mE/ mN/

e. Other Locational Data: (e.g., parcel#, directions to resource, elevation, etc. as appropriate) APN: 610-301-07; -20; -21

*P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
See Continuation Sheet.

P3b. Resource Attributes: (List attributes and codes) HP33 – Farm/Ranch

P4. Resources Present: ☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5b. Description of Photo: (view, date, Acession #) View to north. Photo taken on March 30, 2021

*P6. Date Constructed / Age and Sources:
☒ Historic ☐ Prehistoric ☐ Both
1930 (Assessors Records and Historic Aerials)

*P7. Owner and Address:
Hess & Cohen Trust
20795-28065 Canada Road
Lake Forest, CA 92630

*P8. Recorded by: (Name, org., and addr.)
Jennifer Mermilliod
JM Research & Consulting (JMRC)
5110 Magnolia Avenue
Riverside, CA 92506

*P9. Date Recorded: March 30, 2021

*P10. Survey Type
Intensive-Level

*P11 – Report Citation (Cite survey report and other sources, or enter "none.") Mermilliod, Jennifer (JMRC). 2021. Historic Resources Assessment for the Great Scott Project, Lake Forest, Orange County, CA.

Attachments: ☐ None ☐ Location Map ☐ Sketch Map ☒ Continuation Sheet ☒ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other Other (List)

BUILDING, STRUCTURE, AND OBJECT RECORD

*CHR Satus Code 6Z

*Resource Name or # (Assigned by recorder) Osterman Ranch

B1. Historic Name:

B2. Common Name:

B3. Original Use: Ranch B4. Present Use: MFR

*B5. Architectural Style: Ranch (1930s-1950s; altered)

*B6. Construction History: (Construction date, alterations and date of alterations)

1929 Valencia orange grove
1930 Easterly residence (20795; alteres 1938-1960s), barn, smaller barn (demolished by 1938), and some ancillary structures
1947-1953 Westerly residence (20865); altered 1960-1970
1970-1980 Additoinal ancillary structures

*B7. Moved? ☒ No ☐ Yes ☐ Unknown Date: Original Location:

*B8. Related Features:

Barn
Animal Pens/Corrals/Exercise Ring

B9a. Architect: none B9b. Builder: unknown

*B10. Significance: Theme Early-20th Century Citriculture Area City of Lake Forest/Orange County

Period of Significance 1929-late-1940s Property Type Ranch Applicable Criteria N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

See Continuation Sheet.

B11. Additional Resource Attributes: (List attributes and codes) HP2/HP3 SFR/MFR; HP4 Ancillary Building; HP30 Trees

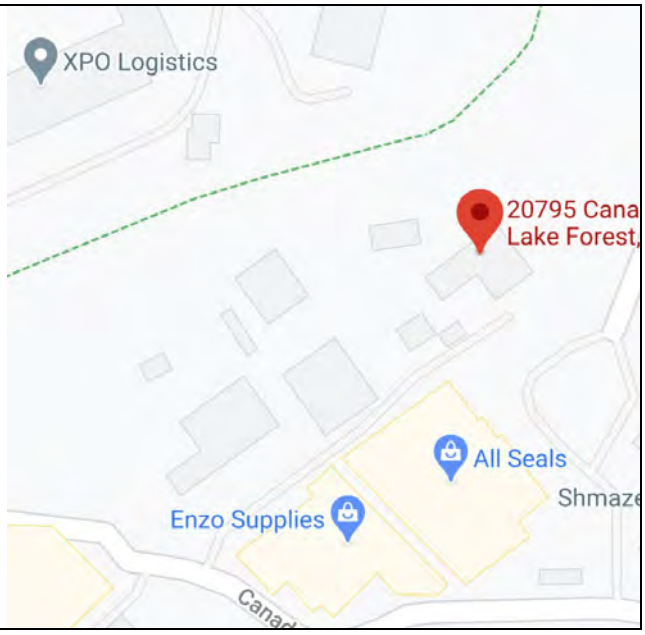
*B12. References:

City of Orange 1927-1932. City Directories.
County of Orange 1926. Tract No. 695. L.A. Misc Records 3/290-291.
County of Orange 1927-1930. Assessment Records
County of Orange 1928. Corporation Grant Deed. M.B. 153/319.
County of Orange 1931-1999. Historical Aerials Imagery, ocgis.com.
County of Orange 1934. Agreement – Well & Pump. M.B. 690/313.
Fidelity National Title Company 2021. Title Report.

B13. Remarks:

*B14. Evaluator: Jennifer Mermilliod

*Date of Evaluation: April 10, 2021



P3a. Description:
This former ranch property is wedged between the rear of a commercial industrial complex off Canada Road and the Serrano Creek Trail at the southern terminus of Linear Lane. The property is elevated above the creek on an irregular finger-shaped parcel and accessed by an asphalt drive from Canada Road and dirt and gravel drive around the rear of the commercial-industrial buildings. The property consists of two single-family residences, a large hay barn, and several ancillary structures for animal shelter and storage. Mainly covered with natural vegetation, one mature orange tree and three mature avocado trees are found on the east edge of the property, and a Eucalyptus grove and boulders are found beyond the northeasterly residence along Linear Lane.

20795 Canada Road
The one-story, single-family residence (20795 Canada Road) faces east from the northeasterly area of the property rests on a stacked concrete and cinder block foundation. The original, cross gabled with hip, 1930 residence is enveloped by multiple additions and enclosures (1938-1960s). The wood-framed, now-irregular plan is topped by a complex moderate-pitched hip and side-gabled roof with twin high-pitched rear-facing gables covered with composition shingles. A variety of eaves, including wide, narrow, boxed, and exposed rafters, shelter walls clad in flush vertical boards. Visible fenestration consists of aluminum-framed, sliding windows, some paired with shutters, and a tripartite assemblage is found on the left façade. The off-centered front door with privacy sidelight is recessed beneath a façade addition or enclosure, a raised entry is found on the side (south) elevation, which may be a former enclosed porch, and an aluminum-framed, sliding glass door accesses a large rear shed roof addition. A brick chimney rises from the interior. A side-gabled detached garage with narrow eaves clad in board-n-batten with swinging panel doors is found to the south, beyond which is a large rear addition that appears to serve as a second matching garage/storage building as well as a storage shed elevated on cinder block. A metal storage container is adjacent (south) of the primary garage. A mature redwood tree and a redwood stump (aged approximately 80 years) are found in the side yard between the residence and primary garage.

20865 Canada Road
The Ranch style one-story single-family residence (20865 Canada Road) faces east from the southwesterly area of the property rests on a stacked concrete foundation. The original, ca. late-1940s residence (1947-1953) has two large façade additions and other modifications mostly completed 1960-1970. The wood-framed, now-rambling plan is topped by a moderate-pitched cross gable roof with extended gable peaks and modest eaves with exposed rafters over original portions and a low-pitched shed roof with wide eaves and exposed heavy rafters over façade additions. Walls are clad in board-n-batten, and fenestration consists primarily of aluminum-framed, sliding windows in the front mass and aluminum-framed double-hung windows on the rear, original mass; one jalousie window is found on the north. The entry is recessed within a covered breezeway that separates the residence from the matching garage, and a raised, covered porch shelters a rear door. An open addition with jacuzzi and second story deck has been added to the rear of the garage and adjacent to a rear swimming pool. The front yard is landscaped with turf, one mature orange tree and three mature avocado trees.

Barn
A large, approximately 58'x64' hay barn faces east between the two residences on a raised low concrete wall foundation and earthen floor. The wood-framed one-story structure with hayloft is topped with a medium-pitched front-gabled roof is covered with corrugated metal panels and ends in narrow, open eaves with gutters over walls clad in flush vertical boards and board-n-batten in front and rear gable ends. Fenestration consists of multiple same-sized openings regularly spaced and filled with corrugated fiberglass. A wood-framed, multi-paned casement window with wood sill and a 5-panel wood door with round metal knob are found on the north elevation adjacent to a former electric panel. Two sliding barn doors on a top metal rail and a swinging, wood hayloft door in the gable end are found on both the front and rear elevations. Four hitching posts line the rear elevation.

Several wood-framed and metal framed open air structures in active use are located along the rear of the property and serve as animal pens and corrals, an exercise ring, and storage. A wind machine permitted in 1953 and an early well and pump house documented in a recorded 1934 agreement were not identified during field survey. The property is in fair condition and retains a poor level of integrity due to many inappropriate additions over time and the loss of its historic setting with the removal of original groves and development of surrounding area.

***B10. Significance:**
The partition of the Rancho Cañada de Los Alisos gave rise to development in this area of Orange County and eventually the City of Lake Forest (formerly El Toro). Originally, a 10,668-acre Mexican land grant from Governor Juan Bautista Alvarado to Jose Antonio Fernando Serrano in 1842, and enlarged by Pio Pica in 1846, most of the rancho was purchased by Bostonian Dwight Whiting in 1884 after the devastating drought of 1863-64. Developed as Aliso City in the style of an English village, Whiting subdivided the level portions, introduced the railroad, and planted olive trees, grape vineyards, and approximately 400 acres of Eucalyptus trees.

In 1928, The Whiting Company sold the 44.13-acre parcel, Lot F of Tract 695, to Bennie W. and Cynthia Osterman. Bennie Willis Osterman was one of a large clan of Ostermans in the area and one of several sons of John Osterman, one of the best-known early ranchers in Orange County with a ranch in Tustin and former president of the Orange County Farm Bureau. As documented in historic newspapers, Bennie's Osterman Ranch was established prior to 1928 and this purchase of additional acreage along the Serrano Creek. Accounts describe a large estate with reservoir used partly as a swimming pool (by 1935), badminton court, horseback riding, and other entertainments in the El Toro foothills where Bennie resided with his wife and two daughters and hosted many social gatherings. Osterman was active in the El Toro Farm Center,

conducting research in pest control for orange and walnut trees, and in 1931 he was one of several incorporators of the Pacific Coast Bean Growers Association.

Immediately after purchase in 1928, the acreage was planted to Valencia oranges (1929), and the easterly residence (20795 Canada Road) and barn were constructed in time for the 1930 assessment. Historic accounts do not document the relocation of the Ostermans from their earlier ranch to this property, or anywhere on the 44 acres, which indicates it may have been occupied by a manager for a time; however, it is clear that Mrs. Osterman was living in the easterly residence (20795) upon her death in 1965. Over the course of the early- to mid-20th century decades, the ranch along the Serrano Creek grew to include multiple ancillary structures. A second residence was constructed sometime between 1947 and 1953, and a the Ostermans deeded to their daughter and son-in-law, Denver and Sadie Nutter, a portion of Lot F in 1953, likely indicating their residency in the second single-family residence on the property. Due to the arid climate and poor soil, unlike other southern California towns, agriculture was generally unsuccessful in the vicinity. Residential and other development began in earnest in 1959, although groves of the ranch persisted into the 1980s, finally giving way to commercial/industrial development by 1990.

The former ranch is no longer a functioning agricultural property, and integrity of design, materials, and setting has been severely compromised by alterations over time and the elimination of its historic agricultural setting. The primary residence (20795 Canada Road) has been severely altered such that its original design cannot be fully understood, though remaining architectural fabric does not indicate high stylistic intent. The secondary Ranch style residence (20865 Canada Road), constructed as the agricultural period of the area was subsiding, is also extensively altered, remaining ancillary structures are of common design and temporary construction, and the groves have been removed for new adjacent development. While the barn remains the most intact, it is an ancillary structure of a larger ranch property and is unable to convey its historic association alone. Although owned, and likely occupied, by Bennie and Cynthia Osterman, who were engaged in early 20th century agriculture in the area as well as the social and cultural life of the small town, the reduced and compromised property is not strongly associated with events that have made a significant contribution to the broad patterns of our national or state history or with significant persons in our past (NR/CR Criteria A,B/1,2); does not embody distinctive characteristics of a type, period, or represent the work of a master or possess high artistic value (NR/CR C/3); and has not yielded, or is likely to yield, further information important in history or prehistory (NR/CR Criteria D/4). The ranch property does not appear to be eligible for listing in the National Register of Historic Places (NR) or California Register of Historical Resources (CR) at any level, and the City of Lake Forest does not have a local preservation ordinance with criteria for designation or maintain a local inventory. Therefore, the Osterman Ranch is assigned a California Historic Resources (CHR) code of ***6Z – Found ineligible for NR, CR, or Local designation through survey evaluation***.

***B12. References (cont.):**

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Santa Ana Register 1921. Notice. July 22.
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Santa Ana Register 1925. El Toro Items. February 27.
Santa Ana Register 1928. No Title (recorded land transactions). May 1.
Santa Ana Register 1929. El Toro Mercantile Company (advertisement). March 4.
Santa Ana Register 1935. El Toro. July 31.
Santa Ana Register 1938. Enjoyable Affair. July 19.
Santa Ana Register 1939. Weekend Festivities. July 5.
Santa Ana Register 1939. John Osterman Called by Death. December 26.
The Tustin News 1965. El Toro Native Has Last Rites. May 27.

P5b. Additional Photographs:

SFR 20795 showing façade alteration, view NW

SFR 20795 and garage, view NE

SFR 20795 west elevation enclosure & additions, view NE

SFR 20795 altered W elevation w/ original residence at core, view S

SFR 20795 altered E elevation showing orig SFR at core, view W

SFR 20795 additions to rear of garage, view W

SFR 20865 large façade addition w/ orig roofline behind, view NW

SFR 20865 garage w/ added breezeway roof, view N/NE

SFR 20865 original rear mass, added breezeway, garage, vew E

SFR 20865 original rear porch, view E

Barn façade with sliding doors and S elevation, view N/NE

Barn south and rear elevations with hitching posts, view E/SE

Storage structures & creek beyond, view E/NE

Animal pens and creek beyond, view N

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

CONTINUATION SHEET

Primary # _____
HRI# _____
Trinomial _____

Page 7 of 7 *Resource Name or # (Assigned by recorder) Osterman Ranch

* Recorded by Jennifer Mermilliod *Date March 30, 2021 ☒ Continuation ☐ Update

Horse corral and creek beyond, view N/NE

Horse exercise ring, garden in foreground, view S

Original orange tree w/ road & new adjacnt development, view E

Rear dirt path along barn and animal structures, view E

Rear dirt path along barn & SFR 20865 original rear mass, view W

Creek bank, boulders, & eucalyptus trees beyond SFR 20795, view E

Attachment B

Historic Aerials

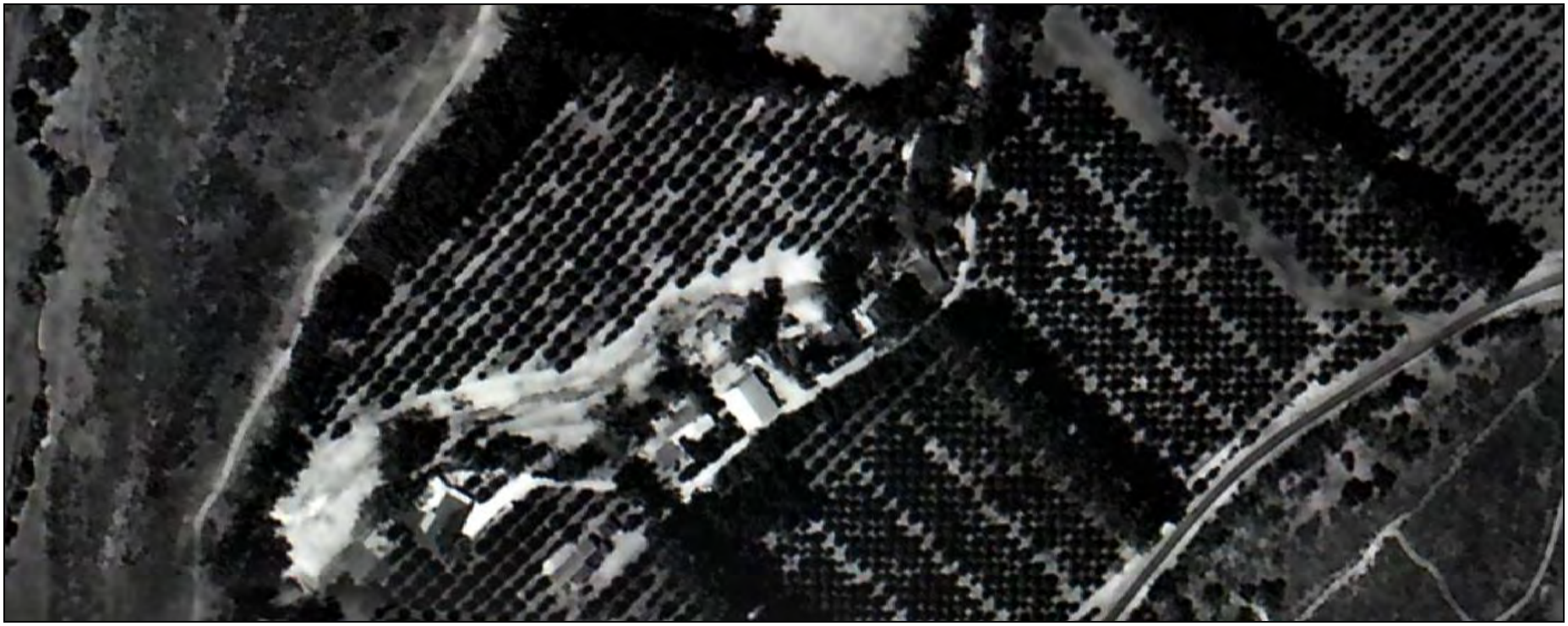
Historic Aerial 1931

Historic Aerial 1938

Historic Aerial 1947

Historic Aerial 1953

Historic Aerial 1960



Historic Aerial 1970

Attachment C

Professional Resume

Jennifer Mermilliod, M.A.

JM Research & Consulting

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Riverside, CA 92501
951-233-6897
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Statement of Qualifications & Expertise

Jennifer Mermilliod, M.A., Principal Historian/Architectural Historian exceeds the Secretary of the Interior's Professional Qualifications Standards for History and Architectural History.

Project Design, Entitlement & Consultation
Regulatory Compliance – Section 106 & CEQA
Survey, Evaluation & Context Development
Design Review, Case Planning, & Plan Check
Historic Preservation Planning, Policy & Programs
Cultural Resources Treatment & Management
National Register, California Register, & Local Registration
Presentation, Public Relations, & Outreach

Education

UC, Riverside, M.A., History, specialization in Historic Preservation, 2001
UC, Riverside, B.A., History, 2000

Professional Experience

Cultural Resources/Historic Consultant, JM Research & Consulting, since 2001
Reviewing Official under SHPO MOU, March Joint Powers Authority, since 2012
Contract Historic Preservation Senior Planner, City of Riverside, since 2016
Historic Consultant and On-film Historian, HGTV & DIY Network, Restored Show, Seasons 1-6, since 2016

Selected Projects

Preservation Planning, Policy & Programs

Determination of Eligibility, 550 E. Chapman Avenue, Orange, 2021
Mission Heritage Plaza Substantial Compliance Analysis, Wakeland Housing & Development, Riverside, 2020
National Register Nomination: Evergreen Cemetery, Riverside, 2020-2021
First American Title Company, 4th & Main Apartment Project, City of Santa Ana, 2020-2021
National Register Nomination: Bumann Ranch, Encinitas, 2020
San Jacinto General Plan Update, City of San Jacinto, 2019
Landmark Nomination: Bigelow's Bungalow, Riverside, 2018
Historic Interpretive Entry Design & Plaque: Marywood Retreat Center, Orange, 2017
San Jacinto Downtown Specific Plan, City of San Jacinto, 2017
National Register Nomination: Jefferson Elementary School, Corona, 2017
Citywide Streetlight LED Conversion Project, City of Riverside, 2017
City of Riverside North Park Pergola Collapse – Salvage & Documentation Program, City of Riverside, 2017
Landmark Plaque: The Patsy O'Toole House, Riverside, 2016
Landmark Plaque: The Nielson Pool House, Riverside, 2016
Landmark Nomination and Plaque: Camp Anza Officers Club, Riverside, 2016
History Room Design & Interpretive Display: Camp Anza Officers Club, Riverside, 2016
City of Redlands Certified Local Government Program Development, 2015
Chicago/Linden Strategic Plan, City of Riverside, 2013
National Register Nomination: Huntington Beach Public Library on Triangle Park, Huntington Beach, 2013
California Baptist University Specific Plan, Riverside, 2012
Landmark Nomination and Plaque: The Walter C. Banks Residence, Riverside, 2012
Historic District Nomination: Segment of State Route 18, Corona, 2012
Landmark Nomination and Plaque: The A.C.E. Hawthorne House and Tree, Riverside, 2012
National Register Nomination: Grand Boulevard, Corona, 2011
California Register Nomination: The Jackson Building, Riverside, 2009
Landmark Nomination and Plaque: The Jackson Building, Riverside, 2008
California Point of Historical Resources Nomination: Camarillo Ranch House, Camarillo, 2005
National Register Multiple Property Nomination: Architecture of the Arts and Crafts Movement, Pasadena, 2004
Structure of Merit Nomination: House at 3855-59 11th Street, Riverside, 2003
National Register Nomination: Camarillo Ranch House, Camarillo, 2003

CEQA Compliance

VitaPakt, Trumark Homes, Covina, 2021
Covina Bowl, Covina, 2020
La Atalaya, Altura Credit Union Member House, Riverside, 2019
Entrada, Wakeland Housing & Development, Riverside, 2019
Main Library, City of Riverside, 2018
Redlands YMCA Properties, Redlands, 2017
Marywood Retreat Center, Orange, 2013-2017
Mission Inn La Trattoria Pergola & Wine Tasting Room, Riverside, 2016
Rhunau, Rhunau, Clark Building, Riverside, 2016
Arlington Plaza, Riverside, 2016
Mission Lofts, Riverside, 2015
Lakeside Temescal Valley Project Lake Corona, Corona, CA
Harris Farm Townhomes, Riverside, 2015
Dhammakaya Retreat, Azusa, 2013
Riverside Plaza Harris' Department Store, Riverside, 2012
Old Town Plaza, San Jacinto, 2011
Pfennighausen Ranch, Pedley, County of Riverside, 2010
March Field Historic District Garage Building #113, March Joint Powers Authority, 2009
Five Points Realignment, City of Riverside, 2008
Fox Block, City of Riverside, 2007

Section 106 & CEQA Compliance

Prado Dam & Reservoir Improvement Project, Santa Ana River, 2017-present
Home Front at Camp Anza - Camp Anza Officers Club, City of Riverside, 2013-2017
HRER, Colton Undergrade & C Street Crossing Seismic Retrofit Projects, City of Colton, Caltrans District 8, 2014
HPSR & FOE, University Avenue Streetscape Project, City of Riverside, Caltrans District 8, 2005
HPSR & FOE, Victoria Avenue Streetscape & Parkway Restoration Project, City of Riverside, Caltrans District 8, 2004
HPSR, Jurupa Avenue Underpass / Mountain Avenue Crossing Closure Project, City of Riverside, Caltrans District 8, 2001

Section 106 Compliance

Entrada, Wakeland Housing & Development, Riverside, 2019
Mission Heritage Plaza & Civil Rights Museum, Wakeland Housing & Development, Riverside, 2017
HPSR, Inglewood Avenue Corridor Widening Project, City of Lawndale, Caltrans District 7, 2013
Van Buren Improvement Project, March Joint Powers Authority, County of Riverside, EDA, 2013
Wattstar Cinema and Education, Los Angeles, 2010
County of San Bernardino Lead Abatement Program, Highland, Redlands, & San Bernardino, 2003

Professional Activities

Publications

The New Home Company Announces Marywood Hills, a Historic Collection of Luxury Residences with Unobstructed Views of the City of Orange. Press Release co-authored for immediate by The New Home Company. April 2018.

The Grandest Boulevard. Riverside County Historical Commission and the Riverside County Regional Park and Open-Space District, *The Riverside County Chronicles,* Issue No. 5. Fall 2011.

Riverside Project Wins Governor's Award for Historic Preservation: 'Home Front at Camp Anza' Brings New Life to Old Officers Club. Press Release authored for immediate release by City of Riverside. October 4, 2016.

Historic Resources Inventory Database Web site: Instructions for Online Navigation. Historic Resources Database Web site User's Manual prepared for the City of Riverside. September 2002.

Historic Resources Inventory: Instructions for Recording and Viewing. Historic Resources Database User's Manual prepared for the City of Riverside. September 2001.

Awards

California Preservation Foundation Award – Latino Context, City of Riverside. 2019.
Governor's Award for Historic Preservation – Homefront at Camp Anza. 2016.
California Preservation Foundation Best Restoration Award – Homefront at Camp Anza. 2017.
IE Economic Partnership Award for Best Real Estate Development and Reuse – Homefront at Camp Anza. 2016.
Golden Nugget Award - Best Renovated, Restored, Adaptive Re-Use Residential Project – Homefront at Camp Anza. 2016.
Golden Nugget Award -Best Affordable Housing Community Under 30du/acre – Homefront at Camp Anza. 2016.

Presentations, Speaking Engagements, and Instruction

City of Riverside Cultural Heritage Board Continuing Education Program TBD 2021
Creating Space for Women: Julia Morgan, Architect, and the Riverside YWCA. Women In Tandem (WIT). COVID HOLD.
The History of the Automobile in Riverside, Riverside Historical Society Four-Part Lecture Series. 2018-2021.
Part 1. The Automobile Comes to Town: The Birth of the Automobile Industry in Riverside, 1902-1913. 2018.

Part 2. From Agriculture to Automobile: The Internalization of a New Economy, 1913-1928. 2019.
Part 3. COVID HOLD – Tentatively rescheduled April 11, 2021.
Part 4. COVID HOLD.

Historic Preservation: The Field of Public History. Notre Dame High School Career Day. September 2018.
Historic Preservation: The Field of Public History. Riverside East Rotary Club. July 2018.
Historic Preservation: The Field of Public History. Riverside Uptown Kiwanis. December 2017.
Architecture: Form, Function, and Ornamentation. Architecture Series. Diocese of San Bernardino, OLPH. October 2011.
How to Research Your Historic Home. City of Riverside Public Workshop. October 2010.
Riverside's Hidden Histories: The Gems Among Us – Nava Tires. Mission Inn Foundation and Museum. June 17, 2010.
The Art of the Survey. Riverside County Historical Commission 5th Annual Symposium. October 26, 2007.
The Field of Public History. California State University, Fullerton. Dr. Wendy Elliott Scheinberg. November 14, 2006.
Arlington Heights, the Realization and Preservation of a California Dream. CPF Conference. May 14, 2005.
How to Research Your Historic Home. Riverside County Historical Commission History Workshop. April 16, 2004.

Affiliations & Service

National Trust for Historic Preservation, General Member #58551599.
California Preservation Foundation, General Member #21244.
Old Riverside Foundation, General Member; Board of Directors (2003-2005) – facilitated mission advancement through planning and direction of annual home tour, awards program, facilities maintenance, and historic preservation advocacy.
Riverside Historic Society, Lifetime Member

Great Scott Tree Service Facility

Noise Impact Study

City of Lake Forest, CA

Prepared for:

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Prepared by:

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Mike Dickerson, INCE
Robert Pearson
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Simi Valley, CA 93065

Date: 9/26/2023

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1.0 Introduction

1.1 Purpose of Analysis and Study Objectives

This noise assessment was prepared to evaluate the potential noise impacts for the project study area and to recommend noise mitigation measures, if necessary, to minimize the potential noise impacts. The assessment was conducted and compared to the noise standards set forth by the Federal, State and Local agencies. Consistent with the City's Noise Guidelines, the project must demonstrate compliance to the applicable noise criterion as outlined within the City's Noise Element and Municipal Code.

The following is provided in this report:

- A description of the study area and the proposed project
- Information regarding the fundamentals of noise
- A description of the local noise guidelines and standards
- An evaluation of the existing ambient noise environment
- An analysis of stationary noise impacts from the project site to adjacent land uses
- Construction noise and vibration evaluation

1.2 Site Location and Study Area

The project site is located at the west of Liner Lane, north of Canada Road, with Serrano Creek bordering the project site to the south and east in Lake Forest, California, as shown in Exhibit A. The site's current land use designation is M1-Light Industrial. Land uses surrounding the site are zoned M1-Light Industrial. A multifamily residential community is further to the south east along Canada Road.

1.3 Proposed Project Description

The Project proposes to develop 6.71 acres, with 26 parking spaces, a 2,621 square foot office, and approximately 3,800 square foot storage building that is currently existing. Exhibit B demonstrates the site plan for the project.

Exhibit A

Location Map

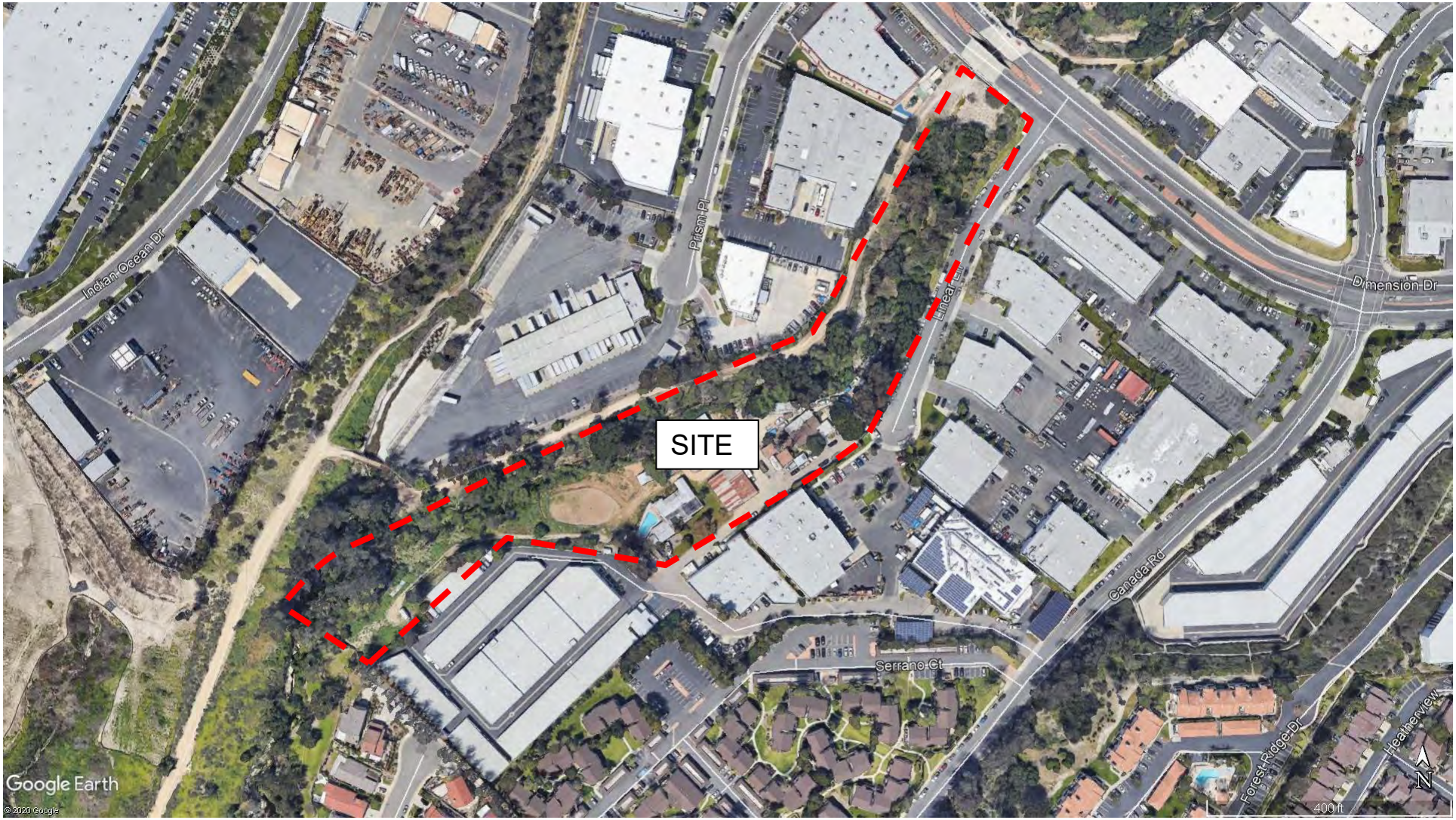
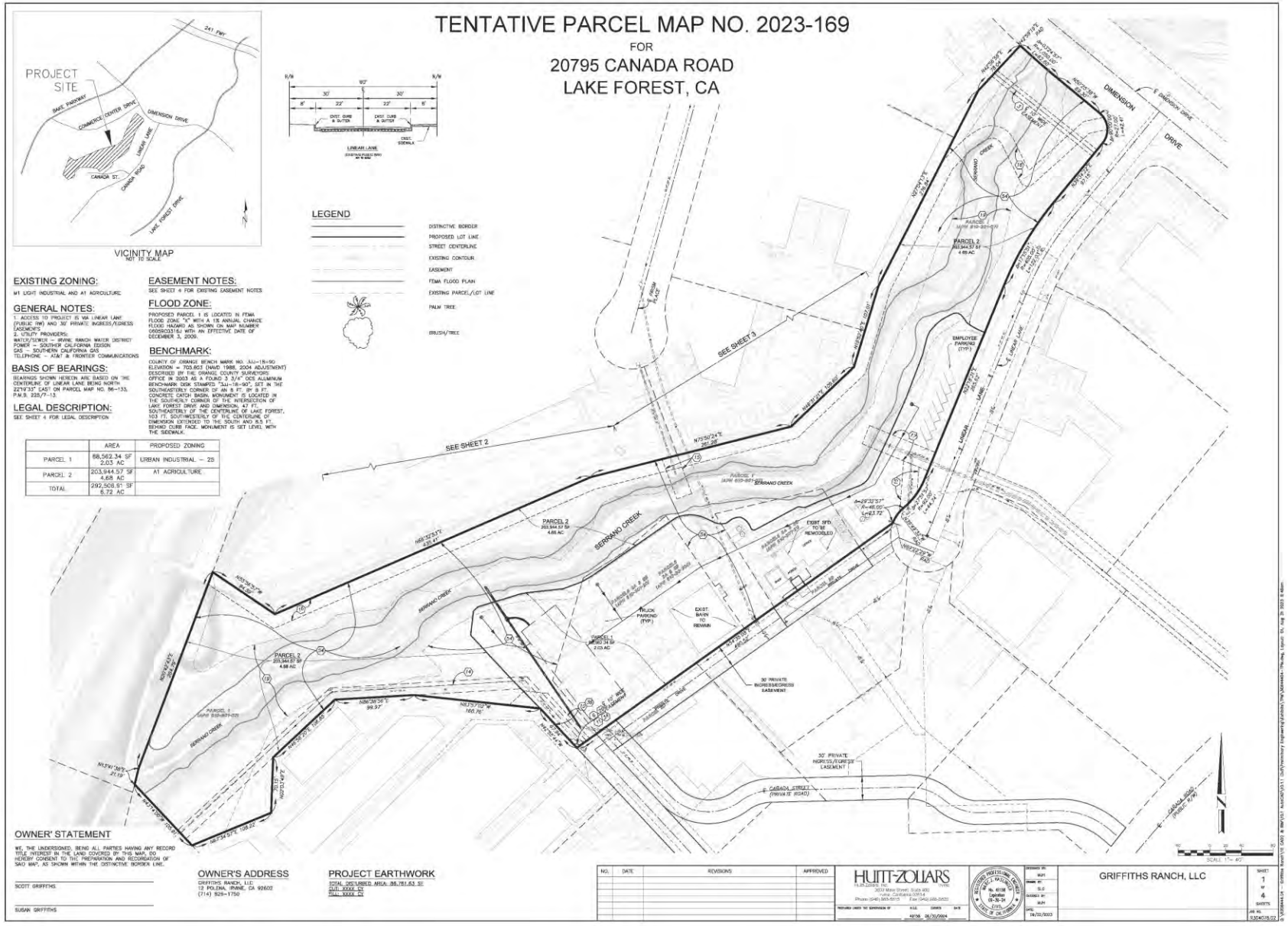


Exhibit B

Site Plan



2.0 Fundamentals of Noise

This section of the report provides basic information about noise and presents some of the terms used in the report.

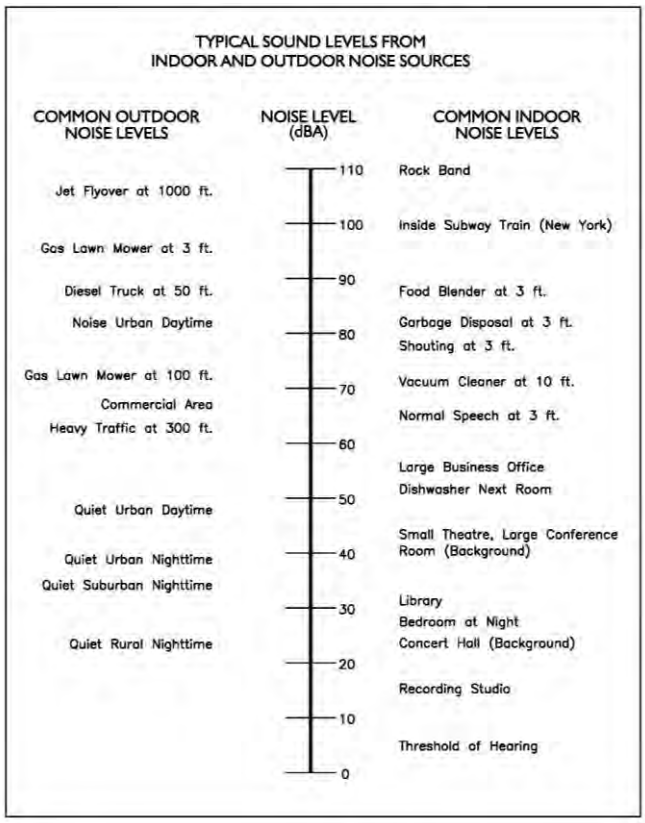
2.1 Sound, Noise and Acoustics

Sound is a disturbance created by a moving or vibrating source and is capable of being detected by the hearing organs. Sound may be thought of as mechanical energy of a moving object transmitted by pressure waves through a medium to a human ear. For traffic or stationary noise, the medium of concern is air. *Noise* is defined as sound that is loud, unpleasant, unexpected, or unwanted.

2.2 Frequency and Hertz

A continuous sound is described by its *frequency* (pitch) and its *amplitude* (loudness). Frequency relates to the number of pressure oscillations per second. Low-frequency sounds are low in pitch (bass sounding) and high-frequency sounds are high in pitch (squeak). These oscillations per second (cycles) are commonly referred to as Hertz (Hz). The human ear can hear from the bass pitch starting out at 20 Hz all the way to the high pitch of 20,000 Hz.

Exhibit C: Typical A-Weighted Noise Levels



2.3 Sound Pressure Levels and Decibels

The *amplitude* of a sound determines its loudness. The loudness of sound increases or decreases as the amplitude increases or decreases. Sound pressure amplitude is measured in units of micro-Newton per square inch meter ($\mu N/m^2$), also called micro-Pascal (µPa). One µPa is approximately one hundred billionths (0.00000000001) of normal atmospheric pressure. Sound pressure level (SPL or L_p) is used to describe in logarithmic units the ratio of actual sound pressures to a reference pressure squared. These units are called decibels, abbreviated dB. Exhibit C illustrates references sound levels for different noise sources.

2.4 Addition of Decibels

Because decibels are on a logarithmic scale, sound pressure levels cannot be added or subtracted by simple plus or minus addition. When two sounds or equal SPL are combined, they will produce an SPL 3 dB greater than the original single SPL. In other words, sound energy must be doubled to produce a 3 dB increase. If two sounds differ by approximately 10 dB, the higher sound level is the predominant sound.

2.5 Human Response to Changes in Noise Levels

In general, the healthy human ear is most sensitive to sounds between 1,000 Hz and 5,000 Hz, and it perceives a sound within that range as being more intense than a sound with a higher or lower frequency with the same magnitude. For purposes of this report as well as with most environmental documents, the A-scale weighting is typically reported in terms of A-weighted decibel (dBA), a scale designed to account for the frequency-dependent sensitivity of the ear. Typically, the human ear can barely perceive a change in noise level of 3 dB. A change in 5 dB is readily perceptible, and a change in 10 dB is perceived as being twice or half as loud. As previously discussed, a doubling of sound energy results in a 3 dB increase in sound, which means that a doubling of sound energy (e.g. doubling the volume of traffic on a highway) would result in a barely perceptible change in sound level.

2.6 Noise Descriptors

Noise in our daily environment fluctuates over time. Some noise levels occur in regular patterns, others are random. Some noise levels are constant while others are sporadic. Noise descriptors were created to describe the different time-varying noise levels.

A-Weighted Sound Level: The sound pressure level in decibels as measured on a sound level meter using the A-weighted filter network. The A-weighting filter de-emphasizes the very low and very high-frequency components of the sound in a manner similar to the response of the human ear. A numerical method of rating human judgment of loudness.

Ambient Noise Level: The composite of noise from all sources, near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.

Community Noise Equivalent Level (CNEL): The average equivalent A-weighted sound level during a 24-hour day, obtained after addition of five (5) decibels to sound levels in the evening from 7:00 to 10:00 PM and after addition of ten (10) decibels to sound levels in the night before 7:00 AM and after 10:00 PM.

Decibel (dB): A unit for measuring the amplitude of a sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micro-pascals.

dB(A): A-weighted sound level (see definition above).

Equivalent Sound Level (LEQ): The sound level corresponding to a steady noise level over a given sample period with the same amount of acoustic energy as the actual time-varying noise level. The energy average noise level during the sample period.

Habitable Room: Any room meeting the requirements of the Uniform Building Code, or other applicable regulations, which is intended to be used for sleeping, living, cooking or dining purposes, excluding such enclosed spaces as closets, pantries, bath or toilet rooms, service rooms, connecting corridors, laundries, unfinished attics, foyers, storage spaces, cellars, utility rooms and similar spaces.

L(n): The A-weighted sound level exceeded during a certain percentage of the sample time. For example, L10 in the sound level exceeded 10 percent of the sample time. Similarly L50, L90, and L99, etc.

Noise: *A*ny unwanted sound or sound which is undesirable because it interferes with speech and hearing, or is intense enough to damage hearing, or is otherwise annoying. The State Noise Control Act defines noise as "...excessive undesirable sound...".

Outdoor Living Area: Outdoor spaces that are associated with residential land uses typically used for passive recreational activities or other noise-sensitive uses. Such spaces include patio areas, barbecue areas, jacuzzi areas, etc. associated with residential uses; outdoor patient recovery or resting areas associated with hospitals, convalescent hospitals, or rest homes; outdoor areas associated with places of worship which have a significant role in services or other noise-sensitive activities; and outdoor school facilities routinely used for educational purposes which may be adversely impacted by noise. Outdoor areas usually not included in this definition are: front yard areas, driveways, greenbelts, maintenance areas and storage areas associated with residential land uses; exterior areas at hospitals that are not used for patient activities; outdoor areas associated with places of worship and principally used for short-term social gatherings; and, outdoor areas associated with school facilities that are not typically associated with educational uses prone to adverse noise impacts (for example, school play yard areas).

Percent Noise Levels: See L(n).

Sound Level (Noise Level): The weighted sound pressure level obtained by use of a sound level meter having a standard frequency filter for attenuating part of the sound spectrum.

Sound Level Meter: An instrument, including a microphone, an amplifier, an output meter, and frequency weighting networks for the measurement and determination of noise and sound levels.

Single Event Noise Exposure Level (SENEL): The dB(A) level which, if it lasted for one second, would produce the same A-weighted sound energy as the actual event.

2.7 Traffic Noise Prediction

Noise levels associated with traffic depends on a variety of factors: (1) volume of traffic, (2) speed of traffic, (3) auto, medium truck (2–3 axle) and heavy truck percentage (4 axle and greater), and sound propagation. The greater the volume of traffic, higher speeds and truck percentages equate to a louder volume in noise. A doubling of the Average Daily Traffic (ADT) along a roadway will increase noise levels by approximately 3 dB; reasons for this are discussed in the sections above.

2.8 Sound Propagation

As sound propagates from a source it spreads geometrically. Sound from a small, localized source (i.e., a point source) radiates uniformly outward as it travels away from the source in a spherical pattern. The sound level attenuates at a rate of 6 dB per doubling of distance. The movement of vehicles down a roadway makes the source of the sound appear to propagate from a line (i.e., line source) rather than a point source. This line source results in the noise propagating from a roadway in a cylindrical spreading versus a spherical spreading that results from a point source. The sound level attenuates for a line source at a rate of 3 dB per doubling of distance.

As noise propagates from the source, it is affected by the ground and atmosphere. Noise models use hard site (reflective surfaces) and soft site (absorptive surfaces) to help calculate predicted noise levels. Hard site conditions assume no excessive ground absorption between the noise source and the

receiver. Soft site conditions such as grass, soft dirt or landscaping attenuate noise at a rate of 1.5 dB per doubling of distance. When added to the geometric spreading, the excess ground attenuation results in an overall noise attenuation of 4.5 dB per doubling of distance for a line source and 7.5 dB per doubling of distance for a point source.

Research has demonstrated that atmospheric conditions can have a significant effect on noise levels when noise receivers are located 200 feet from a noise source. Wind, temperature, air humidity, and turbulence can further impact have far sound can travel.

3.0 Ground-Borne Vibration Fundamentals

3.1 Vibration Descriptors

Ground-borne vibrations consist of rapidly fluctuating motions within the ground that have an average motion of zero. The effects of ground-borne vibrations typically only cause a nuisance to people, but at extreme vibration levels, damage to buildings may occur. Although ground-borne vibration can be felt outdoors, it is typically only an annoyance to people indoors where the associated effects of the shaking of a building can be notable. Ground-borne noise is an effect of ground-borne vibration and only exists indoors since it is produced from noise radiated from the motion of the walls and floors of a room and may also consist of the rattling of windows or dishes on shelves.

Several different methods are used to quantify vibration amplitude.

PPV – Known as the peak particle velocity (PPV) which is the maximum instantaneous peak in vibration velocity, typically given in inches per second.

RMS – Known as root mean squared (RMS) can be used to denote vibration amplitude

VdB – A commonly used abbreviation to describe the vibration level (VdB) for a vibration source.

3.2 Vibration Perception

Typically, developed areas are continuously affected by vibration velocities of 50 VdB or lower. These continuous vibrations are not noticeable to humans whose threshold of perception is around 65 VdB. Outdoor sources that may produce perceptible vibrations are usually caused by construction equipment, steel-wheeled trains, and traffic on rough roads, while smooth roads rarely produce perceptible ground-borne noise or vibration. To counter the effects of ground-borne vibration, the Federal Transit Administration (FTA) has published guidance relative to vibration impacts. According to the FTA, fragile buildings can be exposed to ground-borne vibration levels of 0.3 inches per second without experiencing structural damage.

3.3 Vibration Propagation

There are three main types of vibration propagation: surface, compression, and shear waves. Surface waves, or Rayleigh waves, travel along the ground's surface. These waves carry most of their energy along an expanding circular wavefront, similar to ripples produced by throwing a rock into a pool of water. P-waves, or compression waves, are body waves that carry their energy along an expanding spherical wavefront. The particle motion in these waves is longitudinal (i.e., in a "push-pull" fashion). P-waves are analogous to airborne sound waves. S-waves, or shear waves, are also body waves that carry energy along an expanding spherical wavefront. However, unlike P-waves, the particle motion is transverse, or side-to-side and perpendicular to the direction of propagation.

As vibration waves propagate from a source, the vibration energy decreases in a logarithmic nature and the vibration levels typically decrease by 6 VdB per doubling of the distance from the vibration source. As stated above, this drop-off rate can vary greatly depending on the soil but has been shown to be effective enough for screening purposes, in order to identify potential vibration impacts that may need to be studied through actual field tests.

4.0 Regulatory Setting

The proposed project is located in the City of Perris, California and noise regulations are addressed through the efforts of various federal, state and local government agencies. The agencies responsible for regulating noise are discussed below.

4.1 Federal Regulations

The adverse impact of noise was officially recognized by the federal government in the Noise Control Act of 1972, which serves three purposes:

- Publicize noise emission standards for interstate commerce
- Assist state and local abatement efforts
- Promote noise education and research

The Federal Office of Noise Abatement and Control (ONAC) originally was tasked with implementing the Noise Control Act. However, it was eventually eliminated leaving other federal agencies and committees to develop noise policies and programs. Some examples of these agencies are as follows: The Department of Transportation (DOT) assumed a significant role in noise control through its various agencies. The Federal Aviation Agency (FAA) is responsible for regulating noise from aircraft and airports. The Federal Highway Administration (FHWA) is responsible for regulating noise from the interstate highway system. The Occupational Safety and Health Administration (OSHA) is responsible for the prohibition of excessive noise exposure to workers. The Housing and Urban Development (HUD) is responsible for establishing noise regulations as it relates to exterior/interior noise levels for new HUD-assisted housing developments near high noise areas.

The federal government advocates that local jurisdictions use their land use regulatory authority to arrange new development in such a way that “noise sensitive” uses are either prohibited from being constructed adjacent to a highway or, or alternatively that the developments are planned and constructed in such a manner that potential noise impacts are minimized.

Since the federal government has preempted the setting of standards for noise levels that can be emitted by the transportation source, the City is restricted to regulating the noise generated by the transportation system through nuisance abatement ordinances and land use planning.

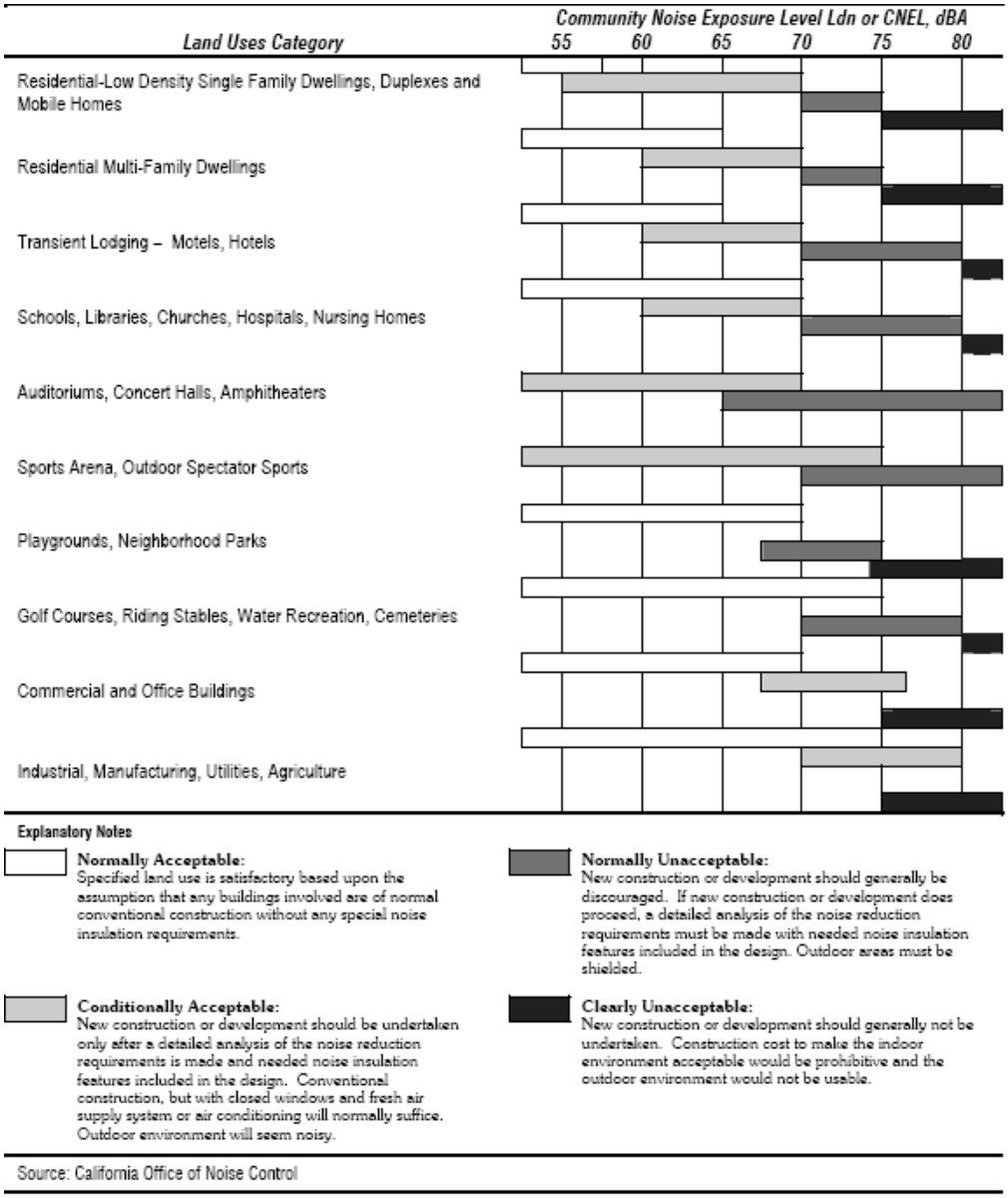
4.2 State Regulations

Established in 1973, the California Department of Health Services Office of Noise Control (ONC) was instrumental in developing regularity tools to control and abate noise for use by local agencies. One significant model is the “Land Use Compatibility for Community Noise Environments Matrix.” The matrix allows the local jurisdiction to clearly delineate compatibility of sensitive uses with various incremental levels of noise.

The State of California has established noise insulation standards as outlined in Title 24 and the Uniform Building Code (UBC) which in some cases requires acoustical analyses to outline exterior noise levels and to ensure interior noise levels do not exceed the interior threshold. The State mandates that the legislative body of each county and city adopt a noise element as part of its comprehensive general

plan. The local noise element must recognize the land use compatibility guidelines published by the State Department of Health Services. The guidelines rank noise land use compatibility in terms of normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable as illustrated in Exhibit D.

Exhibit D: Land Use Compatibility Guidelines



4.3 City of Lake Forest Regulations

The City of Lake Forest outlines their noise regulations and standards within the Noise Element from the General Plan and the Noise Ordinance from the Municipal Code.

City of Lake Forest Municipal Code

Chapter 11.16 from the City's municipal code outlines the noise ordinance. MD's provided excerpts of the ordinance that relates to this project.

Section 11.16.030 – Designated Noise Zone

The entire territory of the City of Lake Forest is herby designated as "Noise Zone 1".

Section 11.16.040 – Exterior Noise Standards

The following noise standards, unless otherwise specifically indicated, shall apply to all residential property within a designated zone:

Table 1: Allowable Exterior Noise Level[1]

Sound Level Standards (dBA Leq)*		
Noise Zone	**Time Period**	
	7 a.m. - 10 p.m.	**10 p.m. - 7 a.m.**
1	55	50

Sec. 11.16.060. – Exemptions

The following activities shall be exempted from the provisions of this chapter.

A. Activities not constituting "special events" conducted on the grounds of any public or private nursery, elementary, intermediate or secondary school or college.

B. "Special events" as defined in Section 5.05.020 provided said events are conducted pursuant to a special event permit issued as described in Chapter 5.05. However, this exemption shall not preclude use of the standards set forth in Section 11.16.040 (Exterior noise standards) or Section 11.16.050 (Interior noise standards) as a guide for the application, review, or issuance of a special event permit.

C. Any mechanical device, apparatus or equipment used, related to or connected with emergency machinery, vehicle, or work.

D. Noise sources associated with construction, repair, remodeling, or grading of any real property, provided said activities do not take place between the hours of 8:00 pm and 7:00 am on weekdays, including Saturday, or any time Sunday or a legal City of Lake Forest Holiday.

E. All mechanical devices, apparatus or equipment which are utilized for the protection or salvage of agricultural crops during periods of potential or actual frost damage or other adverse weather conditions.

F. Mobile noise sources associated with agricultural operations, provided such operations do not take place between the hours of 8:00 pm and 7:00 am on weekdays, including Saturday, or any time Sunday or a legal City of Lake Forest Holiday.

G. Mobile noise sources associated with agricultural pest control through pesticide application, provided that the application is made in accordance with restricted material permits issued by or regulations enforced by the Agricultural Commission.

H. Noise sources associated with the maintenance of real property, provided said activities take place between 7:00 am and 8:00 pm on any day except Sunday or a legal City of Lake Forest Holiday, or between 9:00 am and 8:00 pm on Sunday or a legal City of Lake Forest Holiday.

I. Any activity to the extent regulation thereof has been preempted by State or Federal Law.

J. Noise sources associated with solid waste collection or removal, provided such activities take place between 6:00 am and 6:00 pm Monday through Friday where audible in residential areas or between 7:00 am and 6:00 pm on Saturday where audible in residential areas or between 5:00 am and 9:00 pm and day where such activity is not audible in residential areas; or as otherwise provided in an approved franchise agreement between a waste hauler and the City.

City of Lake Forest – Noise Element

Goals, Policies, and Implementation Measures

Policies, goals and implementation program measures from the Noise Element that would mitigate potential impacts on noise include the following.

PS-6.1 Land Use Planning. Require development and infrastructure projects to be consistent with the maximum allowable noise exposure standards identified in Table PS-1 to ensure acceptable noise levels for existing and future development..

PS-6.2 Sensitive Facilities. Ensure appropriate mitigation is incorporated into the design of noise-sensitive facilities to minimize noise impacts.

PS-6.3 Site Design. Require site planning and project design techniques to minimize noise impacts adjacent to sensitive uses

PS-6.4 Noise Control. Ensure that noise levels do not exceed the limits established in Table PS-2 by incorporating sound-reduction design in new construction or revitalization projects impacted by non-transportation-related noise sources.

PS-6.5 Roadway Noise. Encourage nonmotorized transportation alternatives for local trips and the implementation of noise sensitivity measures in the public realm, including traffic-calming road design, lateral separation, natural buffers, and setbacks to decrease excessive motor vehicle noise.

PS-6.6 Highway Noise. Continue to coordinate with the California Department of Transportation (Caltrans) and the Transportation Corridor Agency (TCA) to achieve maximum noise abatement in the design of new highway projects or improvements along I-5.

PS-6.7 Vehicles and Trucks. Monitor and enforce existing speed limits and motor vehicle codes requiring adequate mufflers on all types of vehicles traveling through the city.

PS-6.8 Commercial Noise. Require the use of noise attenuation measures, including screening and buffering techniques, for all new commercial development expected to produce excessive noise; in existing cases where the City's noise standards are exceeded, work with Code Enforcement to require compliance.

PS-6.9 Interjurisdictional Coordination. Coordinate with neighboring cities to minimize noise conflicts between land uses along the City's boundaries.

PS-6.10 Airplane Noise. Maintain communication with John Wayne Airport and other relevant air transportation agencies to ensure that all future plans have limited impacts to the community of Lake Forest.

PS-6 Actions

PS-6a Update Chapter 11.16 of the Lake Forest Municipal Code to ensure that the noise standards are consistent with this General Plan, including Tables PS-1 and PS-2, and to require new residential, mixed-use with a residential component, and other noise-sensitive development to be designed to minimize noise exposure to noise sensitive uses through incorporation of site planning and architectural techniques. The update shall also include noise standards for residential uses within a mixed-use development, which may differ from other adopted residential noise standards**.**

PS-6b Review new development projects for compliance with the noise requirements established in this General Plan, including the standards established in Tables PS-1 and PS-2. Where necessary, require new development to mitigate excessive noise through best practices, including building location and orientation, building design features, placement of noise-generating equipment away from sensitive receptors, shielding of noise-generating equipment, placement of noise-tolerant features between noise sources and sensitive receptors, and use of noise-minimizing materials such as rubberized asphalt.

PS-6c Require acoustical studies for all new discretionary projects, including those related to development and transportation, which have the potential to generate noise impacts which exceed the standards identified in this General Plan. The studies shall include representative noise measurements, estimates of existing and projected noise levels, and mitigation measures necessary to ensure compliance with this element.

PS-6d In making a determination of impact under the California Environmental Quality Act (CEQA), a substantial increase will occur if ambient noise levels have a substantial increase. Generally, a 3 dB increase in noise levels is barely perceptible, and a 5 dB increase in noise levels is clearly perceptible. Therefore, increases in noise levels shall be considered to be substantial when the following occurs:

- When existing noise levels are less than 60 dB, a 5 dB increase in noise will be considered substantial;
- When existing noise levels are between 60 dB and 65 dB, a 3 dB increase in noise will be considered substantial;
- When existing noise levels exceed 65 dB, a 1.5 dB increase in noise will be considered substantial.

PS-6e Update the City's Noise Ordinance (Chapter 11.16) to reflect the noise standards established in this General Plan and proactively enforce the City's Noise Ordinance, including requiring the following measures for construction:

- Restrict construction activities to the hours of 7:00 a.m. to 7:00 p.m. on Monday through Friday, and 8:00 a.m. to 6:00 p.m. on Saturdays. No construction shall be permitted outside of these hours or on Sundays or federal holidays, without a specific exemption issued by the City.
- A Construction Noise Management Plan shall be submitted by the applicant for construction projects, when determined necessary by the City. The Construction Noise Management Plan shall include proper posting of construction schedules, appointment of a noise disturbance coordinator, and methods for assisting in noise reduction measures.
- Noise reduction measures may include, but are not limited to, the following:
  - Equipment and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically attenuating shields or shrouds) wherever feasible.
  - Except as provided herein, impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for project construction shall be hydraulically or electrically powered to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used. This muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used, if such jackets are commercially available. this could achieve a reduction of 5 dBA. Quieter procedures shall be used, such as drills rather than impact equipment, whenever such procedures are available and consistent with construction procedures.
  - Temporary power poles shall be used instead of generators where feasible.
  - Stationary noise sources shall be located as far from adjacent properties as possible, and they shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or use other measures as determined by the City of provide equivalent noise reduction.
  - The noisiest phases of construction shall be limited to less than 10 days at a time. Exceptions may be allowed if the City determines an extension is necessary and all available noise reduction controls are implemented.
  - Delivery of materials shall observe the hours of operation described above. Truck traffic should avoid residential areas to the extent possible.
- Require new development to minimize vibration impacts to adjacent uses during demolition and construction. For sensitive historic structures, a vibration limit of 0.08 in/sec PPV (peak

particle velocity) will be used to minimize the potential for cosmetic damage to the building. A vibration limit of 0.30 in/sec PPV will be used to minimize the potential for cosmetic damage at buildings of normal conventional construction.

PS-6f The City shall require new residential projects located adjacent to major freeways, hard rail lines, or light rail lines to follow the FTA vibration screening distance criteria to ensure that residential uses are not exposed to vibrations exceeding 72 VdB for frequent events (more than 70 events per day), 75 VdB for occasional events (30-70 events per day), or 80 VdB for infrequent events (less than 30 events per day).

5.0 Study Method and Procedure

The following section describes the noise modeling procedures and assumptions used for this assessment.

5.1 Noise Measurement Procedure and Criteria

Noise measurements are taken to determine the existing noise levels. A noise receiver or receptor is any location in the noise analysis in which noise might produce an impact. The following criteria are used to select measurement locations and receptors:

- Locations expected to receive the highest noise impacts, such as the first row of houses
- Locations that are acoustically representative and equivalent of the area of concern
- Human land usage
- Sites clear of major obstruction and contamination

MD conducted the sound level measurements in accordance to City's noise ordinance, the Federal Highway Transportation (FHWA) and Caltrans (TeNS) technical noise specifications. All measurement equipment meets American National Standards Institute (ANSI) specifications for sound level meters (S1.4-1983 identified in Chapter 19.68.020.AA). The following gives a brief description of the Caltrans Technical Noise Supplement procedures for sound level measurements:

- Microphones for sound level meters were placed 5-feet above the ground for all measurements
- Sound level meters were calibrated (Larson Davis CAL 200) before and after each measurement
- Following the calibration of equipment, a windscreen was placed over the microphone
- Frequency weighting was set on "A" and slow response
- Results of the long-term noise measurements were recorded on field data sheets
- During any short-term noise measurements, any noise contaminations such as barking dogs, local traffic, lawn mowers, or aircraft fly-overs were noted
- Temperature and sky conditions were observed and documented

5.2 Noise Measurement Locations

Noise monitoring locations were selected based on the project site's boundary. three (3) short-term 10-min noise measurements were conducted at the site's property line and are illustrated in Exhibit E. Appendix A includes photos, field sheet, and measured noise data.

5.3 Stationary Noise Modeling

SoundPLAN (SP) acoustical modeling software was utilized to model future worst-case stationary noise impacts to the adjacent land uses. SP is capable of evaluating multiple stationary noise source impacts at various receiver locations. SP's software utilizes algorithms (based on the inverse square law and reference equipment noise level data) to calculate noise level projections. The software allows the user to input specific noise sources, spectral content, sound barriers, building placement, topography, and sensitive receptor locations.

The future worst-case noise level projections were modeled using referenced sound level data for the various stationary on-site sources (parking spaces). The model assumes that the project site has approximately 26 total parking spaces.

The 26 parking spots were modeled using SoundPlans employee parking input parameter function and assumes 1 parking movements per hour. This assumption is conservative as typically employees would arrive in the morning and then depart in the evening.

The SP model assumes that all noise sources are operating simultaneously (worst-case scenario), when in actuality the noise will be intermittent and lower in noise level.

Finally, the model is able to evaluate the noise attenuating effects of any existing or proposed property line walls. Input and output calculations are provided in Appendix C.

5.4 FHWA Roadway Construction Noise Model

The construction noise analysis utilizes the Federal Highway Administration (FHWA) Roadway Construction Noise Model (RNCM), together with several key construction parameters. Key inputs include distance to the sensitive receiver, equipment usage, % usage factor, and baseline parameters for the project site.

The project was analyzed based on the different construction phases. Construction noise is expected to be loudest during the grading, concrete and building phases of construction. The construction noise calculation output worksheet is located in Appendix D. The following assumptions relevant to short-term construction noise impacts were used:

- It is estimated that construction will occur over a 18-month time period. Construction noise is expected to be the loudest during the grading, concrete, and building phases.

Exhibit E

Measurement Locations

6.0 Existing Noise Environment

Three ten-minute (10) ambient noise measurement were conducted at the project site. Noise measurements were taken to determine the existing ambient noise levels. This assessment will utilize the ambient noise data as a basis and compare levels to said data.

6.1 Short-Term Noise Measurement Results

The results of the short-term noise data are presented in Table 2.

Table 2: Short-Term Noise Measurement Data[1]

Location	Time	10-Min dB(A) Leq							
		L_{EQ}	L_{MAX}	L_{MIN}	L_2	L_8	L_{25}	L_{50}	L_{90}
1	3:44PM-3:54PM	46.0	57.6	42.4	51.2	47.3	46.1	45.2	43.8
2	3:57PM-4:07PM	47.8	61.0	40.7	58.8	48.6	46.1	43.9	41.7
3	4:15PM-4:25PM	47.6	61.9	39.4	58.1	51.1	44.5	42.1	40.5

Notes:
1. Short-term noise monitoring location (ST1-3) is illustrated in Exhibit E.

Noise data indicates the ambient noise level ranges between 48 dBA Leq to 46 dBA Leq depending on location. Additional field notes and photographs are provided in Appendix A.

7.0 Future Noise Environment Impacts and Mitigation

This assessment analyzes future noise impacts as a result of the project. The analysis details the estimated exterior noise levels. Stationary noise impacts are analyzed from the on-site noise sources such as trucks loading and unloading.

7.1 Future Exterior Noise

The following outlines the exterior noise levels associated with the proposed project.

7.1.1 Noise Impacts to Off-Site Receptors Due to Stationary Sources

Adjacent uses that may be affected by project operational noise include light industrial to the north, south, east, and west. The worst-case stationary noise was modeled using SoundPLAN acoustical modeling software. Worst-case assumes that all project activities (bulldozer running, cars coming and going) are always operational when in reality the noise will be intermittent and cycle on/off depending on usage. Project operations are anticipated to occur between 6AM to 4PM.

A total of six (6) receptors were modeled to evaluate the proposed project's operational impact. A receptor is denoted by a yellow dot. All yellow dots represent a property line.

This study compares the Project's operational noise levels to two (2) different noise assessment scenarios: 1) Project Only operational noise level projections, 2) Project plus ambient noise level projections.

Project Operational Noise Levels
Exhibit F shows the "project only" operational noise levels at the property lines and adjacent areas. Exhibit F shows the noise contours at the project site and illustrates how the noise will propagate at the site. Operational noise levels at the adjacent uses are anticipated to range between 26 dBA to 53 dBA Leq (depending on the location).

The "project only" noise projections to the adjacent uses are below the City's daytime 55 dBA noise limit, as outlined within the City's noise ordinance (see Section 4.3).

Project Plus Ambient Operational Noise Levels
Table 3 demonstrates the project plus the ambient noise levels. Project plus ambient noise level projections are anticipated to range between 46 to 54 dBA Leq at receptors (R1 – R6). The project plus ambient noise condition is below the City's 55 dBA noise limit without mitigation and therefore is less than significant.

<Table 3 Next Page>

Table 3: Worst-case Predicted Operational Leq Noise Level[1]

Receptor[1]	Floor	Existing Ambient Noise Level (dBA, Leq)[2]	Project Noise Level (dBA, Leq)[3]	Total Combined Noise Level (dBA, Leq)	Daytime (7AM – 10PM) Noise Limit (dBA, Leq)	Change in Noise Level as Result of Project
1	1	46	26	46	55	0
2	1		38	47		1
3	1		32	46		0
4	1		38	47		1
5	1	48	53	54		6
6	1		38	48		0

Notes:
[1.] Receptors 1-6 represents the adjacent property lines.
[3.] See Exhibit f for the operational noise level projections at said receptors.

As shown in Table 3, the project will increase the worst-case noise level by approximately 0 to 6 dBA Leq at receptors (R1 – R6). It takes a change of 3 dBA to hear a noticeable difference.

Table 4 provides the characteristics associated with changes in noise levels.

Table 4: Change in Noise Level Characteristics[1]

Changes in Intensity Level, dBA	Changes in Apparent Loudness
1	Not perceptible
3	Just perceptible
5	Clearly noticeable
10	Twice (or half) as loud

https://www.fhwa.dot.gov/environMent/noise/regulations_and_guidance/polguide/polguide02.cfm

The change in noise level would fall within the “Not Perceptible” to “Clearly Noticeable” acoustic characteristic depending on location.

7.1.2 Noise Impacts to On/Off-Site Receptors Due to Project Generated Traffic

The City of Lake Forest has adopted VMT thresholds and guidelines that provide methodology and impact thresholds for projects that would require a vehicle mile traveled (VMT) analysis. Per the memo provided by EPD Solution, 9/13/2023 (*Project Trip Generation*), the project would generate 84 daily passenger vehicle trips (see Appendix B). Because the project would generate fewer than 110 daily passenger vehicle trips, the project is presumed to have a less than significant impact on VMT and a traffic study is not required.

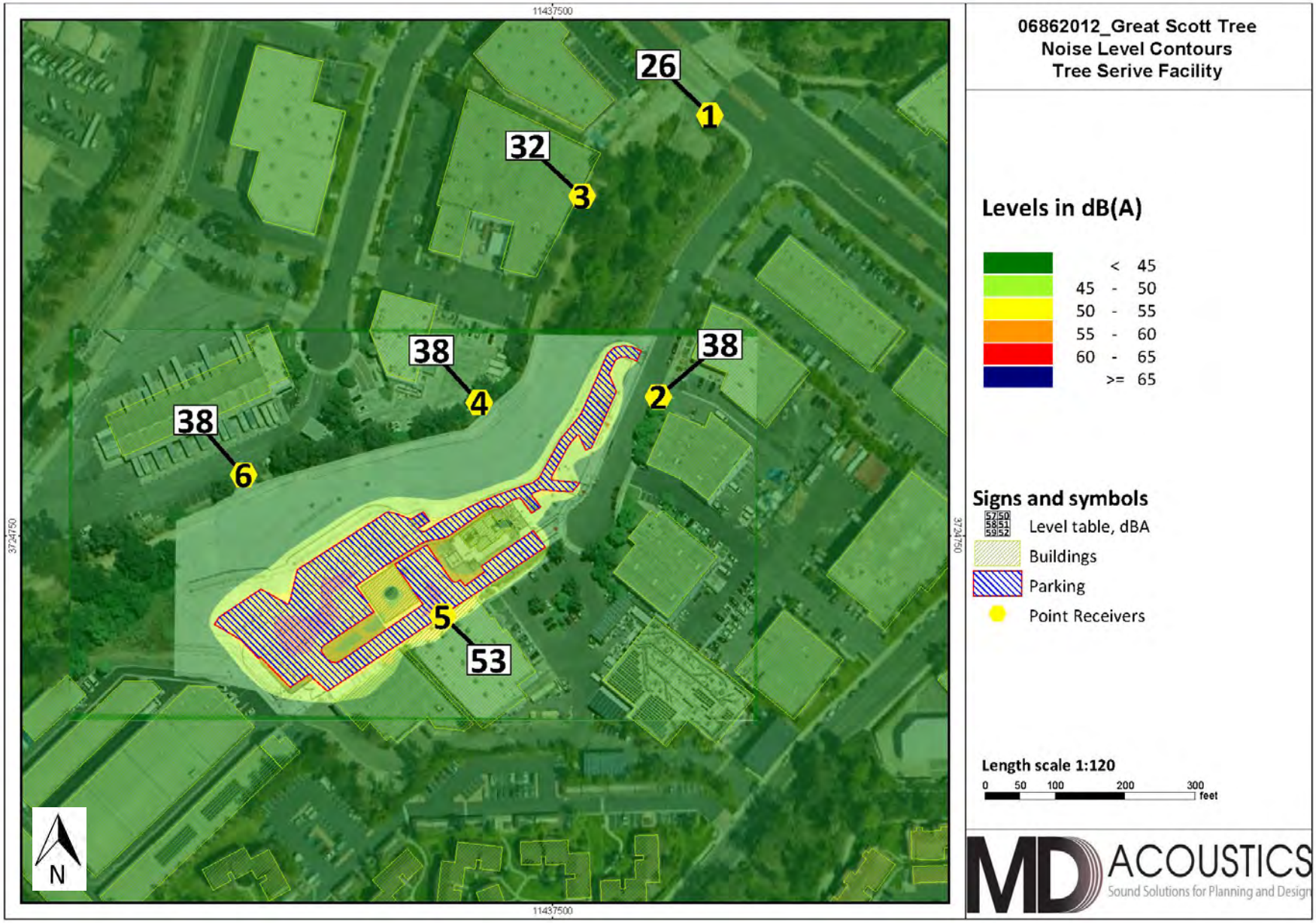
Traffic along the subject roadways would need to double in average daily traffic volumes to see a 3 dBA increase in noise level. Since the project generates a nominal amount of traffic relative to the existing ADTs, the project's traffic noise level increase would be nominal and therefore less than significant.

7.2 Mitigation Measures

The project complies with the City's noise regulations as designed and therefore no mitigation measures are required.

Exhibit F

Future Daytime Operational Noise Levels



8.0 Construction Noise Impact

The degree of construction noise may vary for different areas of the project site and also vary depending on the construction activities. Noise levels associated with the construction will vary with the different phases of construction.

8.1 Construction Noise

The Environmental Protection Agency (EPA) has compiled data regarding the noise generated characteristics of typical construction activities. The data is presented in Table 5.

Table 5: Typical Construction Equipment Noise Levels[1]

Type	Lmax (dBA) at 50 Feet
Backhoe	80
Truck	88
Concrete Mixer	85
Pneumatic Tool	85
Pump	76
Saw, Electric	76
Air Compressor	81
Generator	81
Paver	89
Roller	74

Notes:
[1] Referenced Noise Levels from FTA noise and vibration manual.

Construction is anticipated to occur during the permissible hours according to the City's General Plan. Construction noise will have a temporary or periodic increase in the ambient noise level above the existing within the project vicinity. Furthermore, noise reduction measures are provided to further reduce construction noise. The impact is considered less than significant however construction noise level projections are provided.

Typical operating cycles for these types of construction equipment may involve one or two minutes of full power operation followed by three to four minutes at lower power settings. Noise levels will be loudest during grading phase. A likely worst-case construction noise scenario during grading assumes the use of 1-grader, 1-dozer, 2-excavators, and 2-backhoes operating at 260 feet from the property boundary.

Assuming a usage factor of 40 percent for each piece of equipment, unmitigated noise levels at 123 feet have the potential to reach 77 dBA L_{eq} at the property boundary during building construction.

8.2 Construction Vibration

Construction activities can produce vibration that may be felt by adjacent land uses. The construction of the proposed project would not require the use of equipment such as pile drivers, which are known

to generate substantial construction vibration levels. The primary vibration source during construction may be from a bulldozer. A large bulldozer has a vibration impact of 0.089 inches per second peak particle velocity (PPV) at 25 feet which is perceptible but below any risk to architectural damage.

The fundamental equation used to calculate vibration propagation through average soil conditions and distance is as follows:

$$PPV_{equipment} = PPV_{ref} (100/D_{rec})^n$$

Where: PPV_{ref} = reference PPV at 100ft.
D_{rec} = distance from equipment to receiver in ft.
n = 1.1 (the value related to the attenuation rate through ground)

The thresholds from the Caltrans Transportation and Construction Induced Vibration Guidance Manual in Table 6 (below) provides general thresholds and guidelines as to the vibration damage potential from vibratory impacts.

Table 6: Guideline Vibration Damage Potential Threshold Criteria

Structure and Condition	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

Source: Table 19, Transportation and Construction Vibration Guidance Manual, Caltrans, Sept. 2013.
Note: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

Table 7 gives approximate vibration levels for particular construction activities. This data provides a reasonable estimate for a wide range of soil conditions.

<Table 7, next page>

Table 7: Vibration Source Levels for Construction Equipment[1]

Equipment	Peak Particle Velocity (inches/second) at 25 feet	Approximate Vibration Level LV (dVB) at 25 feet
Pile driver (impact)	1.518 (upper range)	112
	0.644 (typical)	104
Pile driver (sonic)	0.734 upper range	105
	0.170 typical	93
Clam shovel drop (slurry wall)	0.202	94
Hydromill	0.008 in soil	66
(slurry wall)	0.017 in rock	75
Vibratory Roller	0.21	94
Hoe Ram	0.089	87
Large bulldozer	0.089	87
Caisson drill	0.089	87
Loaded trucks	0.076	86
Jackhammer	0.035	79
Small bulldozer	0.003	58

[1] Source: Transit Noise and Vibration Impact Assessment, Federal Transit Administration, May 2006.

At a distance of 33 feet (distance of nearest structure from the site's south east boundary), a large bulldozer would yield a worst-case 0.066 PPV (in/sec) which may be perceptible for short periods of time during grading along the property line of the project site, but is below any threshold of damage. The impact is less than significant and no mitigation is required.

8.3 Construction Noise Reduction Measures

Construction operations must follow the City's General Plan and the Noise Ordinance, which states that construction, repair or excavation work performed must occur within the permissible hours. To further ensure that construction activities do not disrupt the adjacent land uses, the following measures should be taken:

1. During construction, the contractor shall ensure all construction equipment is equipped with appropriate noise attenuating devices that will reduce noise levels 3 to 10 dBA.

2. The contractor should locate equipment staging areas that will create the greatest distance between construction-related noise/vibration sources and sensitive receptors nearest the project site during all project construction. At all times the staging area should be approximately 123 feet from the nearest sensitive receptor.

3. Idling equipment should be turned off when not in use.

4. Equipment shall be maintained so that vehicles and their loads are secured from rattling and banging.

9.0 References

State of California General Plan Guidelines: 1998. Governor's Office of Planning and Research

City of Lake Forest: General Plan Noise Element.

City of Lake Forest: Municipal Code. Chapter 11.16 Noise Control

Environment Planning Development Solutions (EPD) – Great Scott Tree Service Lake Forest Facility Project Trip Generation – 9/13/2023

Appendix A:

Photographs and Field Measurement Data

MD ACOUSTICS
Sound Solutions for Planning and Design
www.mdacoustics.com

AZ Office
4960 S. Gilbert Rd, Ste 1-461
Chandler, AZ 85249

CA Office
1197 E Los Angeles Ave, C-256
Simi Valley, CA 93065

10-Minute Continuous Noise Measurement Datasheet

Project: Great Scott
Site Address/Location: Linear Lane, north of Canada Road
Date: 8/10/2020
Field Tech/Engineer: Jason Schuyler

Site Observations: Clear Sky, Three locations taken, General traffic from cars passing depending on location.

General Location:
Sound Meter: NTi Audio **SN:** A2A-05967-E0
Settings: A-weighted, slow, 1-sec, 10-minute interval
Meteorological Con.: 92 degrees F, 2 to 5 mph wind, eastern direction
Site ID: ST-1 thru ST-3

Site Topo: Flat
Ground Type: Hard site conditions, reflective

Noise Source(s) w/ Distance:

NM1- Taken middle of the property

NM2-Property line of the multi family residential

NM3- Southern Most property ine

Figure 1: Monitoring Locations

Figure 2: ST-1 Photo

Figure 3: ST-2 Photo

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Sound Solutions for Planning and Design
www.mdacoustics.com

AZ Office
4960 S. Gilbert Rd, Ste 1-461
Chandler, AZ 85249

CA Office
1197 E Los Angeles Ave, C-256
Simi Valley, CA 93065

10-Minute Continuous Noise Measurement Datasheet - Cont.

Project: Great Scott
Site Address/Location: Linear Lane, north of Canada Road
Site ID: ST-1 thru ST-3

Figure 4: ST-3 Photo

Table 1: Morning - Baseline Noise Measurement Summary

Location	Start	Stop	Leq	Lmax	Lmin	L2	L8	L25	L50	L90
1	3:44 PM	3:54 PM	46.0	57.6	42.4	51.2	47.3	46.1	45.2	43.8
2	3:57 PM	4:07 PM	47.8	61.0	40.7	58.8	48.6	46.1	43.9	41.7
3	4:15 PM	4:25 PM	47.6	61.9	39.4	58.1	51.1	44.5	42.1	40.5

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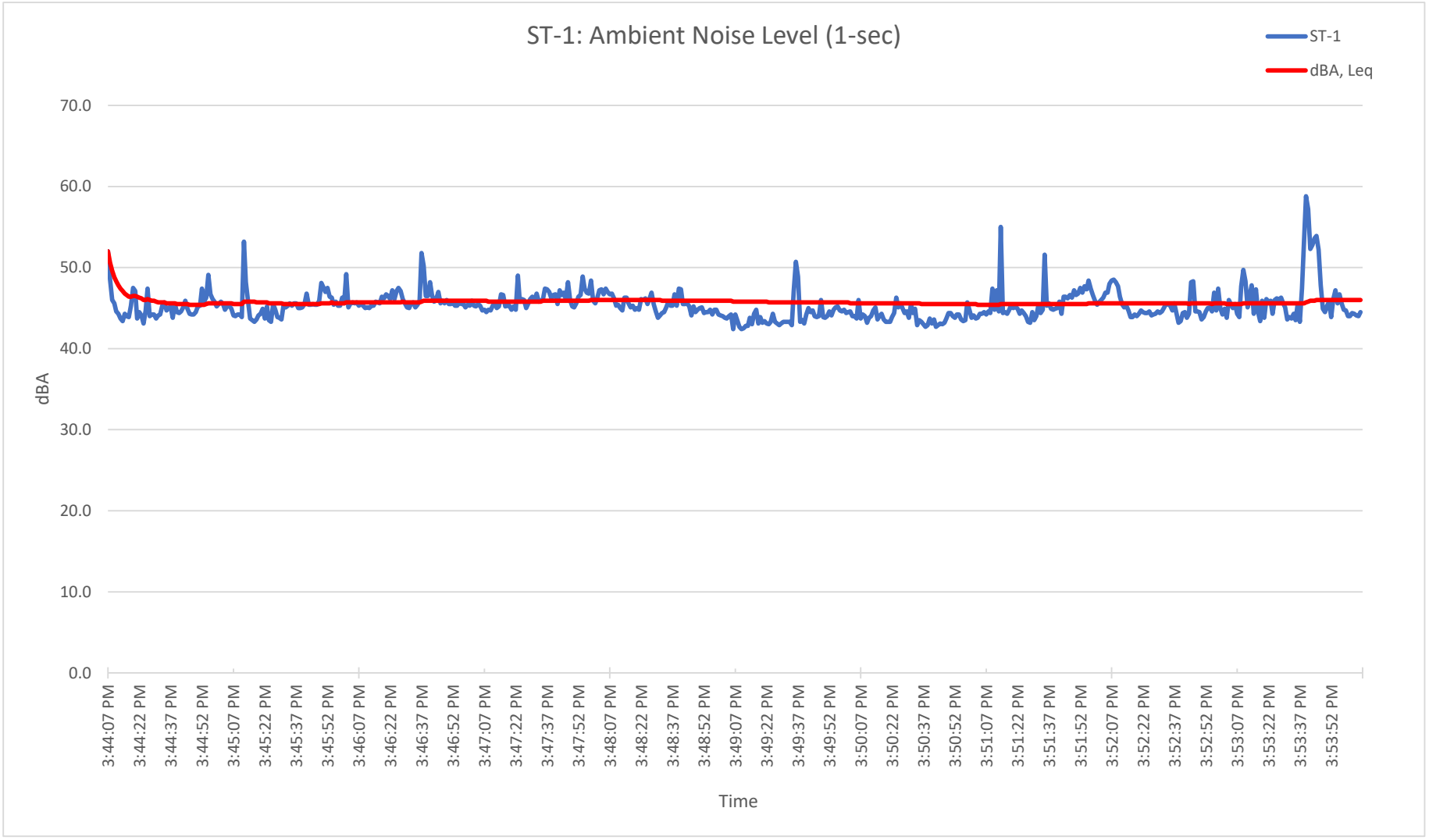
Project: Great Scott
Site Address/Location: Linear Lane, north of Canada Road
Site ID: ST-1



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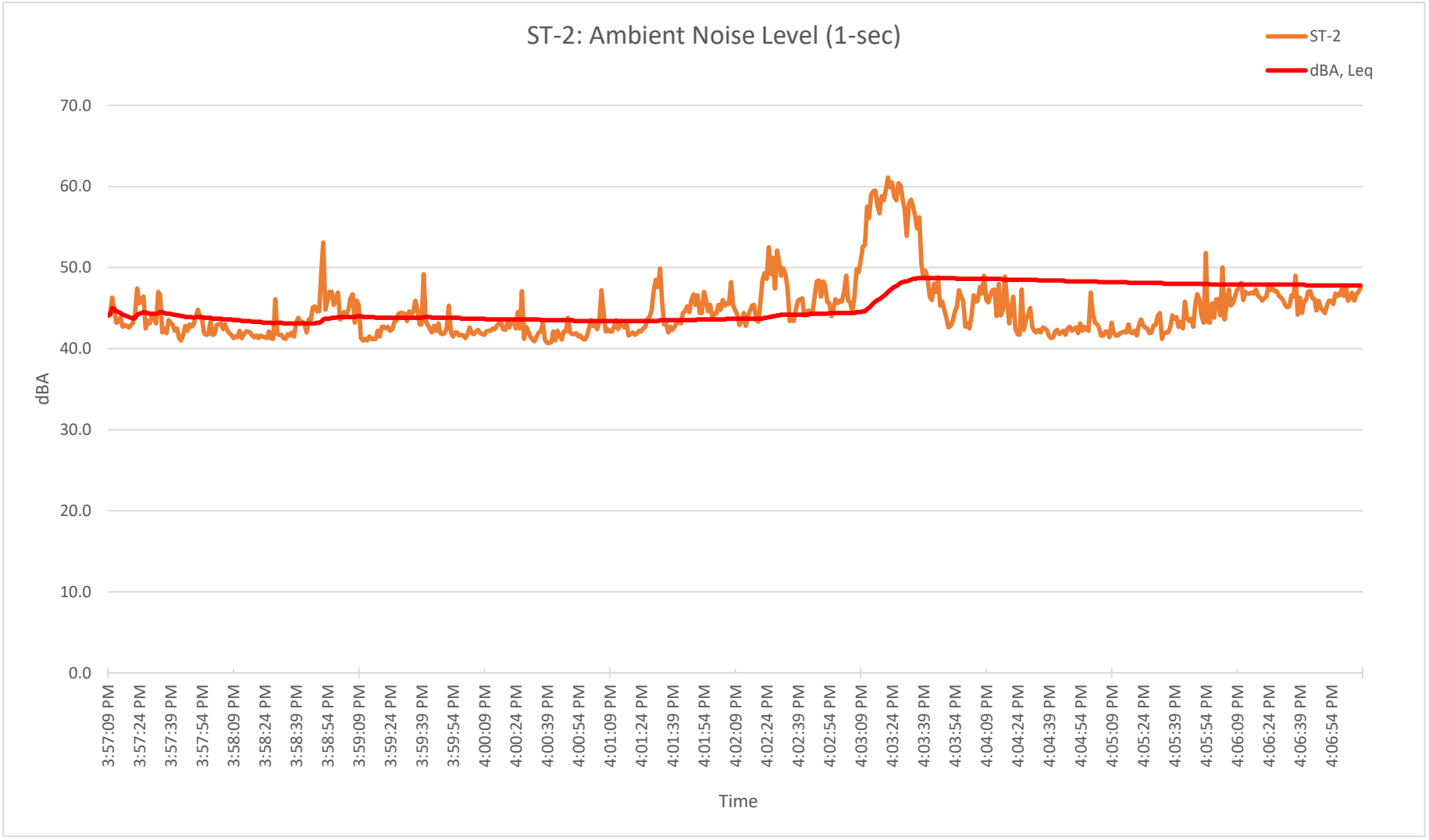
10-Minute Continuous Noise Measurement Datasheet - Cont.

Project: Great Scott
Site Address/Location: Linear Lane, north of Canada Road
Site ID: ST-2



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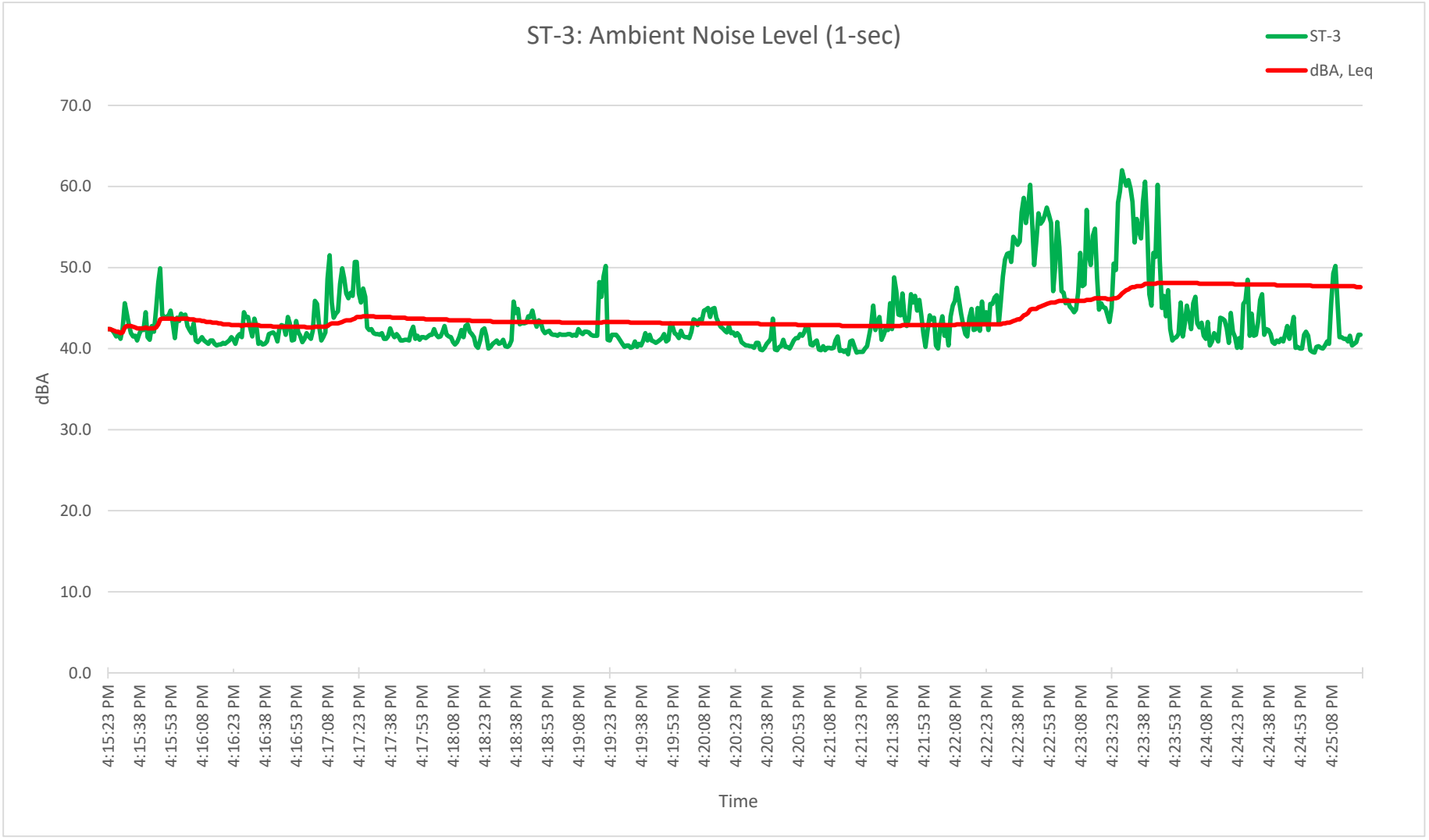
Simi Valley, CA 93065

10-Minute Continuous Noise Measurement Datasheet - Cont.

Project: Great Scott
Site Address/Location: Linear Lane, north of Canada Road
Site ID: ST-3



Appendix B:

EPD Solutions Inc Memo

Date:	September 14, 2023
Prepared by:	Maryam Javanmardi
To:	City of Lake Forest
Site:	Great Scott Tree Service Lake Forest Facility
Subject:	**Project Trip Generation**

Project Location

This memorandum provides a preliminary estimate of the potential vehicle trips that would be generated by the proposed Great Scott Tree Service Facility and a vehicle mile traveled (VMT) screening analysis. The project site, including 6.72 acres, is located within the City of Lake Forest, west of Linear Lane, north of Canada Street and bordered by Serrano Creek to the west. The project is bordered by industrial buildings on the east. The site includes the parcels numbered 610-301-07, 610-301-20, and 610-301-2.

Project Description

The Project proposes to rehabilitate one existing single-family residence as an office for the GSTC-SOC administrative functions alongside the removal of a second residence converted for office use which has taken place subsequent to the receipt of a demolition permit from the City of Lake Forest. Furthermore, the undertaking encompasses the establishment of parking zones dedicated to the tree service vehicles, referred to as "Tree Trucks" and equipment. Although wood chipping is currently not planned, it is desired in the future as it necessitates the installation of robust concrete "backstops" to facilitate the maneuvering of tractor loaders during chipping. The operational configuration and flow of Tree Truck locations for chipping are anticipated to evolve for heightened efficiency over time. Additional considerations regarding the strategy, approach, and location for wood chipping are pending discussion in relation to the use permit. According to the site plan, the site would have a total of 26 truck parking, eight (8) office employee parking (located adjacent to Linear Lane), one (1) EV (Electric Vehicle) parking, and one (1) ADA parking. The project site plan is shown in Figure 1.

Employee Workforce Specifications

The estimate of project trip generation is based on the anticipated operation of the site provided by GSTS-SOC. Based on a conservative assumption, the project would have approximately 52 employees broken down as follows:

- Nine (9) Staff members (including supervisors, administrative and maintenance staff)
- 43 Field Employees

Job-Specific Arrival/Departure Patterns

Field employees would arrive at the project site in their personal vehicle (or by carpool) and would then travel to the daily work site in a field equipment vehicle. Similarly, Supervisors would arrive at the project site in their personal vehicle to pick up a work truck and then depart to the work site. The remaining employees would remain at the project site. According to GSTS-SOC, many of their current field employees carpool resulting in a vehicle occupancy of approximately 1.5 persons per vehicle.

Presented below is the Arrival/Departure Time Pattern breakdown, which is specific to the job and has been provided by the GSTS-SOC:

Morning Operations

- At 6 AM, four (4) GSTC-SOC Supervisors will arrive in GSTC-SOC passenger trucks and park them in a designated section of the eight (8) stalls adjacent to Linear Lane.
- The Supervisors will disperse by 7 AM, making the stalls adjacent to Linear Lane available for other use.
- Starting at 6 AM, a maximum of 43 Crew members will arrive, receive work instructions, load trucks, and then clear the stalls for their personal vehicles.
- The objective is for the crews to depart for job sites by 6:30 AM.
- At 8 AM, approximately four Administrative Staff members will arrive and park in the Linear Lane stalls.

Afternoon Operations

Around 3 PM, Supervisors may return to stalls adjacent to Linear Lane, potentially sharing stalls with Administrative Staff members.

- Typically, the Supervisors depart by 4 PM.
- At 5 PM, the Administrative Staff members usually depart, leaving the Tree Trucks parked overnight on the premises.
  At 3PM, field employees return from job sites and depart the facility by 3:30pm

The lot will maintain 24-hour operations to respond to emergency situations such as storms and administrative operations including weekends.

Parking

The 43 field employees park their personal vehicles in the same spot where their large work trucks are parked overnight. Based on the site plan, each truck parking spot can accommodate approximately two passenger cars. Regarding parking dimensions, truck stalls measure 13'x45', standard stalls adjacent to Linear Lane measure 9'x19', tree truck stalls measure 11'x35', ADA accessible stalls measure 9'x18', and EV stalls measure 12'x18'.

Based on the information provided by GSTS-SOC, here is parking breakdown for the project:

- **Boom Trucks:** 10 spaces
- **Boom/Dump Trucks:** 9 spaces
- **Dump Trucks:** 2 spaces
- **Tree Truck:** 5

These stalls are flexible in quantity and position for efficiency and are distinctly marked with railroad ties.

Circulation

Based on the information provided by GSTS-SOC, here's an overview of the gates designated for the project:

- **Gate A** on Private Drive/Linear Lane: This gate is utilized by Staff to enter to the project site.

- **Gate B** on Private Drive/Linear Lane: This gate is utilized by tree trucks to enter to the project site.
- **Gate C**: on Private Drive/Linear Lane: This gate is utilized by fire trucks, which both enter and exit through this gate. This gate is also utilized by staff and tree truck to exist the project site.

The flow from Gate A and Gate B to Gate C is guided by a one-way road originating from Linear Lane and leading into designated angled parking spots.

Project trip generation

The project trip generation is shown in Table 1. The analysis utilizes peak commute period from 7-9 AM and 4-6 PM. For the purpose of this analysis, AM peak hour is assumed from 7-8 AM and the PM peak hour is assumed from 5-6 PM. Table 1 shows the trip generation by employee type: five (5) office employees, four (4) supervisors, and 43 field employees.

The Trip Generation was analyzed by the following assumptions listed below:

- Office Employees: During the AM peak hour, five (5) office employees enter the site, and no office employees leave the project site, resulting in a total of five (5) trips during the AM peak hour. During the PM peak hour, no office employees enter the site, and five (5) office employees leave the project site, resulting in a total of five (5) trips during the PM peak hour. The total number of daily trips as a result of the operations summary provided previously for office employees is ten (10) trips.

- Supervisors: During the AM peak hour, no supervisors enter the site, and four (4) supervisors leave the project site, resulting in a total of four (4) trips during the AM peak hour. During the PM peak hour, there are no supervisor entries or exits at the project site, resulting in a total of zero (0) trips during this period. The total number of daily trips as a result of the operations summary provided previously for supervisors is 16 trips.

- Field Workers: During the AM and PM peak hours, there are no field workers entries or exits at the project site, resulting in a total of zero (0) trips during these periods. The total number of daily trips as a result of the operations summary provided previously for field workers is 58 trips.

Summarizing the passenger trips for the project, there are 84 daily trips, with nine (9) trips during the AM peak hour and five (5) trips during the PM peak hour. Additionally, trips generated by field equipment (Tree Truck) are 58 daily trips, but none of these occur during either the AM or PM peak hours. In total, this project generates 142 daily trips (including 84 daily passenger trips) with nine (9) trips in AM peak hours and five (5) trips in PM peak hours.

Vehicle Miles Traveled

Background

Senate Bill (SB) 743 was signed by Governor Brown in 2013 and required the Governor's Office of Planning and Research (OPR) to amend the CEQA Guidelines to provide an alternative to LOS for evaluating Transportation impacts. SB743 specified that the new criteria should promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks and a diversity of land uses. The bill also specified that delay-based level of service could no longer be considered an indicator of a significant impact on the environment. In response, Section 15064.3 was added to the CEQA Guidelines beginning January 1, 2019. Section 15064.3 - Determining the Significance of Transportation Impacts states that Vehicle Miles Traveled (VMT) is the most appropriate measure of transportation impacts and provides lead agencies with the discretion to choose the most appropriate methodology and thresholds for evaluating VMT. Section 15064.3(c) states that the provisions of the section shall apply statewide beginning on July 1, 2020.

VMT Screening Analysis

The City of Lake Forest has adopted VMT thresholds and guidelines that provide methodology and impact thresholds for projects that would require a vehicle mile traveled (VMT) analysis. The City of Lake Forest Transportation Analysis Guidelines (July 21, 2020) provide criteria for projects that would be considered to have a less-than significant impact on VMT and therefore could be screened out for further analysis. If a project meets one of the following criteria, then the VMT impact of the project is considered less-than significant and no further analysis of VMT would be required:

- The project serves the local community and thereby has the potential to reduce VMT.
- The project generates less than 110 daily vehicle trips.
- The project is located within a Transit Priority area.
- The project is located in a low VMT generating area.

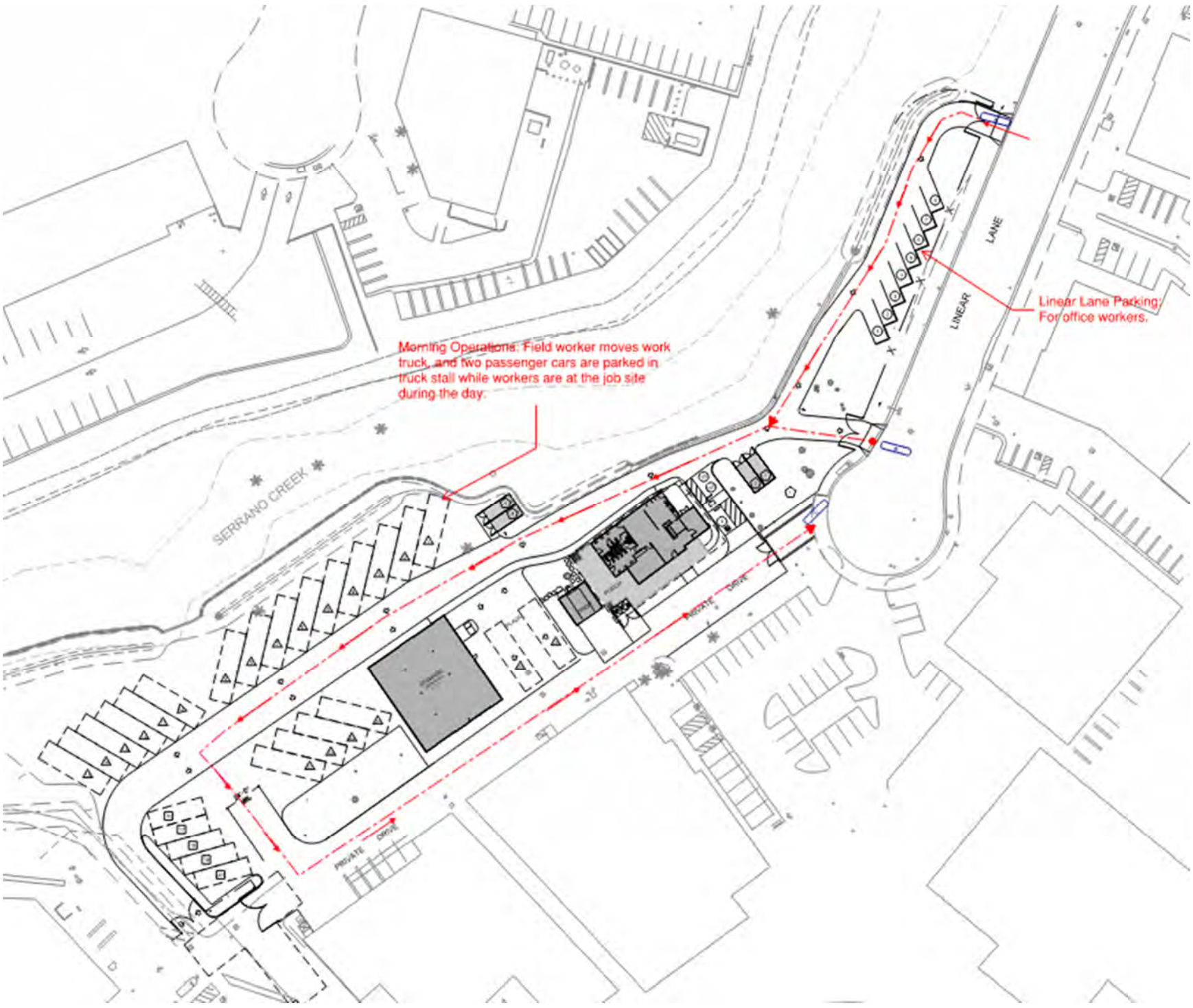
The project would not be considered a local-serving use, as defined in the guidelines. The project is also not located in either a Transit Priority Area or a low VMT generating area.

The City's Guidelines discuss the type of VMT that should be evaluated for various types of projects. Per the guidelines, VMT is defined as "the amount and distance of automobile travel attributable to a project. The term "automobile" refers to on-road passenger vehicles, specifically cars and light trucks". This is consistent with CEQA Guidelines Section 15064.3(a) which states "For the purpose of this section, "vehicle miles traveled" refers to the amount and distance of automobile travel attributable to a project". Based on both of these guidance documents, truck trips are not included in the VMT analysis.

To determine if the project's trip generation would exceed the 110 daily vehicle trips screening threshold, the passenger vehicle trip generation was utilized. This approach is consistent with both the County and CEQA Guidelines. As shown in Table 1, the project would generate 84 daily passenger vehicle trips. Because the project would generate fewer than 110 daily passenger vehicle trips, the project is presumed to have a less than significant impact on VMT and would not require further VMT analysis.

If you have any questions on this information, please contact me at mjavanmardi@epdsolutions.com or at (408) 893-0402.

Figure 1: Project Site Plan



Per architectural site plan dated 8/30/2023

Table 1: Great Scott Trip Generation

Trip Type	# of Employees/Trips	Daily	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total
Office Employees	5	10	5	0	5	0	5	5
Supervisors[1]	4	16	0	4	4	0	0	0
Field Employees (Passenger Vehicle)[2]	43	58	0	0	0	0	0	0
Total Passenger Trips	**52**	**84**	**5**	**4**	**9**	**0**	**5**	**5**
Field Equipment/Tree Trucks[3]	29	58	0	0	0	0	0	0
Total		**142**	**5**	**4**	**9**	**0**	**5**	**5**

[1] Supervisors arrive at the project site, pick up a truck and depart to the job site. Therefore 4 daily trips per supervisor are assumed.

[2] Many field employees carpool, averaging 1.5 employees per vehicle.

[3] Based on the information provided by GSTC-OC, there are 12 spaces designated for Boom Trucks, 11 spaces for Boom/Dump Trucks, 2 spaces for Dump Trucks.

Appendix C:

SoundPlan Input/Output

Great Scott Tree
Contribution spectra - 001 - Great Scott Tree: Outdoor SP

Time slice	Sum dB(A)	50Hz dB(A)	63Hz dB(A)	80Hz dB(A)	100Hz dB(A)	125Hz dB(A)	160Hz dB(A)	200Hz dB(A)	250Hz dB(A)	315Hz dB(A)	400Hz dB(A)	500Hz dB(A)	630Hz dB(A)	800Hz dB(A)	1kHz dB(A)	1.25kHz dB(A)	1.6kHz dB(A)	2kHz dB(A)	2.5kHz dB(A)	3.15kHz dB(A)	4kHz dB(A)	5kHz dB(A)	6.3kHz dB(A)	8kHz dB(A)	10kHz dB(A)	12.5kHz dB(A)	16kHz dB(A)	20kHz dB(A)
Receiver R1 Fl G Lr,lim dB(A) Leq,d 25.8 dB(A)																												
Leq,d	25.8	7.9	7.9	7.9	15.1	15.1	15.1	5.5	5.5	5.5	11.5	11.5	11.5	14.4	14.4	14.4	15.4	15.4	15.4	8.9	8.9	8.9	-11.2	-11.2	-11.2	-55.3	-55.3	-55.3
Leq,d																												
Receiver R2 Fl G Lr,lim dB(A) Leq,d 38.3 dB(A)																												
Leq,d	38.3	16.4	16.4	16.4	27.0	27.0	27.0	18.5	18.5	18.5	24.3	24.3	24.3	26.7	26.7	26.7	27.8	27.8	27.8	24.0	24.0	24.0	14.5	14.5	14.5	-5.3	-5.3	-5.3
Leq,d																												
Receiver R3 Fl G Lr,lim dB(A) Leq,d 32.2 dB(A)																												
Leq,d	32.2	13.4	13.4	13.4	22.5	22.5	22.5	9.7	9.7	9.7	16.3	16.3	16.3	20.7	20.7	20.7	21.6	21.6	21.6	16.0	16.0	16.0	0.5	0.5	0.5	-33.2	-33.2	-33.2
Leq,d																												
Receiver R4 Fl G Lr,lim dB(A) Leq,d 38.1 dB(A)																												
Leq,d	38.1	18.9	18.9	18.9	28.1	28.1	28.1	16.4	16.4	16.4	22.7	22.7	22.7	26.5	26.5	26.5	27.4	27.4	27.4	22.9	22.9	22.9	11.2	11.2	11.2	-14.6	-14.6	-14.6
Leq,d																												
Receiver R5 Fl G Lr,lim dB(A) Leq,d 52.7 dB(A)																												
Leq,d	52.7	33.0	33.0	33.0	42.8	42.8	42.8	34.4	34.4	34.4	39.2	39.2	39.2	40.2	40.2	40.2	40.7	40.7	40.7	37.7	37.7	37.7	30.8	30.8	30.8	16.4	16.4	16.4
Leq,d																												
Receiver R6 Fl G Lr,lim dB(A) Leq,d 38.3 dB(A)																												
Leq,d	38.3	19.4	19.4	19.4	28.5	28.5	28.5	16.0	16.0	16.0	22.8	22.8	22.8	26.7	26.7	26.7	27.4	27.4	27.4	22.8	22.8	22.8	10.3	10.3	10.3	-18.4	-18.4	-18.4
Leq,d																												

Source group	Source type	Tr. lane	Leq,d dB(A)	A dB	
Receiver R1 Fl G Lr,lim dB(A) Leq,d 25.8 dB(A)					
Default parking lot noise	PLot		25.8	0.0	
Receiver R2 Fl G Lr,lim dB(A) Leq,d 38.3 dB(A)					
Default parking lot noise	PLot		38.3	0.0	
Receiver R3 Fl G Lr,lim dB(A) Leq,d 32.2 dB(A)					
Default parking lot noise	PLot		32.2	0.0	
Receiver R4 Fl G Lr,lim dB(A) Leq,d 38.1 dB(A)					
Default parking lot noise	PLot		38.1	0.0	
Receiver R5 Fl G Lr,lim dB(A) Leq,d 52.7 dB(A)					
Default parking lot noise	PLot		52.7	0.0	
Receiver R6 Fl G Lr,lim dB(A) Leq,d 38.3 dB(A)					
Default parking lot noise	PLot		38.3	0.0	

Source group	Source type	Tr. lane	Leq,d dB(A)	A dB	
Receiver R1 Fl G Lr,lim dB(A) Leq,d 25.8 dB(A)					
Default parking lot noise	PLot		25.8	0.0	
Receiver R2 Fl G Lr,lim dB(A) Leq,d 38.3 dB(A)					
Default parking lot noise	PLot		38.3	0.0	
Receiver R3 Fl G Lr,lim dB(A) Leq,d 32.2 dB(A)					
Default parking lot noise	PLot		32.2	0.0	
Receiver R4 Fl G Lr,lim dB(A) Leq,d 38.1 dB(A)					
Default parking lot noise	PLot		38.1	0.0	
Receiver R5 Fl G Lr,lim dB(A) Leq,d 52.7 dB(A)					
Default parking lot noise	PLot		52.7	0.0	
Receiver R6 Fl G Lr,lim dB(A) Leq,d 38.3 dB(A)					
Default parking lot noise	PLot		38.3	0.0	

Appendix D:

Construction Input

Activity	L_{eq} at 123 feet dBA	L_{Max} at 123 feet dBA
Grading	77	79
Building Construction	73	74
Paving	74	77

Equipment Summary	Reference (dBA) 50 ft Lmax
Rock Drills	96
Jack Hammers	82
Pneumatic Tools	85
Pavers	80
Dozers	85
Scrappers	87
Haul Trucks	88
Cranes	82
Portable Generators	80
Rollers	80
Tractors	80
Front-End Loaders	86
Hydraulic Excavators	86
Graders	86
Air Compressors	86
Trucks	86

Grading

Noise Level Calculation Prior to Implementation of Noise Attenuation Requirements										
								Calculated (dBA)		
No.	Equipment Description	Reference (dBA) 50 ft Lmax	Quantity	Usage Factor[1]	Distance to Receptor (ft)	Ground Effect	Shielding (dBA)	Lmax	Leq	Energy
1	Grader	86	1	40	123	0.5	0	76.2	72.2	16777305.9
2	Dozer	85	1	40	123	0.5	0	75.2	71.2	13326687.8
3	Excavator	86	1	40	123	0.5	0	76.2	72.2	16777305.9
4	Tractor/Backhoe	80	1	40	123	0.5	0	70.2	66.2	4214268.71
							Lmax*	**79**	**Leq**	**77**
							Lw	**110**	**Lw**	**109**

Source: MD Acoustics, October 2020.

1- Percentage of time that a piece of equipment is operating at full power.

dBA – A-weighted Decibels

Lmax- Maximum Level

Leq- Equivalent Level

Feet	Meters	Ground Effect	No Shielding Leq dBA	1 dBA Shielding Leq dBA	2 dBA Shielding Leq dBA	3 dBA Shielding Leq dBA	4 dBA Shielding Leq dBA	5 dBA Shielding Leq dBA	6 dBA Shielding Leq dBA	7 dBA Shielding Leq dBA	8 dBA Shielding Leq dBA	9 dBA Shielding Leq dBA	10 dBA Shielding Leq dBA	11 dBA Shielding LeqdBA	12 dBA Shielding Leq dBA	13 dBA Shielding Leq dBA	14 dBA Shielding Leq dBA	15 dBA Shielding Leq dBA
50	**15.2**	**0.5**	**77**	**76**	**75**	**74**	**73**	**72**	**71**	**70**	**69**	**68**	**67**	**66**	**65**	**64**	**63**	**62**
60	18.3	0.5	75	74	73	72	71	70	69	68	67	66	65	64	63	62	61	60
70	21.3	0.5	73	72	71	70	69	68	67	66	65	64	63	62	61	60	59	58
80	24.4	0.5	72	71	70	69	68	67	66	65	64	63	62	61	60	59	58	57
90	27.4	0.5	71	70	69	68	67	66	65	64	63	62	61	60	59	58	57	56
100	30.5	0.5	70	69	68	67	66	65	64	63	62	61	60	59	58	57	56	55
110	33.5	0.5	69	68	67	66	65	64	63	62	61	60	59	58	57	56	55	54
120	36.6	0.5	68	67	66	65	64	63	62	61	60	59	58	57	56	55	54	53
130	39.6	0.5	67	66	65	64	63	62	61	60	59	58	57	56	55	54	53	52
140	42.7	0.5	66	65	64	63	62	61	60	59	58	57	56	55	54	53	52	51
150	45.7	0.5	65	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50
160	48.8	0.5	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49
170	51.8	0.5	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49
180	54.9	0.5	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49	48
190	57.9	0.5	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49	48
200	61.0	0.5	62	61	60	59	58	57	56	55	54	53	52	51	50	49	48	47
210	64.0	0.5	62	61	60	59	58	57	56	55	54	53	52	51	50	49	48	47
220	67.1	0.5	61	60	59	58	57	56	55	54	53	52	51	50	49	48	47	46
230	70.1	0.5	61	60	59	58	57	56	55	54	53	52	51	50	49	48	47	46
240	73.1	0.5	60	59	58	57	56	55	54	53	52	51	50	49	48	47	46	45
250	76.2	0.5	60	59	58	57	56	55	54	53	52	51	50	49	48	47	46	45
260	79.2	0.5	59	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44
270	82.3	0.5	59	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44
280	85.3	0.5	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43
290	88.4	0.5	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43
300	91.4	0.5	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43
310	94.5	0.5	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42
320	97.5	0.5	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42
330	100.6	0.5	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42
340	103.6	0.5	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41
350	106.7	0.5	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41
360	109.7	0.5	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41
370	112.8	0.5	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41	40

Building Construction

Noise Level Calculation Prior to Implementation of Noise Attenuation Requirements

No.	Equipment Description	Reference (dBA) 50 ft Lmax	Quantity	Usage Factor[1]	Distance to Receptor (ft)	Ground Effect	Shielding (dBA)	Calculated (dBA) Lmax	Calculated (dBA) Leq	Energy
1	Cranes	82	1	40	123	0.5	0	72.2	68.2	6679165.79
2	Forklift/Tractor	80	1	40	123	0.5	0	70.2	66.2	4214268.71
3	Generator	80	1	40	123	0.5	0	70.2	66.2	4214268.71
4	Tractor/Backhoe	80	1	40	123	0.5	0	70.2	66.2	4214268.71
							Lmax*	**74**	**Leq**	**73**
							Lw	**106**	**Lw**	**105**

Source: MD Acoustics, July 2018.

1- Percentage of time that a piece of equipment is operating at full power.

dBA – A-weighted Decibels

Lmax- Maximum Level

Leq- Equivalent Level

Feet	Meters	Ground Effect	No Shielding Leq dBA	1 dBA Shielding Leq dBA	2 dBA Shielding Leq dBA	3 dBA Shielding Leq dBA	4 dBA Shielding Leq dBA	5 dBA Shielding Leq dBA	6 dBA Shielding Leq dBA	7 dBA Shielding Leq dBA	8 dBA Shielding Leq dBA	9 dBA Shielding Leq dBA	10 dBA Shielding Leq dBA	11 dBA Shielding LeqdBA	12 dBA Shielding Leq dBA	13 dBA Shielding Leq dBA	14 dBA Shielding Leq dBA	15 dBA Shielding Leq dBA
50	**15.2**	**0.5**	**73**	**72**	**71**	**70**	**69**	**68**	**67**	**66**	**65**	**64**	**63**	**62**	**61**	**60**	**59**	**58**
60	18.3	0.5	71	70	69	68	67	66	65	64	63	62	61	60	59	58	57	56
70	21.3	0.5	69	68	67	66	65	64	63	62	61	60	59	58	57	56	55	54
80	24.4	0.5	68	67	66	65	64	63	62	61	60	59	58	57	56	55	54	53
90	27.4	0.5	66	65	64	63	62	61	60	59	58	57	56	55	54	53	52	51
100	30.5	0.5	65	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50
110	33.5	0.5	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49
120	36.6	0.5	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49	48
130	39.6	0.5	62	61	60	59	58	57	56	55	54	53	52	51	50	49	48	47
140	42.7	0.5	62	61	60	59	58	57	56	55	54	53	52	51	50	49	48	47
150	45.7	0.5	61	60	59	58	57	56	55	54	53	52	51	50	49	48	47	46
160	48.8	0.5	60	59	58	57	56	55	54	53	52	51	50	49	48	47	46	45
170	51.8	0.5	60	59	58	57	56	55	54	53	52	51	50	49	48	47	46	45
180	54.9	0.5	59	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44
190	57.9	0.5	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43
200	61.0	0.5	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43
210	64.0	0.5	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42
220	67.1	0.5	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42
230	70.1	0.5	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41
240	73.1	0.5	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41
250	76.2	0.5	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41	40
260	79.2	0.5	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41	40
270	82.3	0.5	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41	40
280	85.3	0.5	54	53	52	51	50	49	48	47	46	45	44	43	42	41	40	39
290	88.4	0.5	54	53	52	51	50	49	48	47	46	45	44	43	42	41	40	39
300	91.4	0.5	53	52	51	50	49	48	47	46	45	44	43	42	41	40	39	38
310	94.5	0.5	53	52	51	50	49	48	47	46	45	44	43	42	41	40	39	38
320	97.5	0.5	53	52	51	50	49	48	47	46	45	44	43	42	41	40	39	38
330	100.6	0.5	52	51	50	49	48	47	46	45	44	43	42	41	40	39	38	37
340	103.6	0.5	52	51	50	49	48	47	46	45	44	43	42	41	40	39	38	37
350	106.7	0.5	52	51	50	49	48	47	46	45	44	43	42	41	40	39	38	37
360	109.7	0.5	51	50	49	48	47	46	45	44	43	42	41	40	39	38	37	36
370	112.8	0.5	51	50	49	48	47	46	45	44	43	42	41	40	39	38	37	36

Paving

Noise Level Calculation Prior to Implementation of Noise Attenuation Requirements									
No.	Equipment Description	Reference (dBA) 50 ft Lmax	Quantity	Usage Factor[1]	Distance to Receptor (ft)	Ground Effect	Shielding (dBA)	Calculated (dBA) Lmax	Calculated (dBA) Leq	Energy
1	Pavers	86	1	40	123	0.5	0	76.2	72.2	16777305.9
2	Rollers	80	1	40	123	0.5	0	70.2	66.2	4214268.71
3	Paving Equipment	80	1	40	123	0.5	0	70.2	66.2	4214268.71
							Lmax*	77	Leq	74
							Lw	109	Lw	106

Source: MD Acoustics, July 2018.
1- Percentage of time that a piece of equipment is operating at full power.
dBA – A-weighted Decibels
Lmax- Maximum Level
Leq- Equivalent Level

Feet	Meters	Ground Effect	No Shielding Leq dBA	1 dBA Shielding Leq dBA	2 dBA Shielding Leq dBA	3 dBA Shielding Leq dBA	4 dBA Shielding Leq dBA	5 dBA Shielding Leq dBA	6 dBA Shielding Leq dBA	7 dBA Shielding Leq dBA	8 dBA Shielding Leq dBA	9 dBA Shielding Leq dBA	10 dBA Shielding Leq dBA	11 dBA Shielding LeqdBA	12 dBA Shielding Leq dBA	13 dBA Shielding Leq dBA	14 dBA Shielding Leq dBA	15 dBA Shielding Leq dBA
50	**15.2**	**0.5**	**74**	**73**	**72**	**71**	**70**	**69**	**68**	**67**	**66**	**65**	**64**	**63**	**62**	**61**	**60**	**59**
60	18.3	0.5	72	71	70	69	68	67	66	65	64	63	62	61	60	59	58	57
70	21.3	0.5	70	69	68	67	66	65	64	63	62	61	60	59	58	57	56	55
80	24.4	0.5	69	68	67	66	65	64	63	62	61	60	59	58	57	56	55	54
90	27.4	0.5	68	67	66	65	64	63	62	61	60	59	58	57	56	55	54	53
100	30.5	0.5	66	65	64	63	62	61	60	59	58	57	56	55	54	53	52	51
110	33.5	0.5	65	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50
120	36.6	0.5	65	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50
130	39.6	0.5	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49
140	42.7	0.5	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49	48
150	45.7	0.5	62	61	60	59	58	57	56	55	54	53	52	51	50	49	48	47
160	48.8	0.5	61	60	59	58	57	56	55	54	53	52	51	50	49	48	47	46
170	51.8	0.5	61	60	59	58	57	56	55	54	53	52	51	50	49	48	47	46
180	54.9	0.5	60	59	58	57	56	55	54	53	52	51	50	49	48	47	46	45
190	57.9	0.5	60	59	58	57	56	55	54	53	52	51	50	49	48	47	46	45
200	61.0	0.5	59	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44
210	64.0	0.5	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43
220	67.1	0.5	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43
230	70.1	0.5	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42
240	73.1	0.5	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42
250	76.2	0.5	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42
260	79.2	0.5	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41
270	82.3	0.5	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41
280	85.3	0.5	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41	40
290	88.4	0.5	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41	40
300	91.4	0.5	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41	40
310	94.5	0.5	54	53	52	51	50	49	48	47	46	45	44	43	42	41	40	39
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330	100.6	0.5	54	53	52	51	50	49	48	47	46	45	44	43	42	41	40	39
340	103.6	0.5	53	52	51	50	49	48	47	46	45	44	43	42	41	40	39	38
350	106.7	0.5	53	52	51	50	49	48	47	46	45	44	43	42	41	40	39	38
360	109.7	0.5	53	52	51	50	49	48	47	46	45	44	43	42	41	40	39	38
370	112.8	0.5	52	51	50	49	48	47	46	45	44	43	42	41	40	39	38	37

VIBRATION LEVEL IMPACT

Project:	Great Scott Tree Service	Date: 10/30/20
Source:	Large Bulldozer	
Scenario:	Unmitigated	
Location:	Project Site	
Address:		

PPV = PPVref(25/D)^n (in/sec)

DATA INPUT

Equipment = Type	2	Large Bulldozer	INPUT SECTION IN BLUE
PPVref =	0.089	Reference PPV (in/sec) at 25 ft.	
D =	33.00	Distance from Equipment to Receiver (ft)	
n =	1.10	Vibration attenuation rate through the ground	

Note: Based on reference equations from Vibration Guidance Manual, California Department of Transportation, 2006, pgs 38-43.

DATA OUT RESULTS

PPV =	**0.066**	IN/SEC	OUTPUT IN RED

HILLMANN
CONSULTING

PHASE I ENVIRONMENTAL SITE ASSESSMENT

20865-20795 Canada Road
Lake Forest, California 92630

Prepared For:

Great Scott Tree Service, Inc.
10761 Court Avenue
Stanton California, 90680

Hillmann Project Number C3-8091

September 2, 2020

Your Property. Our Priority.
1745 W. Orangewood Avenue, Suite 110, Orange, CA 92868
Telephone (714) 634-9500 Fax: (714) 634-9507 Toll free: (800) 232-4326
www.HillmannConsulting.com

HILLMANN
CONSULTING

September 2, 2020

Mr. Steve Guzowski
Great Scott Tree Service, Inc.
10761 Court Avenue
Stanton California, 90680

RE: Phase I Environmental Site Assessment
20865-20795 Canada Road
Lake Forest, California 92630
Hillmann Project No: C3-8091

Dear Mr. Guzowski:

Hillmann Consulting, LLC, is pleased to provide the results of our Phase I Environmental Site Assessment of the above referenced property. This assessment was performed in general accordance with the scope and limitations of ASTM Practice E 1527-13, which is the latest version of the E1527 standard published by the ASTM.

We appreciate the opportunity to provide environmental due diligence services. If you have any questions concerning this report, or if we can assist you in any other matter, please contact our office at 714-634-9500.

Sincerely,

Hillmann Consulting, LLC

Shilpa Sunil
Environmental Project Manager

Ryan Terwilliger
West Coast Operations Manager

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List of Abbreviations/Acronyms

Hillmann may use the following abbreviations and acronyms for common terminology described in our report. Not all abbreviations or acronyms may be applicable to this report:

ACM	– Asbestos Containing Material
AOC	– Area of Concern
AST	– Aboveground Storage Tank
ASTM	– American Society for Testing Materials
BER	– Business Environmental Risk
CEA	– Classification Exception Area
CERCLA	– Comprehensive Environmental Response Compensation and Liability Act
CERCLIS	– Comprehensive Environmental Response Compensation and Liability Information System
CESQG	– Conditionally Exempt Small Quantity Generator
COC	– Chemicals of Concern
CORRACTS	– Corrective Action Sites
CREC	– Controlled Recognized Environmental Condition
DNPL	– Delisted National Priority List
DTSC	– Department of Toxic Substances Control
ENG	– Engineering
ERNS	– Emergency Response Notification System
CUPA	– Certified Unified Program Agency
FOI/FOIA/FOIL	– Freedom of Information / Freedom of Information Act / Freedom of Information Letter
HVAC	– Heating Ventilation & Air Conditioning
HREC	– Historic Recognized Environmental Condition
IAQ	– Indoor Air Quality
INST	– Institutional
ISRA	– Industrial Site Recovery Act
LBP	– Lead-Based Paint
LQG	– Large Quantity Generator
LTANK	– Leaking Storage Tank
LUST	– Leaking Underground Storage Tank
SDS/MSDS	– Safety Data Sheet / Material Safety Data Sheet
NA	– Not Applicable
NFA	– No Further Action
NFRAP	– No Further Remedial Actions Planned
NPDES	– National Pollutant Discharge Elimination System
NPL	– National Priority List
OPRA	– Open Public Records Act
PAH	– Polycyclic Aromatic Hydrocarbon
PCE	– Perchloroethylene
RAO	– Response Action Outcome
RCRA	– Resource Conservation and Recovery Act
RWQCB	– Regional Water Quality Control Board
SCAQMD	– South Coast Air Quality Management District
RCRIS	– Resource Conservation and Recovery Information System
REC	– Recognized Environmental Condition
SDG	– Significant Data Gap
SEMS	– Superfund Enterprise Management System
SRP	– Site Remediation Program
SQG	– Small Quantity Generator
SVOC	– Semi-Volatile Organic Compound
TCE	– Trichloroethylene
TSDF	– Treatment Storage and/or Disposal Facility
USEPA	– United States Environmental Protection Agency
UST	– Underground Storage Tank
VEC	– Vapor Encroachment Condition
VOC	– Volatile Organic Compound

1.0 FINDINGS, OPINIONS, AND CONCLUSIONS

Hillmann Consulting, LLC (Hillmann) performed a Phase I Environmental Site Assessment (ESA) of 20865-20795 Canada Road, Lake Forest, California 92630 (the Property). This assessment has been conducted in accordance with our contracted scope of work and the ASTM Standard Practice E 1527-13 for Phase I Environmental Site Assessments and All Appropriate Inquiries (AAI) Final Rule 40 CFR Part 312. This section contains a summary of findings, opinions, and conclusions made by this assessment. However, this section, alone, does not constitute the complete assessment. The report must be read in its entirety.

1.1 Summary of Project Details

Project Name:		N/A			
Primary Street Address:		20865 -20795 Canada Road			
City:	Lake Forest	**County:**	Orange	**State:**	California
Tax ID/Parcel Number:		610-301-07 and 610-301-20, 601-301-21			
Property Owner:		Mr. Brian Hess			
Zoning Designation:		A General Plan Amendment to change the General Plan designation from OS to Light Industrial; A Zone Change to change the zoning of the property from General Agriculture (A-1) to Light Industrial (M-1) to establish a contractor storage yard use (Great Scott Tree Services Inc.). Submitted on March 22, 2018. Under review.			
Approx. Property Area:		APN 610-301-07 – 5.54 acres APN 610-301-20 – 0.82 acres APN 610-301-21 – 0.35 acres			
Buildings/# of Floors		One single story house converted to office use, one single story residential house, and a wooden barn			
Approx. Building Area:		House: 3,500 SF and Barn: 2,800 SF Former residential house used as Office: 2,600 SF			
Approx. Year Built:		Residential house prior to 1910/1952 and Office 1928; Barn 1848			
Commercial Occupants:		N/A			
Current Use:		20865 Canada Road- Residential with a barn, horse stalls, and farm animals 20795 Canada Road- Office, ancillary structures used as storage shed			
Prior Uses:		Orchards, residential / farm houses			
Inspected By:		Ms. Shilpa Sunil			
Property Contact/Company:		Mr. Steve Guzowski/Great Scott tree Service Inc.			
Property Escort/Company:		Mr. Steve Guzowski Great Scott tree Service Inc.			
Inspection Date:		August 27, 2020			
Weather Conditions:		Clear Sunny, 85 degrees F			

1.2 Findings Summary Table

PHASE I ENVIRONMENTAL SITE ASSESSMENT				
Assessment Subject	**No Notable Finding**	**Notable Findings**	**REC?**	**Rep. Ref.**
User Provided Info	X			3.0
Data Gaps	X	Hillmann was not able to access the western portion of the Property due to thick and overgrown vegetation.		2.3
Property Regulatory Records Review	X	The Property is not listed in any regulatory databases.		4.3.1
Property Historical Records Review		Historical site uses include citrus and avocado orchards and a residential home.	REC	4.2
Site Reconnaissance		Property consists of two parcels. The northwestern portion of the Property includes Serrano creek, hiking trail and the remainder portion of the Property is covered with dense vegetation. The southern parcel is developed with a single-family residential house that has 4 bedrooms, 2 bathrooms and approximately 2,400 square feet of floor space; and a barn. A horse stall and farm animal storage area were observed at the northwestern portion of the Property. A horse corral was observed at the southwest side of the Property. Remaining portion of the parcel is undeveloped, currently covered by brushes and trees. The north eastern portion of the Property is currently occupied by the tenant- Richard Cohen Landscape and Construction, Inc. This Property has 4 bedrooms, 2 bathrooms and approximately 2,600 square feet of floor space that is currently converted to office use.	No	5.0
Interviews		Mr. Steve Guzowski of Great Scott Tree Service, Inc. indicated a 500-gallon underground gasoline tank with pump was on the Property until 1984-1985, and used for agricultural purposes. A leak was detected approximately in 1984. Under the guidance of the local environmental jurisdiction, the pump was removed and the tank was filled with water. Mr. Steve indicated that the underground storage tank was still underground. Due to overgrown vegetation, there were no visible signs of the former UST at the Property. Hillmann reviewed online Geotracker records and there were no files pertinent to the underground storage tank found. Based on the age of the construction of the residential home, the home was connected to a septic system. A septic system cleanout was observed at the north side of the 20795 Canada Road building. At the time of the site inspection, Hillmann observed Los Alisos Water District has recently put a new sewer system in place.	REC No	6.0

Adjoining & Nearby Properties	X	The northwest adjacent Property at 20697 Prism Place located approximately 277 feet northwest is listed under UST and SWEEPS UST, RCRA NON-GEN/NLR, HAZNET, CERS, CERS HAZ Waste databases. The south-southeast adjacent Property at 20845 Canada Road located approximately 103 feet down gradient of the Property is listed under RCRA NONGEN/NLR database.	No No	4.3.2 5.2.8
BUSINESS ENVIRONMENTAL RISKS / NON-ASTM SCOPE				
BER	**Not Applicable**	**Findings**		**Rep. Ref.**
Asbestos Containing Materials (ACM)		Based on the age of the construction of the single-family residential home there is potential for ACM.		7.1
Lead Based Paint (LBP)				7.2
Radon		The Property located in USEPA Radon Zone 3.		7.3
Mold				7.4

1.3 Findings and Conclusions

1.3.1 Recognized Environmental Conditions

Hillmann has performed a Phase I Environmental Site Assessment in accordance with the scope and limitations of ASTM Practice E 1527-13 of the Property as described in Section 2 of this report. Any additions to, exceptions to or deletions from this practice are also described in Section 2 of this report. This assessment has revealed no evidence of *recognized environmental conditions* in connection with the Property, except for the following:

RECOGNIZED ENVIRONMENTAL CONDITIONS	
REC 1	The former UST at the Property is considered to be REC to the Property.
REC 2	The historical usage of the Property as a citrus and avocado grove is considered a REC in connection with the Property.
HISTORICAL RECOGNIZED ENVIRONMENTAL CONDITIONS	
	No HRECs were identified.
CONTROLLED RECOGNIZED ENVIRONMENTAL CONDITIONS	
	No CRECs were identified.
SIGNIFICANT DATA GAPS	
	No SDGs were identified.

1.3.2 REC Response Action Recommendations

The following table presents recommended response actions to the identified RECs for further investigation and/or corrective action:

REC RESPONSE ACTION SUMMARY TABLE	
REC #	**Response Action**
REC 1 and 2	Hillmann recommends a limited Phase II subsurface investigation to determine whether elevated pesticide compounds are present due to the history of agricultural/orchard use. Additionally, Hillmann recommends soil sampling to determine whether the owner reported gasoline underground storage tank has adversely impacted the Property. A subsurface investigation would be necessary to evaluate to the extent of residual impact. In addition, due to the residual impact in shallow soil and groundwater, a subsurface soil vapor survey is recommended prior to any planned redevelopment of the Property.

1.3.3 Additional Findings

The following environmental conditions were identified, but are not considered to be a REC in connection with the Property:

NOTABLE ENVIRONMENTAL CONDITIONS	
1.	The site appears to have been utilized as citrus and avocado orchard from circa 1938 to 1940. There is the potential for soil contamination due to current and historic pesticide applications; this is considered to be a REC in connection with the Property.
2.	Site contact Mr. Guzowski of Great Scott Tree Service, Inc. indicated a 500-gallon underground gasoline tank with pump was on Property until 1984-1985 and was used for agricultural purposes. Property owner reported that a leak was detected approximately in 1984. Under the guidance of the local environmental jurisdiction, the pump was removed and the tank was filled with water. Mr. Steve indicated that the underground storage tank was still underground. Due to overgrown vegetation, there were no visible signs of the former UST at the Property. There were no records of date of installation of the UST and no leaks were recorded. Hillmann reviewed online Geotracker records and there were no files pertinent to the underground storage tank found. Hillmann reviewed the GPR investigation report prepared by C Below, dated August 31, 2020, the investigation results did not identify any tank, other than possible resident's septic tank measuring 10x12 and possible old water pump foundation near the drive way measuring 2x2 were identified. The GPR report is attached under Appendix C. Based on the lack of tank removal records, Hillmann recommends further soil sampling to determine if the subsurface has been impacted by the former UST leak and analyze for suspect compounds such as total petroleum hydrocarbons (TPHcc), volatile organic compounds (VOCs), and Ca Assessment Metals (CAM).
3.	Mr. Steve Guzowski mentioned that the residential property had a septic system in place. Due to the overgrown vegetation, septic system was not visible. There were new sewer lines in places laid out by the city observed in the vicinity of the Property. Additionally, Hillmann observed a septic system cleanout exists at the north side of the Property (20795 Canada Road); however, the capacity of the septic tank is unknown. The only pertinent information Hillmann was able to obtain was that the septic tank is serviced by vacuuming out the contents periodically approximately twice a month. Hillmann recommends to remove the septic system and be capped under current regulations.
4.	Hillmann observed one above ground storage tank stored on a secondary containment in the barn building. No evidence of leaks or staining was observed in vicinity of the tank. The above ground storage tank is not considered to be a REC; however, it should be properly removed and disposed of at an authorized off-site location. Additionally, there were small containers of degreaser observed in the barn building. Hillmann observed de-minimis oil staining in the barn building.
5.	Several 5-gallon pails containing grout and flooring construction material were observed in the northeast covered storage yard. Five 5-gallon containers and a 5-gallon pail of oil and small containers of paint was observed inside the garage.

6.	XPO Logistics Freight Inc - UIV (20697 Prism Place). This site is adjoining to the northwest and is cross-upgradient of the Property. The site is listed under UST, SWEEPS UST, RCRA NONGEN/NLR, CERS Hazwaste, CERS tanks, HAZZNET databases. This site is registered on the UST database with Facility ID # FA0024234. The SWEEPS UST listing indicates the 10,000-gallon motor vehicle fuel diesel UST was installed in 1988. Based on the absence of reported releases or violations, this listing is not considered a REC in connection with the Property. The CERS Hazwaste listing indicates that hazardous waste treatment occurs onsite, several administrative violations are noted. The CERS listing indicates that the site operates as a chemical storage facility with several administrative violations. The CERS listing indicates that the site returned to compliance on 3/17/2017 after the violation for not collecting waste in a container was issued on 3/13/2017. Due to a lack of reported spills, the relatively minor violation, and hydrologic gradient, these listings are not considered to be RECs in connection with the Property

1.4 Environmental Professional Statement

I declare that, to the best of my professional knowledge and belief, I meet the definition of *Environmental Professional* as defined in §312.10 of 40 CFR 312. I have the specific qualifications based on education, training, and experience to assess a *property* of the nature, history, and setting of the subject *property*. I have developed and performed all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Ryan Terwilliger
Environmental Professional

2.0 INTRODUCTION

2.1 Purpose and Scope

This assessment was conducted utilizing generally accepted Phase I ESA industry standards in accordance with the ASTM Standard Practice E 1527-13. The ASTM describes these methodologies as representing good commercial and customary practice in the United States of America for conducting an environmental site assessment of a parcel of commercial real estate with respect to the range of contaminants within the scope of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and petroleum products. As such, this practice is intended to permit a user to satisfy one of the requirements to qualify for the innocent landowner, contiguous property owner or bona fide prospective purchaser limitations on CERCLA liability (hereinafter, the "landowner liability protections," or "LLPs"): that is, the practice that constitutes all appropriate inquiries into the previous ownership and uses the property consistent with good commercial and customary practice as defined at 42 U.S.C. §9601(35) (B). The primary goal of the processes established by ASTM E1527-13 is to identify *recognized environmental conditions* in connection with the Property.

The term *recognized environmental condition (REC)* is defined by the ASTM as the presence or likely presence of any hazardous substances or petroleum products in, on or at a property: (1) due to a release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment.

The ASTM has also defined the terms *historical recognized environmental conditions* and *controlled recognized environmental conditions* as two additional types of RECs. The term *historical recognized environmental condition (HREC)* is defined as a past release of any hazardous substances or petroleum products that has occurred in connection with the Property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the Property to any required controls (for example, property use restrictions, activity and use limitations, institutional controls or engineering controls).

The term *controlled recognized environmental condition (CREC)* is defined as a recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority, with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls.

Conditions determined to be *"de minimis conditions"* are not considered to be RECs, HRECs or CRECs. *De minimis condition* is defined by the ASTM, "…as a condition that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies."

The chief components of this assessment are generally described as follows:

- A non-invasive visual reconnaissance of the Property and adjoining properties in accordance with ASTM guidelines for evidence of RECs.

- Interviews of past and present owners and occupants and state and local government officials, seeking information related to the potential presence of RECs at the Property.

- A review of standard physical record sources for available topographic, geologic and groundwater data.

- A review of standard historic record sources, such as fire insurance maps, city directories, aerial photographs, prior reports, and interviews, etc., to determine prior uses of the Property from the present, back to the Property's first developed use, or back to 1940, whichever is earlier.

- A review of standard environmental record sources including federal and state environmental databases, and additional environmental record sources, to identify potential regulatory concerns with the Property, adjoining properties, and properties located within the surrounding area.

An evaluation of environmental or other regulatory compliance matters is excluded from the scope of this assessment.

These methodologies are described as representing good commercial and customary practice for conducting an Environmental Site Assessment of a property for the purpose of identifying recognized environmental conditions.

2.1.1 Business Environmental Risks/Non-ASTM Scope Considerations

In accordance with our contract agreement, Hillmann may have addressed the following potential environmental subject matters that are outside of the requirements of the ASTM E1527-13 standard:

Asbestos-Containing Materials (ACM): A cursory non-intrusive visual screening for the presence of suspect ACM within the accessed areas of buildings built prior to 1990 on the Property. It is emphasized that this cursory non-intrusive visual screening does not constitute an asbestos survey/inspection of the premises. An asbestos survey/inspection should be sought by the report User(s) if more certainty is desired regarding ACM and potential asbestos hazards at the Property. Furthermore, a review of regulatory compliance matters pertaining to asbestos is excluded from the scope of work.

Lead-Based Paint (LBP): A cursory non-intrusive visual screening of the condition of painted surfaces in the accessed areas of residential buildings/units built prior to 1980 on the Property. It is emphasized that this cursory non-intrusive visual screening does not constitute a comprehensive survey for LBP or potential lead hazards. A comprehensive inspection should be sought by the report User(s) if more certainty is desired regarding LBP at the Property. Furthermore, a review of regulatory compliance matters pertaining to lead-based paint is excluded from the scope of work.

USEPA Designated Radon Potential: Review of general non-site-specific data published by the USEPA regarding the Radon Zone classification for the area of the Property.

Mold: A cursory non-intrusive visual screening within the accessed areas of buildings on the Property for evidence of systemic microbial problems, including visible mold growth, water damaged building materials or musty odors. It is emphasized that this cursory non-intrusive visual screening does not constitute a comprehensive survey for moisture/mold/microbial damage. A more comprehensive inspection should be sought by the report User(s) if more certainty is desired regarding the potential for moisture/mold/microbial damages at the Property.

2.2 Property Location/Legal Description

Property location and legal description details are described as follows:

Primary Street Address:		20865 Canada Road			
City:	Lake Forest	**County:**	Orange	**State:**	California
Tax ID/Parcel Number:		610-301-07 and 610-301-20			
Approx. Land Area:		610-301-07 – 5.54 acres APN 610-301-20 – 0.82 acres APN 610-301-21 – 0.35 acres			
Approx. Latitude/Longitude:		North 33.6605380 degrees/West 117.6751250 degrees			
Additional Details (if appl.):		NA			

2.3 Data Gaps

A *data gap* is defined by the ASTM as a lack of or inability to obtain information required by this practice despite good faith efforts by the environmental professional to gather such information. A data gap is only significant if other information and/or professional experience raises reasonable concerns involving the data gap and the ability to determine the presence or absence of recognized environmental conditions. The following table summarizes data gaps encountered during the assessment as well as a discussion of their significance.

Data Gap:	Significant (Yes/No)?	Discussion
Historical records data failure	No	See Section 4.2.9
Response to agency records requests not received as of date of report.	No	Any additional information indicative of a REC will be forwarded upon receipt.

2.4 User Reliance

This report is for the exclusive use of the User(s) named on the front cover. No other party(ies) shall have any right to rely on the content of this report without first obtaining the consent of the original report User; and without obtaining written consent from Hillmann in the form of a letter of reliance or report recertification.

2.5 Significant Assumptions

The following significant assumptions are made:

- Hillmann has assumed that the site operations at the time of the site visit reflect typical site conditions relative to potential environmental conditions and that no concealment of environmental conditions or releases by site owners or occupants has occurred. Likewise, Hillmann has also assumed that no areas of the Property with potential environmental concerns or RECs were concealed or otherwise not made known to us, intentionally or unknowingly, by the Property owners/occupants and/or site escort at the time of the site visit.

- For the purpose of estimating the approximate direction of groundwater flow in the absence of site specific groundwater data, unless indicated otherwise, Hillmann has assumed that the gradient of groundwater flow follows the surface topography of the Property and immediate surrounding area.

2.6 General Limitations and Exceptions

2.6.1 Limitations

The report turnaround time specified by the contract agreement for this assessment may present a limitation to Hillmann's ability to access and review pertinent regulatory agency records. Such limitations, if encountered, are further specified in Section 4.4.

Significant limitations related to the condition or accessibility of the Property at the time of the site reconnaissance, if encountered, are reported in Section 5.1.

2.6.2 Other Exceptions or Deletions

No other exceptions or deletions from the ASTM Standard E 1527-13 are reported.

2.6.3 Special Terms and Conditions

Hillmann has prepared this Phase I Environmental Site Assessment using reasonable efforts in each phase of its work to identify recognized environmental conditions associated with hazardous substances, wastes, and petroleum products at the Property. Findings within this report are based on information collected from observations made on the day of the site reconnaissance and from reasonably ascertainable information obtained from governing public agencies and private sources.

This report is not definitive and should not be assumed to be a complete or specific definition of the conditions above or below grade. Information in this report is not intended to be used as a construction document and should not be used for demolition, renovation, site development, redevelopment, or other construction purposes. Hillmann makes no representation or warranty that the past or current operations at the Property are, or have been, in compliance with all applicable federal, state and local laws, regulations and codes.

Findings, conclusions, and recommendations presented in this report are based on our visual observations of the Property, interviews conducted, the records reviewed, information provided by the Client, and/or a review of readily available and supplied drawings and documents. Hillmann relies upon the information, whether written, graphic or verbal, provided by the Property contact(s) or as shown on any documents reviewed or received from the Property contact, owner or agent, or municipal source; and assumes that information to be true and correct. Although there may have been some degree of overlap in the information provided by these various sources, Hillmann did not attempt to independently verify the accuracy or completeness of all information reviewed or received during the course of this assessment. Hillmann can neither warrant nor guarantee the accuracy or completeness of information that was obtained from ostensibly knowledgeable individuals, regulatory agency representatives or other secondary sources.

Regardless of the findings stated in this report, Hillmann is not responsible for consequences or conditions arising from facts that were concealed, withheld or not fully disclosed at the time the assessment was conducted.

This report does not warrant against future operations or conditions, nor does it warrant against operations or conditions present of a type or at a location not investigated.

The regulatory database report provided is based on an evaluation of the data collected and compiled by a contracted data research company. The regulatory research is designed to meet the requirements of ASTM Standard E 1527-13. Hillmann can neither warrant nor guarantee the accuracy or completeness of the information obtained from the regulatory database report provider during the course of this assessment.

Subsurface conditions may differ from the conditions implied by the surface observations and can only be reliably evaluated through intrusive techniques.

Reasonable efforts have been made during this assessment to identify aboveground and underground storage tanks and ancillary equipment. “Reasonable efforts” are limited to information gained from visual observation of largely unobstructed areas, recorded database information held in public record and available information gathered from interviews. Such methods may not identify surficial and subsurface features that may have been hidden from view due to parked automobiles and other vehicles, snow cover, vegetative growth, pavement, construction or debris pile storage or incorrect information from sources.

Hillmann is not a professional title insurance firm and makes no guarantee, explicit or implied, that the records which were reviewed represent a comprehensive or precise delineation of past Property ownership or tenancy for legal purposes.

The ASTM E1527-13 standard states that recommendations are not required to be included in a Phase I ESA report; however, further that recommendations are an additional service that may be useful in the User’s analysis of landowner liability protections or business environmental risks; and that the User should consider whether recommendations for additional inquiries or other services are desired.

The recommended response actions to the identified RECs presented in Section 1.3, if any, are not intended to represent the only course(s) of action to take; nor does it imply any opinion as to the timing of the action. Furthermore, it is emphasized that additional response actions may become warranted depending on the outcome of the initial action(s) taken. Hillmann advises that consultation with legal counsel familiar with environmental and real estate law may be beneficial to the decision-making process for the type and timing of a response action to identified RECs if any.

Due to the limited nature of our review of potential Business Environmental Risks, the User of the report should consider whether to take additional action(s) to further define, properly manage and/or mitigate potential BERs.

In the event of any conflict between the terms and conditions of this report and the terms and conditions of the consulting services agreement for this project, the consulting services agreement shall control.

3.0 USER PROVIDED INFORMATION

The term "User" is defined by ASTM as the party seeking to use Practice E1527 to complete an environmental site assessment of the Property; specifically, the entities named on the front cover to which the report has been addressed.

3.1 Prior Environmental Reports/Documentation

Phase I Environmental Site Assessment, 20865 Canada Road, Lake Forest, California 92630 prepared by Hillmann Consulting and dated December 2, 2019.

The prior Phase I identified two RECs in connection with the Property. The first, was due to the owner reported UST on the Property, with lack of records of removal of UST. The second was due to historical usage of the Property as a citrus and avocado grove is considered to be a REC to the Property.

Hillmann recommends a limited Phase II subsurface investigation to determine the historic agricultural use and whether the owner reported gasoline underground storage tank has adversely impacted the Property.

3.2 User Questionnaire

Section 6 of the ASTM E1527-13 standard describes certain tasks required to be performed by the report User in order to qualify for landowner liability protections to CERCLA liability. To assist the report User to meet these requirements, and as recommended by the ASTM E1527-13 standard, a Questionnaire of inquiries (User Questionnaire) specified in 40 CFR 312.25, 312.28, 312.29, 312.30, and 312.31 has been provided to the original report User. The following is a summary of the User's response:

Question:	Yes/No:	Detail:
Environmental liens that are filed or recorded against the property: Did a search of recorded land title records identify any environmental liens filed or recorded against the property under federal, tribal, state or local law?	NR	
Activity and use limitations that are in place on the property or that have been filed or recorded against the property: Did a search of recorded land title records (or judicial records where appropriate, identify any AULs, such as engineering controls, land use restrictions or institutional controls that are in place at the property and/or have been filed or recorded against the property under federal, tribal, state or local law?	NR	
Specialized knowledge or experience of the person seeking to qualify for the LLP: Do you have any specialized knowledge or experience related to the property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?	NR	

Relationship of the purchase price to the fair market value of the property if it were not contaminated: Does the purchase price being paid for this property reasonably reflect the fair market value of the property? If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the property?	NR	
Commonly Known or Reasonably Ascertainable Information: Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example,		
-Do you know the past uses of the property?	NR	
-Do you know of specific chemicals that are present or were once present at the property?	NR	
-Do you know of spills or other chemical releases that have taken place at the property?	NR	
-Do you know of any environmental cleanups that have taken place at the property?	NR	
The degree of obviousness of the presence or likely presence of contamination at the property, and the ability to detect the contamination by appropriate investigation: Based on your knowledge and experience related to the property are there any obvious indicators that point to the presence or likely presence of releases at the property?	NR	
Litigation/Administrative Proceedings/Government Notices As the User of this ESA, do you have knowledge of (1) any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on, or from the property; (2) any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on or from the property; and (3) any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products.	NR	

NR-no response

3.3 Reason for Performing Phase I ESA

Hillmann assumes that the Phase I ESA was being performed in order to qualify for landowner liability protection to CERCLA liability.

4.0 RECORDS REVIEW

4.1 Physical Setting Sources

The following physical setting sources were reviewed:

Source	Discussion
USGS 7.5 minute Topographic Map Data: (EDR Geocheck-Physical Setting Source Addendum)	The Property lies at an elevation of approximately 631 feet above mean sea level on the El Toro, CA Quadrangle map. The topography indicated by the map appeared to be gently sloping downward towards the west. The closest down gradient water body is Serrano Creek located approximately 198 feet to the west.
USDA SCS Soil Data: (EDR Geocheck-Physical Setting Source Addendum)	The soil type at the Property is classified as "Riverwash". The "Riverwash" designation is described as soils with a sand surface texture with a Very slow infiltration rates. Soils are clayey, have a high-water table or are shallow to an impervious layer.
Geologic Data: (EDR Geocheck-Physical Setting Source Addendum)	The geologic formation in the vicinity of the Property is described as a stratified sequence of the Cenozoic Era, Tertiary System, and Miocene Series.
Additional Sources/ Data:	N/A
Groundwater Flow Discussion:	Based on a review of the above information as well as observation of the site, the direction of shallow groundwater flow at the site is inferred to be generally to north.

4.2 Historical Use – Property and Adjoining Properties

Hillmann has conducted research in order to help identify the likelihood of past uses having led to recognized environmental conditions in connection with the Property. Standard historical sources have been sought in an attempt to document the past uses of the Property as far back as it can be shown that the Property contained structures; or from the time the Property was first used for residential, agricultural, commercial, industrial or governmental purposes.

4.2.1 Fire Insurance Maps

Hillmann obtained a Certified Sanborn Map Report from EDR in order to research published historic fire insurance maps for the Property and surrounding area. A copy of the report is included in Appendix D. The following is a summary of site use information interpreted from a review of the report:

Year(s)	Description	
	Property	(No Coverage)
	Adjoining Properties	

4.2.2 City Directories

The following is a generalized summary of the findings of City Directory Research for past occupants of the Property, indicating occupants and the years indicated by the listings.

Property	
Occupant(s)	**Appr. Date Range**
Canada Ranch Stables / Hess Ronald Construction	2000-2010
Don Hess	1992-1995

Hillmann also reviewed the EDR City Directory Abstract report for listings of historic occupants of the adjoining properties. The following is a general summary of listings of historic adjoining property occupants:

Adjoining Properties		
Address(es)	**Historic Occupant(s)**	**Appr. Date Range**
20941 Canada Road	American Mini Storage	1995-2014
	Private individual	1992
20845 Canada Road	Commercial/industrial	2010-2014

4.2.3 Historical Topographic Map Review

Hillmann reviewed historic topographic maps of the Property from EDR. The following details related to site usage were indicated by the topographic maps:

Year(s)	Summary	
1902, 1935	**Property**	The Property is depicted as undeveloped land.
	Adjoining Properties	The adjoining properties are depicted as undeveloped land.
1942	**Property**	The Property is depicted as an orchard.
	Adjoining Properties	The adjoining properties are depicted as orchards. Serrano Creek is depicted to the northwest.
1949, 1950	**Property**	The Property is depicted as an orchard. Serrano Creek is depicted to the northwest.
	Adjoining Properties	The adjoining properties are depicted as orchards. Adjacent property to the northeast is depicted with three small structures. Canada Road is shown on the map.
1968	**Property**	The Property is depicted as undeveloped land with a small structure depicted to the southwest. Serrano Creek is depicted to the northwest.
	Adjoining Properties	Adjacent property to the northeast is depicted with three small structures. Canada Road is shown on the map.
1978, 1981, 1982	**Property**	The Property is depicted as an orchard with a small structure depicted to the southwest. Serrano Creek is depicted to the northwest.
	Adjoining Properties	Adjacent property to the northeast is depicted with three small structures. The adjoining properties to the northwest are depicted as commercial/light industrial structure.
1997	**Property**	The Property is depicted as an orchard. Serrano Creek is depicted to the northwest.
	Adjoining Properties	The adjoining properties to the northwest and southwest are depicted with existing commercial/light industrial structures.
2012	**Property**	No building development is depicted on the topographic map.
	Adjoining Properties	No building development is depicted on the topographic map.

4.2.4 Aerial Photograph Review

Hillmann reviewed historic aerial photographs of the Property from EDR. The following interpretation of land usage was made by review of the aerial photographs:

Year(s)	Summary	
1938, 1946, 1949	**Property**	The Property appears to be developed with small residential structure surrounded by orchard. Serrano Creek is depicted to the northwest.
	Adjoining Properties	The adjoining properties appear to be orchards. Small structures are depicted to the northeast.
1952, 1963, 1967, 1972, 1974, 1980	**Property**	The southwest corner of the Property appears to be developed with the existing residential home and barn; the remainder of the Property appears to be orchards.
	Adjoining Properties	The adjoining properties appear to be orchards. Small structures are depicted to the northeast and to the south.
1990, 1994,	**Property**	The Property appears to be developed with the existing structures including a residential home and a barn. Serrano creek is depicted to the northwest.
	Adjoining Properties	The adjoining properties to the north, east and southwest are depicted to be developed with existing commercial/light industrial structures. The south adjacent property is depicted to be undeveloped land.
2005, 2009, 2012 and 2016	**Property**	The Property appears to be developed with the existing structures including a residential home and a barn. Serrano creek is depicted to the northwest.
	Adjoining Properties	The adjoining properties to the north, east, west, and southwest are depicted to be developed with existing commercial/light industrial structures.

4.2.5 EDR High-Risk Historical Records

The EDR Radius Map™ report, which will be discussed in greater detail in Section 4.3, provided a search of proprietary databases of potential historical high-risk uses at or in the vicinity of the Property. These databases include EDR Historic Cleaners – a database of property addresses with records of historical occupancy by suspected cleaners businesses; EDR Historic Auto – a database of property addresses with records of historical occupancy by potential automotive gas/filling stations and repair facilities; and EDR MGP- a database of sites historically occupied by manufactured gas plants and related facilities.

EDR Historic Cleaners	No on-site or adjoining listings identified.
EDR Historic Auto	No on-site or adjoining listings identified.
EDR MGP	No listings identified within 1-mile search distance.

4.2.6 Petroleum/Natural Gas Well Review

Hillmann reviewed historical record sources for evidence of historic petroleum and/or natural gas wells at the Property. In addition, Hillmann conducted a search of the property location on the Division of Oil, Gas & Geothermal Resources Well Finder database (http://maps.conservation.ca.gov/doggr/index.html). No record of any historical petroleum/natural gas wells at the Property was identified.

4.2.7 Additional Historical Data

No additional historical data was reviewed and/or obtained.

4.2.8 Summary of Identified Historic Uses

The following table presents a summary of the types and approximate timeframes of identified prior uses of the Property:

Property	
Years (Approx.)	**Use**
1938 to 1980	Orchards, Serrano Creek
1990 to Present	Residential, Barn, Serrano Creek

The following table presents a summary of the types of identified prior uses of the adjoining properties:

Adjoining Properties	
Years (Approx.)	**Use**
1938 to 1980	Orchards
1990	Undeveloped land (south adjacent property)
1990 to Present	Undeveloped land

4.2.9 Historical Records Data Failure

The ASTM E1527-13 standard defines data failure as a failure to achieve the ASTM specified historical research objectives after reviewing the standard historical sources that are reasonably ascertainable and likely to be useful. The objective is to identify all obvious uses of the property from the present, back to the property's first developed use, or back to 1940, whichever is earlier. Furthermore, records of historic use/conditions should be sought in intervals no less than approximately five years, unless the property conditions appear unchanged over a longer interval.

Objective	Met?	Detail	Significant Data Gap?
First developed use/date determined?	Yes	The Property was developed as Orchard and a Bran in 1800s. A residential home circa 1938.	No
Record sources at 5-year intervals back to 1940 or first developed use?	No	Records gaps between 1952 and 1963, 1980 and 1989, and 1994 and 2005; however, site conditions likely unchanged during these intervals.	No
All obvious prior uses identified?	Yes	See Section 4.2.8.	No

Please refer to Section 2.3 for additional discussion of data gaps and their significance to the findings of the assessment.

4.2.10 Historic Uses REC Discussion

A portion of the Property appears to have been utilized as orchards since circa 1930. This use suggests the historical application of pesticides during this time, which could have accumulated in the shallow soils at that time. There is the potential for soil contamination due to current and historic pesticide applications, this is considered to be a REC in connection with the Property.

The owner of the Property reported a 500-gallon underground gasoline tank with a pump that was used as part of the agricultural purposes is considered to be REC to the Property. According to the Property owner, a leak was detected in 1984 and the pump was removed from the Property under the guidance of the local environmental jurisdiction. Hillmann reviewed records for the agencies and there are no records obtained in regards to the underground storage tank. There have been no records of the UST as having been removed and it is considered to be a REC in connection with the Property. Hillmann recommends a limited Phase II investigation to determine whether the UST is still present and whether the historical operation of the UST have negatively impacted the Property.

4.3 Standard Environmental Record Sources

Hillmann obtained a regulatory database report, titled EDR Radius Map™ Report, from Environmental Data Resources of Shelton, CT. The report provided a search of standard environmental record sources in general accordance with the requirements of the ASTM E1527-13. Hillmann has reviewed the regulatory database report, and a summary of findings has been presented in the following tables and report sections. Hillmann has also reviewed the list of unmapped sites (a.k.a. "Orphan List" sites). Unmapped sites identified as falling within an applicable specific search distance or warranting discussion in the report, if any, have been included in the information presented below. Detailed descriptions of the meaning and significance of the regulatory databases can be found in the regulatory database report in Appendix E.

Regulatory Database	Search Distance	Property Listed?	Adj. Properties Listed?	Total Listings Within Search Distance
Fed. NPL/Proposed NPL	1-mile	No	No	0
Fed. Delisted NPL	½-mile	No	No	0
Fed. SEMS	½-mile	No	No	0
Fed. SEMS-ARCHIVE	½-mile	No	No	0
Fed. RCRA CORRACTS	1-mile	No	No	0
Fed. RCRA TSD	½-mile	No	No	0
Fed. RCRA LQG	Site & Adj.	No	No	
Fed. RCRA SQG	Site & Adj.	No	No	
Fed. RCRA CESQG	Site & Adj.	No	No	
Fed. ENG Control List	Site	No		
Fed. INST Control List	Site	No		
Fed. ERNS	Site	No		
State/Tribal Hazardous Waste Site	1-mile	No	No	0
State/Tribal Landfill/Solid Waste	½-mile	No	No	0
State/Tribal Leaking Storage Tanks	½-mile	No	No	2
State/Tribal Registered Storage Tanks	Site & Adj.	No	No	
State/Tribal Eng. Control List	Site	No		

State/Tribal Inst. Control List	Site	No		
State/Tribal Voluntary Cleanup Sites	½-mile	No	No	0
State/Tribal Brownfields	½-mile	No	No	0
Supplemental Regulatory Databases	Site & Adj.	No	No	

4.3.1 Property Listings

The Property address was identified in the following databases.

PEST LIC, FINDS, ECHO, RCRA Non-Gen/ NLR, HWTS, – Richard Cohen Landscape and Construction Inc at 20795 Canada Road. The Property is listed under PEST LIC with facility type as MGB and QAC. This site is listed as a Non-generator of hazardous waste. There were no reported violations. Based on the absence of reported violations or releases and the relative hydraulic gradient this listing is not considered a REC in connection with the Property.

4.3.2 Adjoining Property Listings

RCRA NonGen NLR/ – Global Power Technologies Group at 20692 Canada Road. This site is adjoining to the north-northwest and approximately 85 feet up/crossgradient of the Property. This site is listed as a Non-generator of hazardous waste. There were no reported violations. Based on the absence of reported violations or releases and the relative hydraulic gradient this listing is not considered a REC in connection with the Property.

RCRA NonGen NLR/ – Camila Corp at 20845 Canada Road. This site is adjoining to the south-southeast and approximately 103 feet downgradient of the Property. This site is listed as a Non-generator of hazardous waste. There were no reported violations. Based on the absence of reported violations or releases and the relative hydraulic gradient this listing is not considered a REC in connection with the Property.

UST, SWEEPS UST, RCRA NonGEN/ NLR, HAZNET, CERS, CERS HAZWASTE – XPO Logistics Freight INC. UIV at 20697 Prism Place. The site is adjoining to the northwest and is approximately 277 feet cross- gradient of the Property. This site is registered on the UST database with Facility ID # FA0024234. The SWEEPS UST listing indicates a 10,000-gallon motor vehicle fuel - diesel underground storage tank was installed in 1988. RCRA NonGen/NLR listing indicates the site is non generator of hazardous waste. CERS HAZWASTE describes the site as a hazardous waste generator. The listings indicate several violations issued since 2012 to 2017 and were returned to compliance immediately. Several compliance evaluation inspection results are listed for the site. Based on the absence of reported violations or releases and the upgradient position relative to the Property, this site is not considered a REC in connection with the Property.

4.3.3 ASTM Search Distance Findings

The following is a summary of the findings of the regulatory database review with regard to sites identified as located within the ASTM specified search distance surrounding the Property. In order to keep this report informative and yet concise, Hillmann has provided a brief discussion of the listed site(s) for each database category that appears most likely to impact the Property based

on distance, topography and/or case status. A copy of the full regulatory database report, including available details of all listed sites, is included in Appendix E.

Note that listings for the following databases, if identified, would be discussed above in Sections 4.3.1 and 4.3.2: Registered Storage Tanks, Federal RCRA Generators, Federal and State INST and ENG Controls, ERNS.)

Federal NPL: No NPL listing was identified within a one-mile radius of the Property.

Federal Delisted NPL: No DNPL listings were identified within a ½-mile radius of the Property.

Federal SEMS (formerly CERCLIS): No SEMS listing was identified within a ½-mile radius of the Property.

Federal SEMS-ARCHIVE (former CERC-NFRAP): No SEMS-ARCHIVE listings were identified within a ½-mile radius of the Property.

Federal RCRA-CORRACTS: No CORRACTS listing was identified within a one-mile radius of the Property.

Federal RCRA-TSD: No TSD listings were identified within a ½-mile radius of the Property.

State/Tribal Hazardous Waste Sites: No SHWS listings were identified within a one-mile radius of the Property on the EnviroStor database.

No SHWS listings were identified within a one-mile radius of the Property on the RESPONSE database.

State/Tribal Landfill/Solid Waste Disposal Sites: No SWF/LF listings were identified within a ½-mile radius of the Property.

State/Tribal Leaking Storage Tanks: Five (5) LUST listings were identified within a ½-mile radius of the Property. The closest listing is described as Chevron at 20731 Lake Forest located 1968 feet east of the Property. The site is listed with completed case -closed status dated 04/20/1998. Based on the distance, hydraulic gradient and case closed status the listed sites are not considered to be concern to the Property.

Based on the regulatory closure received and the relative distance from the Property, other LUST listing is not considered a REC in connection with the Property.

No SLIC listings were identified within a ½-mile radius of the Property.

State/Tribal Voluntary Cleanup Sites: No VCP listings were identified within a ½-mile radius of the Property.

State/Tribal Brownfields: No BROWNFIELDS listings were identified within a ½-mile radius of the Property.

Review of the sites identified within the ASTM search parameters did not identify any nearby or surrounding area sites that are considered to be a REC in connection with the Property, unless as discussed otherwise previously in this section.

4.3.4 Tier I Vapor Encroachment Screening

Hillmann reviewed adjoining and vicinity database sites to identify potential off-site sources of sub-surface vapor encroachment. This review was based upon the current ASTM "Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions" (ASTM E 2600-15); and also utilizing the "Methodology for Identifying the Area of Concern Around a Property Potentially Impacted by Vapor Migration from Nearby Contaminated Sources" (Buonicore, 2011-S-103-AWMA). Vicinity database sites pertaining to non-petroleum product releases within 1,760 feet of the Property in the up-gradient direction, 365 feet of the Property in the cross gradient direction and 100 feet of the Property in the down gradient direction; and vicinity database sites pertaining to petroleum product releases within 528 feet of the Property in the up-gradient direction, 165 feet of the Property in the cross gradient direction and 100 feet of the Property in the down gradient direction were reviewed to identify active contamination sites with the potential to affect subsurface vapor conditions at the subject property. The potential for vapor encroachment was considered in assessing whether or not a REC exists in connection with the Property when reviewing applicable sites within those distances.

The 500- gallon gasoline underground storage tank is considered to be potential vapor instruction and therefore, considered to be REC to the Property.

4.4 Additional Environmental Record Sources

4.4.1 Supplemental Database Listings

Hillmann reviewed the regulatory database report for listings on supplemental databases that were searched in addition to the Standard Environmental Record Sources. Any property or adjoining property listings on such databases, if identified, would be discussed in Section 4.3.1 and 4.3.2. None of the other supplemental database listings identified by the regulatory database report are considered to be a REC in connection with the Property.

4.4.2 Local Agency & Internet Research

Hillmann has submitted requests to local and municipal agencies for pertinent records pertaining to the Property, particularly with regard to potential environmental concerns such as petroleum storage tanks, storage, and usage of hazardous substances and petroleum products, and/or known or suspected environmental contamination. Hillmann also conducted online research of government environmental regulatory databases where available, as well as a general cursory internet search of the Property address, for information indicative of a REC. The following table summarizes the findings of the research:

Source	Type of Request	Outcome
Environmental Protection Agency (EPA)	FOIA Request	The Property address was searched. No results for the Property were found.
Irvine Ranch Water District	FOIA Request	The Property address was searched. No results for the Property were found.
Department of Toxic Substances Control (DTSC)	FOIA Request	The Property address was searched. No results for the Property were found.
Regional Water Quality Control Board (RWQCB) – Santa Ana Region (8)	FOIA Request	The Property address was searched. No results for the Property were found.
South Coast Air Quality Management District (SCAQMD)	FOIA Request	The Property address was searched. No results for the Property were found.
Orange County Geographical Information System (GIS)	On-line search	No information indicative of a REC was identified.
CA DTSC EnviroStor database http://www.envirostor.dtsc.ca.gov/public/	Internet	The Property address was searched. No results for the Property were found.
CA GeoTracker database http://geotracker.waterboards.ca.gov/	Internet	The Property address was searched. No results for the Property were found.
USEPA Envirofacts search http://www.epa.gov/enviro/index.html	Internet	The Property address was searched. No results for the Property were found.
www.google.com	On-line search	The Property address search returns no results
www.realquest.com	On-line search	Basic Property information such as parcel number, date of construction, and building square footages were collected. Pertinent information, where obtained, is referenced in the appropriate sections of this report.
Other:	NA	

5.0 SITE RECONNAISSANCE

5.1 Methodology and Limiting Conditions

The site reconnaissance consisted of visual and/or physical observations of the Property and improvements, adjoining properties as viewed from the Property boundaries and the surrounding area based on visual observations from adjoining public thoroughfares. Building exteriors were observed at ground level unless otherwise indicated. Where applicable, Hillmann accessed and observed representative areas of building interiors to the extent they were made safely accessible with the cooperation of the site escort.

Site Inspection Personnel:	Ms. Shilpa Sunil
Property Escort/Company:	Mr. Steve Guzowski/ Great Scott Tree Service, Inc.
Inspection Date:	August 27, 2020
Weather Conditions:	Clear Sunny, 85 degrees F

5.1.1 Significant Inaccessible Areas

Hillmann was not able to access the western portion of the Property due to thick and overgrown vegetation.

5.2 General Site Setting

5.2.1 Site and Vicinity Characteristics

The Property consists of irregular shaped is approximately 6.71-acres in size. Property consists of three parcels. Serrano Creek borders the Property to the north side of the Property. There are hiking trails observed along the border of the creek. The southern parcel is developed with two single-family residential houses and a barn.

The vicinity of the Property is improved primarily by commercial/light industrial properties.

5.2.2 Topographic Characteristics

The terrain of the Property appeared to be relatively flat that slopes to the north. Serrano Creek borders northern portion of the Property.

5.2.3 General Description of Structures

The southern parcel is developed with a single story single-family residential house that has 4 bedrooms, 2 bathrooms and approximately 2,400 square feet of floor space; and a barn. A single-story wooden barn and a single-family residential house that is converted to office use are located at the northeast of the Property.

5.2.4 Sources of Heating and Cooling

Heating and cooling are provided by natural gas and electric powered systems.

5.2.5 Potable Water Source/Sewage Disposal System

Potable water and sewer services are provided via the public utility.

5.2.6 Current Use(s) of the Property

The current owner of the property currently resides at the residential home. The northwest portion of the site is used for storage of farm animals and horses. The northeastern portion of the Property is currently been occupied by the tenant- Richard Cohen Landscape and Construction, Inc.

5.2.7 Past Use(s) of the Property

No obvious indication of past Property usage likely to have involved the use, treatment, storage, disposal or generation of hazardous substances or petroleum products was observed at the time of the site visit. Please refer to Section 4.2 for findings of historical site use research.

5.2.8 Current Use(s) of the Adjoining Properties

The following table describes the current uses of the adjoining properties:

Dir	Street Address	Description
NW	20697 Prism Pl, Lake Forest	XPO Logistics
NE	20692 Prism Place	Global Power Technologies Group
S	20845 Canada Road	Camilo Corporation
SW	20941 Canada Road	American mini Storage

No visual observations indicative of a potential environmental concern was noted on the adjoining properties.

5.2.9 Past Use(s) of the Adjoining Properties

No indication of past uses of the adjoining properties was noted at the time of the site visit. Please refer to Section 4.2 for the findings of historical site use research.

5.2.10 Current/Past Uses of Surrounding Area

The vicinity of the Property consists primarily of commercial and light industrial properties. No indications of past Property use that differ substantially from current conditions were observed at the time of the site visit.

5.3 Interior & Exterior Observations

5.3.1 Storage/Usage of Hazardous Substances and Petroleum Products

The following hazardous substances and petroleum products were observed to be stored and used by property occupants:

Occupant	Substance	Qty/Container Type	Storage Conditions
20795 Canada Rd	Misc. Lubricants	Approximately 15 containers of various sizes	Stored on shelves inside the garage. No signs of staining or leaking
(Robert Cohen Landscape)		Various	Large amounts of pesticides are stored in a storage building and a shed in the pesticide storage area by the maintenance area.

5.3.2 Drums

No drums were identified on the Property.

5.3.3 Unidentified Substance Containers

No unidentified containers suspected of containing hazardous substances or petroleum products were noted on the Property.

5.3.4 Other Hazardous Substances/Petroleum Products

No other containers of hazardous substances or petroleum products were noted on the Property at the time of the site visit.

5.3.5 Bulk Petroleum/Hazardous Material Storage Tanks

The following storage tanks for bulk petroleum or hazardous material storage were identified or reported to be present; or are suspected to be present based on visual observations:

AST/ UST	Product	Capacity	Construction	Year Installed	Status	Location/Notes
UST	None	500-gal	Steel	Unknown	Inactive	Owner of Property reported the former UST was located at the front of the residential building 20865 Canada Road.
AST	Motor oil	110-gal	Steel	Unknown	Inactive	Stored on secondary containment inside the barn. There were no spills or leaks observed by the above ground storage tank.

5.3.6 PCBs in Electrical/Hydraulic Equipment

There were no transformers noted on the Property. No signs of leaking or staining were observed in the area of the transformers.

No other electrical or hydraulic equipment suspected of containing PCBs was identified at the

Property.

5.3.7 Odors

No strong, unusual or pungent odors were noted on the Property.

5.3.8 Pools of Liquid

No standing water or pools of liquid likely to contain hazardous substances or petroleum products were noted at the Property.

5.3.9 Interior Stains or Corrosion

Hillmann observed de-minimis oil staining in the barn building.

5.3.10 Interior Drains/Sumps

No floor drains or sump pits were noted at the Property other than for storm water or sewage management.

5.3.11 Exterior Pits/Ponds/Lagoons

No evidence of exterior pits, ponds or lagoons was identified on the Property in connection with waste treatment or disposal.

5.3.12 Stained Soil, Pavement/Stressed Vegetation

No stained soil, pavement or stressed vegetation was observed at the Property.

5.3.13 On-Site Solid Waste Disposal/Fill Material

No evidence of any on-site solid waste dumping was noted at the Property.

No evidence of recently deposited fill materials was observed at the Property.

5.3.14 Wastewater

Sanitary sewage and storm water runoff generated on-site are discharged into municipal sewer systems. No other waste discharges were noted at the Property.

5.3.15 Septic Systems

Mr. Steve Guzowski mentioned that the residential property had a septic system in place. Due to the overgrown vegetation, septic system was not visible. There were new sewer lines in place laid out by the city observed in the vicinity of the Property. Hillmann recommends to remove the septic system and it be capped under current regulations.

Additionally, Hillmann observed a septic system cleanout that exists at the north side of the Property (20795 Canada Rod); however, the capacity of the septic tank is unknown. The only pertinent information Hillmann was able to obtain was that the septic tank is serviced by vacuuming out the contents periodically, approximately twice a month.

5.3.16 Wells

No indication of a well was noted on the Property.

5.3.17 Railroad Spurs

No railroad spurs were noted on the Property at the time of the assessment.

6.0 INTERVIEWS

6.1 Interviews with Past and Present Owners and Occupants

Subject	Name/Affiliation	Summary
Property Owner / Representative	Mr. Steve Guzowski/Great Scott tree Service Inc.	Mr. Steve Guzowski, of Great Scott Tree Service Inc., was provided with an environmental questionnaire with instructions to have it completed by a party knowledgeable of the Property. As of the date of this report, the environmental questionnaire has not been returned.
Property Occupants	Not applicable	Property occupants were not available for interview at the time of the assessment.
Past Owners, Occupants, Operators	Not applicable	Past owners/occupants of the Property were not available for interview at the time of the assessment.
Owners/Occupants of Adjoining or Nearby Properties	Not applicable	The Property was not an abandoned property with evidence of unauthorized uses or uncontrolled access; therefore, interviews with adjoining or nearby property owners or occupants were not conducted.

6.2 Interviews with State and/or Local Government Officials

Written and on-line requests for environmental records of the Property from State and Local governmental agencies are detailed in Section 4.4.2.

7.0 BUSINESS ENVIRONMENTAL RISKS

In accordance with the contract agreement for this assessment, Hillmann has performed cursory reviews of several potential Business Environmental Risks (also known as "Non-Scope Considerations"). The ASTM E1527-13 standard defines the term business environmental risk (BER) as, *"a risk which can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of a parcel of commercial real estate, not necessarily limited to those environmental issues required to be investigated in this practice."*

7.1 Asbestos-Containing Material (ACM)

The contracted scope of work included a cursory visual screening of the accessed portions of buildings at the Property built prior to 1990 for suspect asbestos containing materials (ACM). The information provided in this section, where applicable, is limited to identification of potential suspect materials and their general condition. This is not intended to be a comprehensive survey for the presence of ACM, and no testing has been conducted.

Suspected ACM noted during a cursory visual screening of 20865 Canada Road included sheetrock wall systems, ceiling acoustical spray on material, suspended ceiling tiles, carpet mastics, and floor tile with associated mastics. Although not observed, the roofing materials may contain asbestos. Additional types of suspect ACM may exist in enclosed areas or areas not accessed during the assessment. It is emphasized that this limited screening does not constitute a comprehensive asbestos survey of the premises and is meant only to provide a cursory evaluation regarding the potential presence of ACM at the Property.

7.2 Lead-Based Paint

The contracted scope of work included a cursory visual screening of the condition of painted surfaces in the accessed areas of residential buildings/units built prior to 1980. This is not intended to constitute a comprehensive survey for LBP or potential lead hazards, and no testing has been conducted.

In general, interior painted surfaces within the space were observed to be in fair condition.

7.3 Radon

Hillmann reviewed data compiled by the USEPA, as summarized by the regulatory database report, which indicated that the Property is located in an area with a low potential for radon concentrations that exceed current USEPA action guidelines. Orange County is classified as a Zone 3 or 'low risk' area for radon.

7.4 Mold/Microbial Damage

As per the contracted scope of work, Hillmann conducted a cursory visual screening of the accessed areas of the building for evidence of significant damage to building materials and finishes as result of moisture intrusion and/or mold/microbial growth. Hillmann did not observe any other evidence of significant problems with moisture intrusion or mold/microbial growth at the Property.

Hillmann did not observe any evidence of significant problems with moisture intrusion or mold/microbial growth at the Property.

8.0 REFERENCES

ASTM E1527-13-Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process; ASTM International, 2013

ASTM E12600-15-Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transaction, ASTM International, 2015

EDR Radius Map Report with GeoCheck™, Environmental Data Resources, 2019

EDR City Directory Abstract Report, Environmental Data Resources, 2019

EDR Sanborn Map Report, Environmental Data Resources, 2019

www.historicaerials.com

Methodology for Identifying the Area of Concern Around a Property Potentially Impacted by Vapor Migration from Nearby Contaminated Sources; A. Buonicore, 2011

Orange County's On-line Geographical Information System

Phase I Environmental Site Assessment, 20865 Canada Road, Lake Forest, California 92630 prepared by Hillmann Consulting and dated December 2, 2019.

9.0 APPENDICES

Appendix A	Site Diagram / Vicinity Map
Appendix B	Site Photographs
Appendix C	Questionnaires / User Provided Information
Appendix D	Historical Records Documentation
Appendix E	Regulatory Records Documentation
Appendix F	Other Documents
Appendix G	Project Personnel Qualifications

APPENDIX A

SITE DIAGRAM / VICINITY MAP

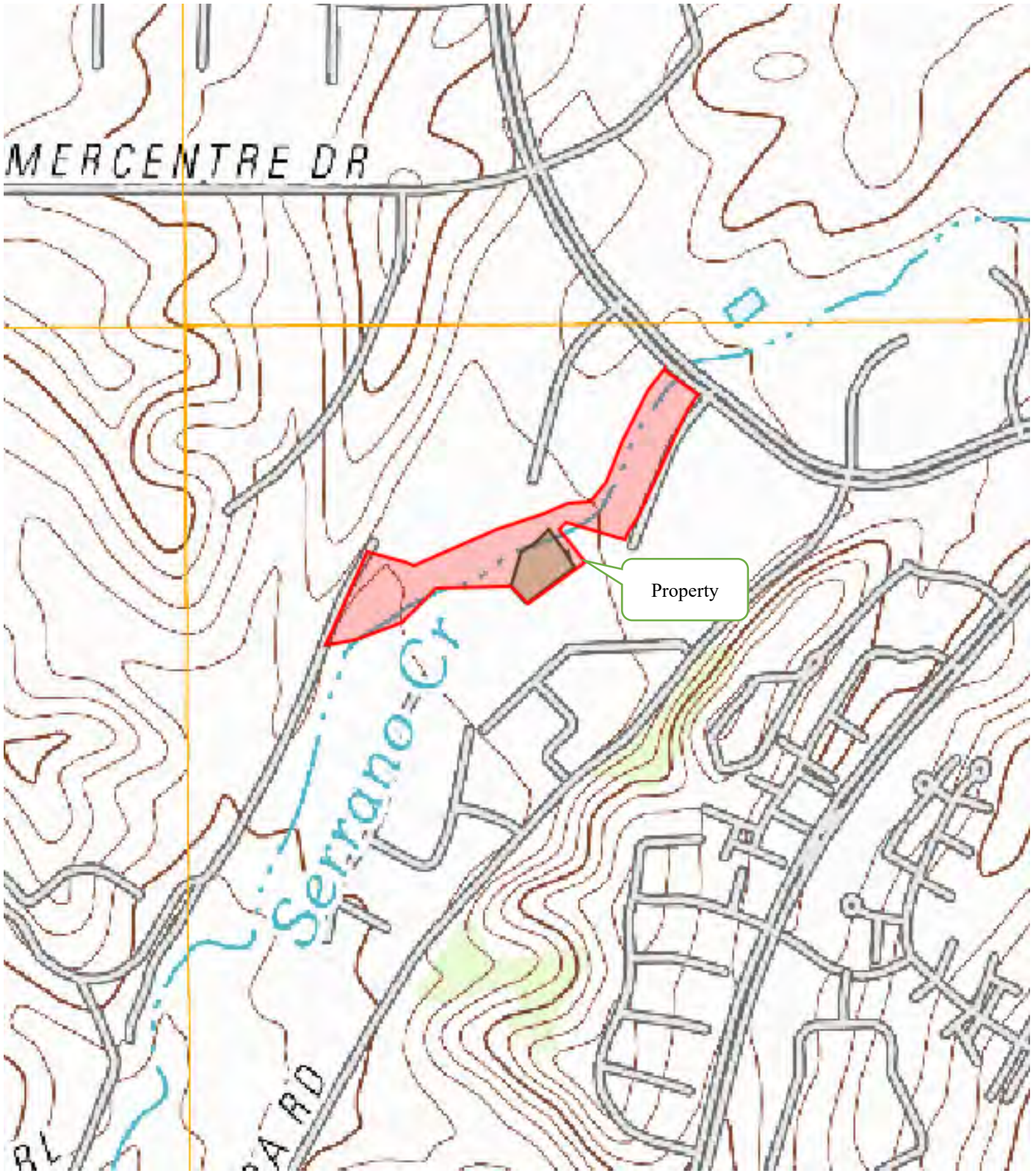


Figure 1: SITE VICINITY MAP	SCALE: (Not to Scale)	N

HILLMANN CONSULTING

Project Location:	20865 -20795 Canada Road Lake Forest, CA 92630
Project No.:	C3-8091

Figure 2: SITE DIAGRAM	SCALE: (Not to Scale)	N ↑

HILLMANN CONSULTING

Project Location:	20865 -20795 Canada Road Lake Forest, CA 92630
Project No.:	C3-8091

APPENDIX B

SITE PHOTOGRAPHS

PHOTO LOG
20865-20795 Canada Road
Lake Forest, CA 92360
C3-8091

View of the Property, facing northeast

View of the barn on the Property, facing east

View of the Property, facing northeast

View of the horse corral

View of rear side of the Property to the west

View of the nursery garden area

PHOTO LOG
20865-20795 Canada Road
Lake Forest, CA 92360
C3-8091

View of horse stalls

View of pool equipment

Rear side of the residential home

View of amenities at rear of the residential home

View of the garage on west side of the residential home

View of anticipated septic system location

PHOTO LOG
20865-20795 Canada Road
Lake Forest, CA 92360
C3-8091

Additional view of the barn facing south

Interior view of the barn

View of de minimis staining observed inside the barn

View of degreasers stored on west side of the barn

View of the tool storage area

View of the AST with motor oil on a secondary containment

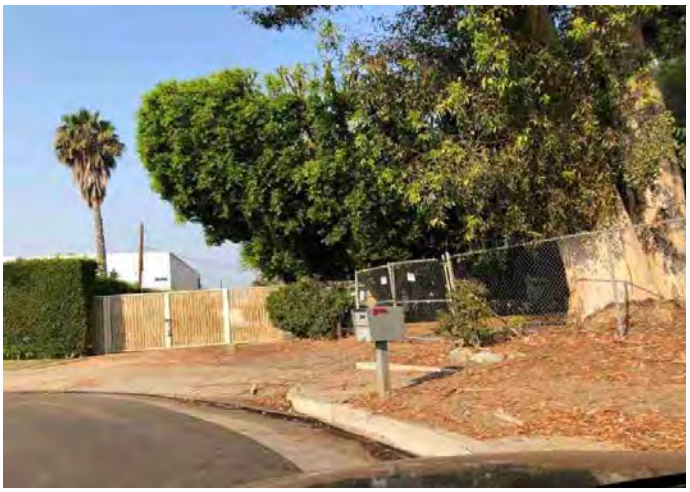
PHOTO LOG
20865-20795 Canada Road
Lake Forest, CA 92360
C3-8091

View of northwest corner of the barn

View of RV stored on rear side of the barn

View of a storage shed located at rear side of the Property

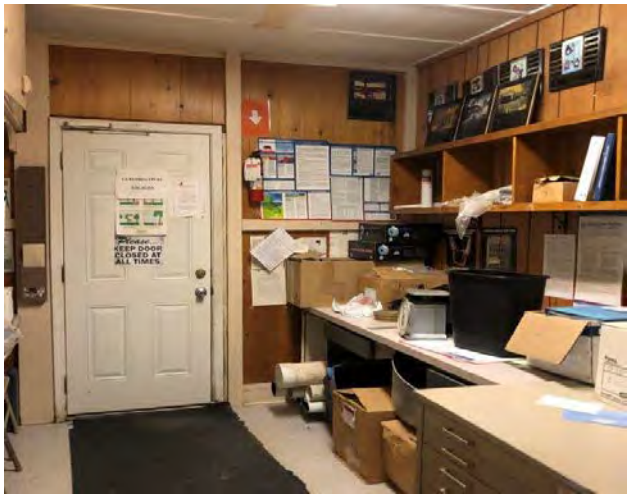
View of a farm animal pen


View of ingress/egress area from Linear Lane to the Property-20795 Canada Road

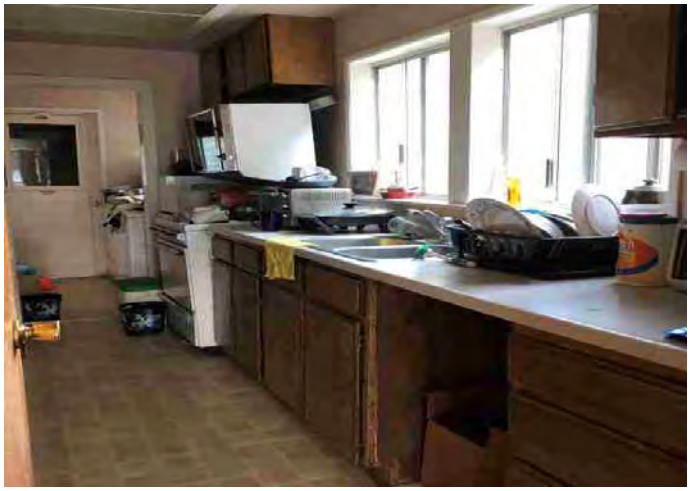
View of northeastern potion of Property occupied by Richard Cohen Landscape (20795 Canada Rd)

PHOTO LOG
20865-20795 Canada Road
Lake Forest, CA 92360
C3-8091

Additional view of the northeastern potion of the Property



Interior view of the office (20795 Canada Road)



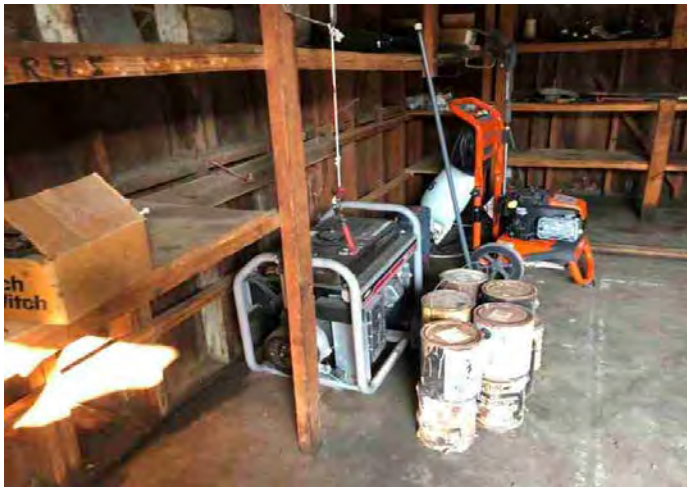
View of kitchen (20795 Canada Road)

View of the inside of a storage container

Interior view of garage area

View of pail of oil and lubricant storage area inside the garage

PHOTO LOG
20865-20795 Canada Road
Lake Forest, CA 92360
C3-8091



View of paint storage area

Rear side storage shed

View of tools storage shed

View of covered storage yard

View of grout and other construction material storage area

View of 5-gallon pails of grout storage area

PHOTO LOG
20865-20795 Canada Road
Lake Forest, CA 92360
C3-8091

View of septic system cleanout

Additional view of storage sheds to the northeastern portion occupied by Richard Cohen Landscape

View of water tank locate on east side of the residential home

View of undeveloped portion of the Property to the east

View of mulch storage are to the northwest of the Property

View of the creek

PHOTO LOG
20865-20795 Canada Road
Lake Forest, CA 92360
C3-8091

View of propane tank storage area by the barn

According to Mr. Steve Guzowski this is the location of the abandoned UST

View of south adjacent property

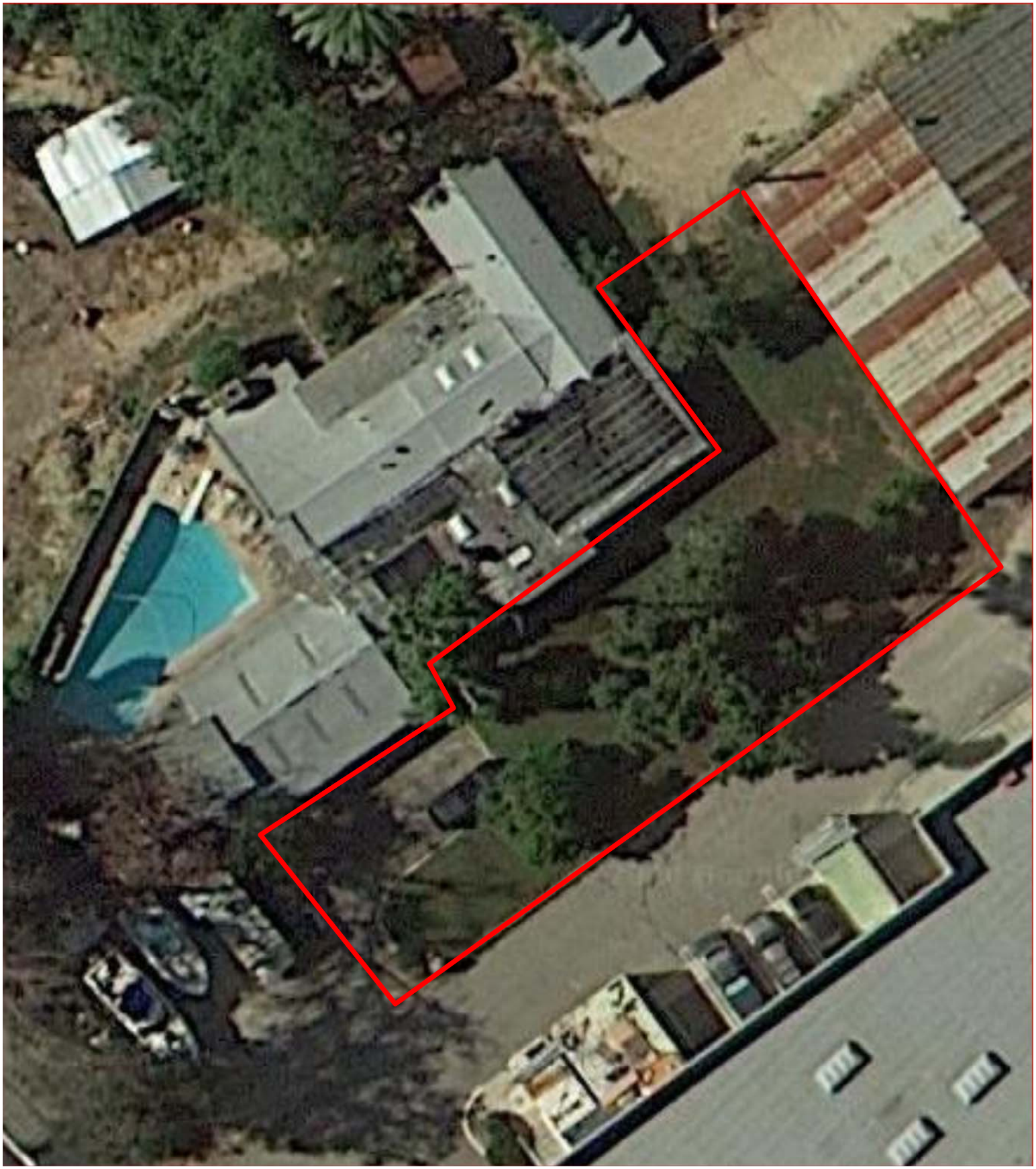
View of north adjacent property

View of south east adjacent property across Linear Lane

View of southeast adjacent property

APPENDIX C

QUESTIONNAIRES/USER PROVIDED INFORMATION



C BELOW
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www.cbelow.com

TECHNICIAN DAILY WORK FORM

14280 EUCLID AVE. CHINO, CA 91710
Office: (888) 90-BELOW
Fax: (909) 606-6555

Lead Technician Name	Date	C Below Project No.
Daniel Montes	08-31-2020	20-2742

Additional Tech(s)

Project Name	Project Address
Canada Rd. GPR Investigation	20865 Canada Road Lake Forrest, Ca 92630
Client	Contact
Great Scott Tree Service Inc.	Steve Guzowski

Service Type

- [x] Ground Penetrating Radar
- [ ] CCTV
- [ ] Potholing
- [ ] Utility Locating
- [ ] Utility Locating/GPR
- [ ] Other_____

Work Summary - Area Dimensions, Surface Conditions, Subsurface Indications Found, Marking Method, Unlocatable Facilities, Etc.

Attempted to locate possible underground storage tank withing work area provided by client on site

Utilities: Underground Storage Tank, Unknown

Performed GPR scan to locate unknown positive indications and non conductive utilities throughout designated work area

Provided direction of utilities and possible edges off structures

Marking Methods: (APWA) Uniform Color Code, (CGA) Best Practices

Equipment Used: GPR LMX100, Dowsing Rods

Unable to locate a possible abandoned underground storage tank within the work scope but I did find indications for possibly the residents septic tank measuring 10x12 and possible pump for former underground storage tank near the drive way measuring 2x2

Went over findings and any issues or concerns with onsite contact before departing job

CAUTION

WHEN EXCAVATING WITHIN THE TOLERANCE ZONE (24 INCHES ON EACH SIDE), PERFORM EXCAVATION WITH HAND TOOLS UNTIL THE MARKED FACILITY IS EXPOSED.
FOR CONCRETE AND MASONRY STRUCTURES, DO NOT CUT, CORE OR DRILL WITHIN 3 INCHES OF ANY MARKED INDICATION.

Investigation results provided by C Below, Inc. (CBI), are given in good faith and to the best of our knowledge. However, in the unlikely event that such information proves to be inaccurate, the extent of liability assumed by CBI if any, is limited to the amount billed for labor and materials on the day that the information was provided and alleged to have been inaccurate. The services being provided by CBI do not relieve the Client and/or property owner of the responsibility of having to comply with California Government Code §§4216-4216.9. It is expressly understood by the Client and/or owner that CBI's services are not a substitute for compliance with the California Code §§4216-4216.9. This daily is based on observations made during a walk-through investigation of the property and is not intended to create any sort of warranty and/or certification that the work performed by the contractor and/or subcontractors was completed in compliance with the governing building codes, architectural plans and specifications or contract documents.
Please Note: Certain low-density material such as PVC and plastic conduit may not be located accurately, if at all, using any investigation method. Always use caution when excavating.

TIME IN	TIME OUT	REG. HOURS	O.T. HOURS	TRAVEL TIME
9:30am	11:30am	4		2

Lead Technician Signature

Approved By: _____
Project Contact

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TECHNICIAN DAILY WORK PHOTOS

14280 EUCLID AVE, CHINO, CA 91710
Office: (888) 90-BELOW
Fax: (909) 606-6555

Date	C Below Project No.
08-31-2020	20-2742

PHOTO 1

PHOTO 2

PHOTO 3

PHOTO 4

HILLMANN
CONSULTING

PHASE I ENVIRONMENTAL SITE ASSESSMENT

20865 Canada Road
Lake Forest, California 92630

Prepared For:

Great Scott Tree Service, Inc.
10761 Court Avenue
Stanton California, 90680

Hillmann Project Number C3-7524

December 2, 2019

Your Property. Our Priority.
1745 W. Orangewood Avenue, Suite 110, Orange, CA 92868
Telephone (714) 634-9500 Fax: (714) 634-9507 Toll free: (800) 232-4326
www.HillmannConsulting.com

HILLMANN
CONSULTING

December 2, 2019

Mr. Steve Guzowski
Great Scott Tree Service, Inc.
10761 Court Avenue
Stanton California, 90680

RE: Phase I Environmental Site Assessment
20865 Canada Road
Lake Forest, California 92630
Hillmann Project No: C3-7524

Dear Mr. Guzowski:

Hillmann Consulting, LLC, is pleased to provide the results of our Phase I Environmental Site Assessment of the above referenced property. This assessment was performed in general accordance with the scope and limitations of ASTM Practice E 1527-13, which is the latest version of the E1527 standard published by the ASTM.

We appreciate the opportunity to provide environmental due diligence services. If you have any questions concerning this report, or if we can assist you in any other matter, please contact our office at 714-634-9500.

Sincerely,

Hillmann Consulting, LLC

Shilpa Sunil
Environmental Project Manager

Ryan Terwilliger
West Coast Operations Manager

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List of Abbreviations/Acronyms

Hillmann may use the following abbreviations and acronyms for common terminology described in our report. Not all abbreviations or acronyms may be applicable to this report:

ACM	– Asbestos Containing Material
AOC	– Area of Concern
AST	– Aboveground Storage Tank
ASTM	– American Society for Testing Materials
BER	– Business Environmental Risk
CEA	– Classification Exception Area
CERCLA	– Comprehensive Environmental Response Compensation and Liability Act
CERCLIS	– Comprehensive Environmental Response Compensation and Liability Information System
CESQG	– Conditionally Exempt Small Quantity Generator
COC	– Chemicals of Concern
CORRACTS	– Corrective Action Sites
CREC	– Controlled Recognized Environmental Condition
DNPL	– Delisted National Priority List
DTSC	– Department of Toxic Substances Control
ENG	– Engineering
ERNS	– Emergency Response Notification System
CUPA	– Certified Unified Program Agency
FOI/FOIA/FOIL	– Freedom of Information / Freedom of Information Act / Freedom of Information Letter
HVAC	– Heating Ventilation & Air Conditioning
HREC	– Historic Recognized Environmental Condition
IAQ	– Indoor Air Quality
INST	– Institutional
ISRA	– Industrial Site Recovery Act
LBP	– Lead-Based Paint
LQG	– Large Quantity Generator
LTANK	– Leaking Storage Tank
LUST	– Leaking Underground Storage Tank
SDS/MSDS	– Safety Data Sheet / Material Safety Data Sheet
NA	– Not Applicable
NFA	– No Further Action
NFRAP	– No Further Remedial Actions Planned
NPDES	– National Pollutant Discharge Elimination System
NPL	– National Priority List
OPRA	– Open Public Records Act
PAH	– Polycyclic Aromatic Hydrocarbon
PCE	– Perchloroethylene
RAO	– Response Action Outcome
RCRA	– Resource Conservation and Recovery Act
RWQCB	– Regional Water Quality Control Board
SCAQMD	– South Coast Air Quality Management District
RCRIS	– Resource Conservation and Recovery Information System
REC	– Recognized Environmental Condition
SDG	– Significant Data Gap
SEMS	– Superfund Enterprise Management System
SRP	– Site Remediation Program
SQG	– Small Quantity Generator
SVOC	– Semi-Volatile Organic Compound
TCE	– Trichloroethylene
TSDF	– Treatment Storage and/or Disposal Facility
USEPA	– United States Environmental Protection Agency
UST	– Underground Storage Tank
VEC	– Vapor Encroachment Condition
VOC	– Volatile Organic Compound

1.0 FINDINGS, OPINIONS, AND CONCLUSIONS

Hillmann Consulting, LLC (Hillmann) performed a Phase I Environmental Site Assessment (ESA) of APNs 610-301-07 and 610-301-20, Lake Forest, California (the Property). This assessment has been conducted in accordance with our contracted scope of work and the ASTM Standard Practice E 1527-13 for Phase I Environmental Site Assessments and All Appropriate Inquiries (AAI) Final Rule 40 CFR Part 312. This section contains a summary of findings, opinions, and conclusions made by this assessment. However, this section, alone, does not constitute the complete assessment. The report must be read in its entirety.

1.1 Summary of Project Details

Project Name:		N/A			
Primary Street Address:		20865 Canada Road			
City:	Lake Forest	**County:**	Orange	**State:**	California
Tax ID/Parcel Number:		610-301-07 and 610-301-20			
Property Owner:		Mr. Brian Hess			
Zoning Designation:		A General Plan Amendment to change the General Plan designation from OS to Light Industrial; A Zone Change to change the zoning of the property from General Agriculture (A-1) to Light Industrial (M-1) to establish a contractor storage yard use (Great Scott Tree Services Inc.). Submitted on March 22, 2018. Under review.			
Approx. Property Area:		610-301-07 – 5.54 acres 610-301-20 – 0.82 acres			
Buildings/# of Floors		Single- story residential house, and a wooden barn			
Approx. Building Area:		House: 3,500 SF and Barn: 2,800 SF			
Approx. Year Built:		House prior to 1910/1952; Barn 1848			
Commercial Occupants:		N/A			
Current Use:		Residential with a barn and horse stalls and farm animals			
Prior Uses:		Orchards			
Inspected By:		Ms. Shilpa Sunil			
Property Contact/Company:		Mr. Steve Guzowski/Great Scott tree Service Inc.			
Property Escort/Company:		Mr. Steve Guzowski			
Inspection Date:		June 12, 2019 and June 26, 2019			
Weather Conditions:		Clear Sunny, 85 degrees F			

1.2 Findings Summary Table

PHASE I ENVIRONMENTAL SITE ASSESSMENT				
Assessment Subject	**No Notable Finding**	**Notable Findings**	**REC?**	**Rep. Ref.**
User Provided Info	X			3.0
Data Gaps	X	Hillmann was not able to access the western portion of the Property due to thick and overgrown vegetation.		2.3
Property Regulatory Records Review	X	The property is not listed in any regulatory databases.		4.3.1
Property Historical Records Review		Historical site uses include citrus and avocado orchards and residential home.	REC	4.2
Site Reconnaissance		Property consists of two parcels. The northwestern portion of the Property includes Serrano creek, hiking trail and the remainder portion of the Property is covered with dense vegetation. The southern parcel is developed with a single-family residential house that has 4 bedrooms, 2 bathrooms and approximately 2,400 square feet of floor space; and a barn. A horse stall and farm animal storage area were observed at the northwestern portion of the Property. A horse corral was observed at the southwest side of the Property. Remaining portion of the parcel is undeveloped currently covered by brushes and trees. The north eastern portion of the Property is currently been occupied by the tenant- Richard Cohen Landscape and Construction, Inc. Several 55-gallon drums of an unspecified oil were observed on the Property. One of the drums was stored on bare dirt.	No	5.0
Interviews		Mr. Steve Guzowski of Great Scott Tree Service, Inc. indicated a 500-gallon underground gasoline tank with pump was on Property until 1984-1985 used for agricultural purposes. A leak was detected approximately in 1984. Under the guidance of the local environmental jurisdiction, the pump was removed and the tank was filled with water. Mr. Steve indicated that the underground storage tank was still underground. Due to overgrown vegetation, there were no visible signs of the former UST at the Property. Hillmann reviewed online Geotracker records and there were no files pertinent to the underground storage tank found on file. Based on the age of the construction of the residential home, the home was connected to a septic system. At the time of the site inspection, Hillmann observed Los Alisos Water District has recently placed new sewer system in place.	REC No	6.0
Adjoining & Nearby Properties	X	The northwest adjacent Property at 20697 Prism Place located approximately 277 feet northwest is listed under UST and SWEEPS UST, RCRA NON-GEN/NLR, HAZNET, CERS, CERS HAZ Waste databases. The south-southeast adjacent Property at 20845 Canada Road located approximately 103 feet down gradient of the Property is listed under RCRA NONGEN/NLR database.	No No	4.3.2 5.2.8

BUSINESS ENVIRONMENTAL RISKS / NON-ASTM SCOPE			
BER	**Not Applicable**	**Findings**	**Rep. Ref.**
Asbestos Containing Materials (ACM)		Based on the age of the construction of the single-family residential home there is potential for ACM.	7.1
Lead Based Paint (LBP)			7.2
Radon		The Property located in USEPA Radon Zone 3.	7.3
Mold			7.4

1.3 Findings and Conclusions

1.3.1 Recognized Environmental Conditions

Hillmann has performed a Phase I Environmental Site Assessment in accordance with the scope and limitations of ASTM Practice E 1527-13 of the Property as described in Section 2 of this report. Any additions to, exceptions to or deletions from this practice are also described in Section 2 of this report. This assessment has revealed no evidence of *recognized environmental conditions* in connection with the Property, except for the following:

RECOGNIZED ENVIRONMENTAL CONDITIONS	
REC 1	The UST at the Property and the historic agricultural use of the Property is considered to be REC to the Property.
REC 2	The historical usage of the Property as a citrus and avocado grove is considered a REC in connection with the Property.
HISTORICAL RECOGNIZED ENVIRONMENTAL CONDITIONS	
	No HRECs were identified.
CONTROLLED RECOGNIZED ENVIRONMENTAL CONDITIONS	
	No CRECs were identified.
SIGNIFICANT DATA GAPS	
	No SDGs were identified.

1.3.2 REC Response Action Recommendations

The following table presents recommended response actions to the identified RECs for further investigation and/or corrective action:

REC RESPONSE ACTION SUMMARY TABLE	
REC #	**Response Action**
REC 1 and 2	Hillmann recommends a limited Phase II subsurface investigation to determine the historic agricultural use and whether the historical gasoline underground storage tank has adversely impacted the Property. Hillmann also recommends a geophysical survey to determine if a UST system is still located on the Property. Hillmann recommends the 55-gallon drums observed in the barn should be properly removed and disposed of at an authorized off-site location.

1.3.3 Additional Findings

The following environmental conditions were identified, but are not considered to be a REC in connection with the Property:

NOTABLE ENVIRONMENTAL CONDITIONS	
1.	The site appears to have been utilized as citrus and avocado orchard from circa 1938 to 1940. There is the potential for soil contamination due to current and historic pesticide applications; this is considered to be a REC in connection with the Property.
2.	Site contact Mr. Guzowski of Great Scott Tree Service, Inc. indicated a 500-gallon underground gasoline tank with pump was on Property until 1984-1985 and was used for agricultural purposes. A leak was detected approximately in 1984. Under the guidance of the local environmental jurisdiction, the pump was removed and the tank was filled with water. Mr. Steve indicated that the underground storage tank was still underground. Due to overgrown vegetation, there were no visible signs of the former UST at the Property. There were no records of date of installation of the UST and no leaks were recorded. Hillmann reviewed online Geotracker records and there were no files pertinent to the underground storage tank on file. Hillmann recommends the soil sampling to determine if the subsurface has been impacted and analyze for suspect compounds such as total petroleum hydrocarbons (TPHcc), volatile organic compounds (VOCs), and Ca Assessment Metals (CAM). Hillmann recommends a geophysical survey to determine if the unknown existing UST system is still in ground using electro-magnetics and GPR if necessary.
3.	Hillmann observed four 55-gallon drums of unspecified oil was stored on pallets and one of the drums was stored on bare dirt located in the barn building. No evidence of leaks or staining was observed in vicinity of the drums. The drums are not considered to be a REC; however, they should be properly removed and disposed of at an authorized off-site location.
4.	XPO Logistics Freight Inc - UIV (20697 Prism Place). This site is adjoining to the northwest and is cross-upgradient of the Property. The site is listed under UST, SWEEPS UST, RCRA NONGEN/NLR, CERS Hazwaste, CERS tanks, HAZZNET databases. This site is registered on the UST database with Facility ID # FA0024234. The SWEEPS UST listing indicates the 10,000-gallon motor vehicle fuel diesel UST was installed in 1988. Based on the absence of reported releases or violations, this listing is not considered a REC in connection with the Property. The CERS Hazwaste listing indicates that hazardous waste treatment occurs onsite, several administrative violations are noted. The CERS listing indicates that the site operates as a chemical storage facility with several administrative violations. The CERS listing indicates that the site returned to compliance on 3/17/2017 after the violation for not collecting waste in a container was issued on 3/13/2017. Due to a lack of reported spills, the relatively minor violation, and hydrologic gradient, these listings are not considered to be RECs in connection with the Property

1.4 Environmental Professional Statement

I declare that, to the best of my professional knowledge and belief, I meet the definition of *Environmental Professional* as defined in §312.10 of 40 CFR 312. I have the specific qualifications based on education, training, and experience to assess a *property* of the nature, history, and setting of the subject *property*. I have developed and performed all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Ryan Terwilliger
Environmental Professional

2.0 INTRODUCTION

2.1 Purpose and Scope

This assessment was conducted utilizing generally accepted Phase I ESA industry standards in accordance with the ASTM Standard Practice E 1527-13. The ASTM describes these methodologies as representing good commercial and customary practice in the United States of America for conducting an environmental site assessment of a parcel of commercial real estate with respect to the range of contaminants within the scope of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and petroleum products. As such, this practice is intended to permit a user to satisfy one of the requirements to qualify for the innocent landowner, contiguous property owner or bona fide prospective purchaser limitations on CERCLA liability (hereinafter, the "landowner liability protections," or "LLPs"): that is, the practice that constitutes all appropriate inquiries into the previous ownership and uses the property consistent with good commercial and customary practice as defined at 42 U.S.C. §9601(35) (B). The primary goal of the processes established by ASTM E1527-13 is to identify *recognized environmental conditions* in connection with the Property.

The term *recognized environmental condition (REC)* is defined by the ASTM as the presence or likely presence of any hazardous substances or petroleum products in, on or at a property: (1) due to a release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment.

The ASTM has also defined the terms *historical recognized environmental conditions* and *controlled recognized environmental conditions* as two additional types of RECs. The term *historical recognized environmental condition (HREC)* is defined as a past release of any hazardous substances or petroleum products that has occurred in connection with the Property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the Property to any required controls (for example, property use restrictions, activity and use limitations, institutional controls or engineering controls).

The term *controlled recognized environmental condition (CREC)* is defined as a recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority, with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls.

Conditions determined to be *"de minimis conditions"* are not considered to be RECs, HRECs or CRECs. *De minimis condition* is defined by the ASTM, "…as a condition that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies."

The chief components of this assessment are generally described as follows:

- A non-invasive visual reconnaissance of the Property and adjoining properties in accordance with ASTM guidelines for evidence of RECs.

- Interviews of past and present owners and occupants and state and local government officials, seeking information related to the potential presence of RECs at the Property.

- A review of standard physical record sources for available topographic, geologic and groundwater data.

- A review of standard historic record sources, such as fire insurance maps, city directories, aerial photographs, prior reports, and interviews, etc., to determine prior uses of the Property from the present, back to the Property's first developed use, or back to 1940, whichever is earlier.

- A review of standard environmental record sources including federal and state environmental databases, and additional environmental record sources, to identify potential regulatory concerns with the Property, adjoining properties, and properties located within the surrounding area.

An evaluation of environmental or other regulatory compliance matters is excluded from the scope of this assessment.

These methodologies are described as representing good commercial and customary practice for conducting an Environmental Site Assessment of a property for the purpose of identifying recognized environmental conditions.

2.1.1 Business Environmental Risks/Non-ASTM Scope Considerations

In accordance with our contract agreement, Hillmann may have addressed the following potential environmental subject matters that are outside of the requirements of the ASTM E1527-13 standard:

Asbestos-Containing Materials (ACM): A cursory non-intrusive visual screening for the presence of suspect ACM within the accessed areas of buildings built prior to 1990 on the Property. It is emphasized that this cursory non-intrusive visual screening does not constitute an asbestos survey/inspection of the premises. An asbestos survey/inspection should be sought by the report User(s) if more certainty is desired regarding ACM and potential asbestos hazards at the Property. Furthermore, a review of regulatory compliance matters pertaining to asbestos is excluded from the scope of work.

Lead-Based Paint (LBP): A cursory non-intrusive visual screening of the condition of painted surfaces in the accessed areas of residential buildings/units built prior to 1980 on the Property. It is emphasized that this cursory non-intrusive visual screening does not constitute a comprehensive survey for LBP or potential lead hazards. A comprehensive inspection should be sought by the report User(s) if more certainty is desired regarding LBP at the Property. Furthermore, a review of regulatory compliance matters pertaining to lead-based paint is excluded from the scope of work.

USEPA Designated Radon Potential: Review of general non-site-specific data published by the USEPA regarding the Radon Zone classification for the area of the Property.

Mold: A cursory non-intrusive visual screening within the accessed areas of buildings on the Property for evidence of systemic microbial problems, including visible mold growth, water damaged building materials or musty odors. It is emphasized that this cursory non-intrusive visual screening does not constitute a comprehensive survey for moisture/mold/microbial damage. A more comprehensive inspection should be sought by the report User(s) if more certainty is desired regarding the potential for moisture/mold/microbial damages at the Property.

2.2 Property Location/Legal Description

Property location and legal description details are described as follows:

Primary Street Address:		20865 Canada Road			
City:	Lake Forest	**County:**	Orange	**State:**	California
Tax ID/Parcel Number:		610-301-07 and 610-301-20			
Approx. Land Area:		610-301-07 – 5.54 acres 610-301-20 – 0.82 acres			
Approx. Latitude/Longitude:		North 33.6605360 degrees/West 117.6751220 degrees			
Additional Details (if appl.):		NA			

2.3 Data Gaps

A *data gap* is defined by the ASTM as a lack of or inability to obtain information required by this practice despite good faith efforts by the environmental professional to gather such information. A data gap is only significant if other information and/or professional experience raises reasonable concerns involving the data gap and the ability to determine the presence or absence of recognized environmental conditions. The following table summarizes data gaps encountered during the assessment as well as a discussion of their significance.

Data Gap:	Significant (Yes/No)?	Discussion
Historical records data failure	No	See Section 4.2.9
Response to agency records requests not received as of date of report.	No	Any additional information indicative of a REC will be forwarded upon receipt.

2.4 User Reliance

This report is for the exclusive use of the User(s) named on the front cover. No other party(ies) shall have any right to rely on the content of this report without first obtaining the consent of the original report User; and without obtaining written consent from Hillmann in the form of a letter of reliance or report recertification.

2.5 Significant Assumptions

The following significant assumptions are made:

- Hillmann has assumed that the site operations at the time of the site visit reflect typical site conditions relative to potential environmental conditions and that no concealment of environmental conditions or releases by site owners or occupants has occurred. Likewise, Hillmann has also assumed that no areas of the Property with potential environmental concerns or RECs were concealed or otherwise not made known to us, intentionally or unknowingly, by the Property owners/occupants and/or site escort at the time of the site visit.

- For the purpose of estimating the approximate direction of groundwater flow in the absence of site specific groundwater data, unless indicated otherwise, Hillmann has assumed that the gradient of groundwater flow follows the surface topography of the Property and immediate surrounding area.

2.6 General Limitations and Exceptions

2.6.1 Limitations

The report turnaround time specified by the contract agreement for this assessment may present a limitation to Hillmann's ability to access and review pertinent regulatory agency records. Such limitations, if encountered, are further specified in Section 4.4.

Significant limitations related to the condition or accessibility of the Property at the time of the site reconnaissance, if encountered, are reported in Section 5.1.

2.6.2 Other Exceptions or Deletions

No other exceptions or deletions from the ASTM Standard E 1527-13 are reported.

2.6.3 Special Terms and Conditions

Hillmann has prepared this Phase I Environmental Site Assessment using reasonable efforts in each phase of its work to identify recognized environmental conditions associated with hazardous substances, wastes, and petroleum products at the Property. Findings within this report are based on information collected from observations made on the day of the site reconnaissance and from reasonably ascertainable information obtained from governing public agencies and private sources.

This report is not definitive and should not be assumed to be a complete or specific definition of the conditions above or below grade. Information in this report is not intended to be used as a construction document and should not be used for demolition, renovation, site development, redevelopment, or other construction purposes. Hillmann makes no representation or warranty that the past or current operations at the Property are, or have been, in compliance with all applicable federal, state and local laws, regulations and codes.

Findings, conclusions, and recommendations presented in this report are based on our visual observations of the Property, interviews conducted, the records reviewed, information provided by the Client, and/or a review of readily available and supplied drawings and documents. Hillmann relies upon the information, whether written, graphic or verbal, provided by the

Property contact(s) or as shown on any documents reviewed or received from the Property contact, owner or agent, or municipal source; and assumes that information to be true and correct. Although there may have been some degree of overlap in the information provided by these various sources, Hillmann did not attempt to independently verify the accuracy or completeness of all information reviewed or received during the course of this assessment. Hillmann can neither warrant nor guarantee the accuracy or completeness of information that was obtained from ostensibly knowledgeable individuals, regulatory agency representatives or other secondary sources.

Regardless of the findings stated in this report, Hillmann is not responsible for consequences or conditions arising from facts that were concealed, withheld or not fully disclosed at the time the assessment was conducted.

This report does not warrant against future operations or conditions, nor does it warrant against operations or conditions present of a type or at a location not investigated.

The regulatory database report provided is based on an evaluation of the data collected and compiled by a contracted data research company. The regulatory research is designed to meet the requirements of ASTM Standard E 1527-13. Hillmann can neither warrant nor guarantee the accuracy or completeness of the information obtained from the regulatory database report provider during the course of this assessment.

Subsurface conditions may differ from the conditions implied by the surface observations and can only be reliably evaluated through intrusive techniques.

Reasonable efforts have been made during this assessment to identify aboveground and underground storage tanks and ancillary equipment. “Reasonable efforts” are limited to information gained from visual observation of largely unobstructed areas, recorded database information held in public record and available information gathered from interviews. Such methods may not identify surficial and subsurface features that may have been hidden from view due to parked automobiles and other vehicles, snow cover, vegetative growth, pavement, construction or debris pile storage or incorrect information from sources.

Hillmann is not a professional title insurance firm and makes no guarantee, explicit or implied, that the records which were reviewed represent a comprehensive or precise delineation of past Property ownership or tenancy for legal purposes.

The ASTM E1527-13 standard states that recommendations are not required to be included in a Phase I ESA report; however, further that recommendations are an additional service that may be useful in the User’s analysis of landowner liability protections or business environmental risks; and that the User should consider whether recommendations for additional inquiries or other services are desired.

The recommended response actions to the identified RECs presented in Section 1.3, if any, are not intended to represent the only course(s) of action to take; nor does it imply any opinion as to the timing of the action. Furthermore, it is emphasized that additional response actions may become warranted depending on the outcome of the initial action(s) taken. Hillmann advises that consultation with legal counsel familiar with environmental and real estate law may be beneficial

to the decision-making process for the type and timing of a response action to identified RECs if any.

Due to the limited nature of our review of potential Business Environmental Risks, the User of the report should consider whether to take additional action(s) to further define, properly manage and/or mitigate potential BERs.

In the event of any conflict between the terms and conditions of this report and the terms and conditions of the consulting services agreement for this project, the consulting services agreement shall control.

3.0 USER PROVIDED INFORMATION

The term "User" is defined by ASTM as the party seeking to use Practice E1527 to complete an environmental site assessment of the Property; specifically, the entities named on the front cover to which the report has been addressed.

3.1 Prior Environmental Reports/Documentation

No prior reports were provided.

3.2 User Questionnaire

Section 6 of the ASTM E1527-13 standard describes certain tasks required to be performed by the report User in order to qualify for landowner liability protections to CERCLA liability. To assist the report User to meet these requirements, and as recommended by the ASTM E1527-13 standard, a Questionnaire of inquiries (User Questionnaire) specified in 40 CFR 312.25, 312.28, 312.29, 312.30, and 312.31 has been provided to the original report User. The following is a summary of the User's response:

Question:	Yes/No:	Detail:
Environmental liens that are filed or recorded against the property: Did a search of recorded land title records identify any environmental liens filed or recorded against the property under federal, tribal, state or local law?	No	
Activity and use limitations that are in place on the property or that have been filed or recorded against the property: Did a search of recorded land title records (or judicial records where appropriate, identify any AULs, such as engineering controls, land use restrictions or institutional controls that are in place at the property and/or have been filed or recorded against the property under federal, tribal, state or local law?	No	
Specialized knowledge or experience of the person seeking to qualify for the LLP: Do you have any specialized knowledge or experience related to the property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?	Yes	
Relationship of the purchase price to the fair market value of the property if it were not contaminated: Does the purchase price being paid for this property reasonably reflect the fair market value of the property? If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the property?	Yes	

Commonly Known or Reasonably Ascertainable Information: Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example,		
-Do you know the past uses of the property?	Yes	Agricultural use.
-Do you know of specific chemicals that are present or were once present at the property?	No	
-Do you know of spills or other chemical releases that have taken place at the property?	No	
-Do you know of any environmental cleanups that have taken place at the property?	No	
The degree of obviousness of the presence or likely presence of contamination at the property, and the ability to detect the contamination by appropriate investigation: Based on your knowledge and experience related to the property are there any obvious indicators that point to the presence or likely presence of releases at the property?	No	
Litigation/Administrative Proceedings/Government Notices As the User of this ESA, do you have knowledge of (1) any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on, or from the property; (2) any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on or from the property; and (3) any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products.	No	

NR-no response

3.3 Reason for Performing Phase I ESA

Hillmann assumes that the Phase I ESA was being performed in order to qualify for landowner liability protection to CERCLA liability.

4.0 RECORDS REVIEW

4.1 Physical Setting Sources

The following physical setting sources were reviewed:

Source	Discussion
USGS 7.5 minute Topographic Map Data: (EDR Geocheck-Physical Setting Source Addendum)	The Property lies at an elevation of approximately 631 feet above mean sea level on the El Toro, CA Quadrangle map. The topography indicated by the map appeared to be gently sloping downward towards the west. The closest down gradient water body is Serrano Creek located approximately 198 feet to the west.
USDA SCS Soil Data: (EDR Geocheck-Physical Setting Source Addendum)	The soil type at the Property is classified as "Riverwash". The "Riverwash" designation is described as soils with a sand surface texture with a Very slow infiltration rates. Soils are clayey, have a high-water table or are shallow to an impervious layer.
Geologic Data: (EDR Geocheck-Physical Setting Source Addendum)	The geologic formation in the vicinity of the Property is described as a stratified sequence of the Cenozoic Era, Tertiary System, and Miocene Series.
Additional Sources/ Data:	N/A
Groundwater Flow Discussion:	Based on a review of the above information as well as observation of the site, the direction of shallow groundwater flow at the site is inferred to be generally to north.

4.2 Historical Use – Property and Adjoining Properties

Hillmann has conducted research in order to help identify the likelihood of past uses having led to recognized environmental conditions in connection with the Property. Standard historical sources have been sought in an attempt to document the past uses of the Property as far back as it can be shown that the Property contained structures; or from the time the Property was first used for residential, agricultural, commercial, industrial or governmental purposes.

4.2.1 Fire Insurance Maps

Hillmann obtained a Certified Sanborn Map Report from EDR in order to research published historic fire insurance maps for the Property and surrounding area. A copy of the report is included in Appendix D. The following is a summary of site use information interpreted from a review of the report:

Year(s)	Description	
	Property	(No Coverage)
	Adjoining Properties	

4.2.2 City Directories

The following is a generalized summary of the findings of City Directory Research for past occupants of the Property, indicating occupants and the years indicated by the listings.

Property	
Occupant(s)	**Appr. Date Range**
Canada Ranch Stables / Hess Ronald Construction	2000-2010
Don Hess	1992-1995

Hillmann also reviewed the EDR City Directory Abstract report for listings of historic occupants of the adjoining properties. The following is a general summary of listings of historic adjoining property occupants:

Adjoining Properties		
Address(es)	**Historic Occupant(s)**	**Appr. Date Range**
20941 Canada Road	American Mini Storage	1995-2014
	Private individual	1992
20845 Canada Road	Commercial/industrial	2010-2014

4.2.3 Historical Topographic Map Review

Hillmann reviewed historic topographic maps of the Property from EDR. The following details related to site usage were indicated by the topographic maps:

Year(s)	Summary	
1902, 1935	**Property**	The Property is depicted as undeveloped land.
	Adjoining Properties	The adjoining properties are depicted as undeveloped land.
1942	**Property**	The Property is depicted as an orchard.
	Adjoining Properties	The adjoining properties are depicted as orchards. Serrano Creek is depicted to the northwest.
1949, 1950	**Property**	The Property is depicted as orchard. Serrano Creek is depicted to the northwest.
	Adjoining Properties	The adjoining properties are depicted as orchards. Adjacent property to the northeast is depicted with three small structures. Canada Road is shown on the map.
1968	**Property**	The Property is depicted as undeveloped land with a small structure depicted to the southwest. Serrano Creek is depicted to the northwest.
	Adjoining Properties	Adjacent property to the northeast is depicted with three small structures. Canada Road is shown on the map.
1978, 1981, 1982	**Property**	The Property is depicted as orchard with a small structure depicted to the southwest. Serrano Creek is depicted to the northwest.
	Adjoining Properties	Adjacent property to the northeast is depicted with three small structures. The adjoining properties to the northwest are depicted as commercial/light industrial structure.
1997	**Property**	The Property is depicted as orchard. Serrano Creek is depicted to the northwest.
	Adjoining Properties	The adjoining properties to the northwest and southwest are depicted with existing commercial/light industrial structures.
2012	**Property**	No building development is depicted on the topographic map.
	Adjoining Properties	No building development is depicted on the topographic map.

4.2.4 Aerial Photograph Review

Hillmann reviewed historic aerial photographs of the Property from EDR. The following interpretation of land usage was made by review of the aerial photographs:

Year(s)	Summary	
1938, 1946, 1949	**Property**	The Property appears to be developed with small residential structure surrounded by orchard. Serrano Creek is depicted to the northwest.
	Adjoining Properties	The adjoining properties appear to be orchards. Small structures are depicted to the northeast.
1952, 1963, 1967, 1972, 1974, 1980	**Property**	The southwest corner of the Property appears to be developed with the existing residential home and barn; the remainder of the Property appears to be orchards.
	Adjoining Properties	The adjoining properties appear to be orchards. Small structures are depicted to the northeast and to the south.
1990, 1994,	**Property**	The Property appears to be developed with the existing structures including a residential home and a barn. Serrano creek is depicted to the northwest.
	Adjoining Properties	The adjoining properties to the north, east and southwest are depicted to be developed with existing commercial/light industrial structures. The south adjacent property is depicted to be undeveloped land.
2005, 2009, 2012 and 2016	**Property**	The Property appears to be developed with the existing structures including a residential home and a barn. Serrano creek is depicted to the northwest.
	Adjoining Properties	The adjoining properties to the north, east, west, and southwest are depicted to be developed with existing commercial/light industrial structures.

4.2.5 EDR High-Risk Historical Records

The EDR Radius Map™ report, which will be discussed in greater detail in Section 4.3, provided a search of proprietary databases of potential historical high-risk uses at or in the vicinity of the Property. These databases include EDR Historic Cleaners – a database of property addresses with records of historical occupancy by suspected cleaners businesses; EDR Historic Auto – a database of property addresses with records of historical occupancy by potential automotive gas/filling stations and repair facilities; and EDR MGP- a database of sites historically occupied by manufactured gas plants and related facilities.

EDR Historic Cleaners	No on-site or adjoining listings identified.
EDR Historic Auto	No on-site or adjoining listings identified.
EDR MGP	No listings identified within 1-mile search distance.

4.2.6 Petroleum/Natural Gas Well Review

Hillmann reviewed historical record sources for evidence of historic petroleum and/or natural gas wells at the Property. In addition, Hillmann conducted a search of the property location on the Division of Oil, Gas & Geothermal Resources Well Finder database (http://maps.conservation.ca.gov/doggr/index.html). No record of any historical petroleum/natural gas wells at the Property was identified.

4.2.7 Additional Historical Data

No additional historical data was reviewed and/or obtained.

4.2.8 Summary of Identified Historic Uses

The following table presents a summary of the types and approximate timeframes of identified prior uses of the Property:

Property	
Years (Approx.)	**Use**
1938 to 1980	Orchards, Serrano Creek
1990 to Present	Residential, Barn, Serrano Creek

The following table presents a summary of the types of identified prior uses of the adjoining properties:

Adjoining Properties	
Years (Approx.)	**Use**
1938 to 1980	Orchards
1990	Undeveloped land (south adjacent property)
1990 to Present	Undeveloped land

4.2.9 Historical Records Data Failure

The ASTM E1527-13 standard defines data failure as a failure to achieve the ASTM specified historical research objectives after reviewing the standard historical sources that are reasonably ascertainable and likely to be useful. The objective is to identify all obvious uses of the property from the present, back to the property's first developed use, or back to 1940, whichever is earlier. Furthermore, records of historic use/conditions should be sought in intervals no less than approximately five years, unless the property conditions appear unchanged over a longer interval.

Objective	Met?	Detail	Significant Data Gap?
First developed use/date determined?	Yes	The Property was developed as Orchard and a Bran in 1800s. A residential home circa 1938	No
Record sources at 5-year intervals back to 1940 or first developed use?	No	Records gaps between 1952 and 1963, 1980 and 1989, and 1994 and 2005; however, site conditions likely unchanged during these intervals.	No
All obvious prior uses identified?	Yes	See Section 4.2.8.	No

Please refer to Section 2.3 for additional discussion of data gaps and their significance to the findings of the assessment.

4.2.10 Historic Uses REC Discussion

A portion of the Property appears to have been utilized as Orchards since circa 1930. This use suggests the historical application of pesticides during this time, which could have accumulated in the shallow soils at that time. There is the potential for soil contamination due to current and historic pesticide applications, this is considered to be a REC in connection with the Property.

The 500-gallon underground gasoline tank with a pump that was used as part of the agricultural purposes is considered to be REC to the Property. According to the owner, a leak was detected in 1984 and the pump was removed from the Property under the guidance of the local environmental jurisdiction. Hillmann reviewed records for the agencies and there are no records obtained in regards to the underground storage tank. There have been no records of the UST as having been removed and it is considered to be a REC in connection with the Property. Hillmann recommends a limited Phase II investigation to determine whether the UST is still present and whether the historical operation of the UST have negatively impacted the Property.

4.3 Standard Environmental Record Sources

Hillmann obtained a regulatory database report, titled EDR Radius Map™ Report, from Environmental Data Resources of Shelton, CT. The report provided a search of standard environmental record sources in general accordance with the requirements of the ASTM E1527-13. Hillmann has reviewed the regulatory database report, and a summary of findings has been presented in the following tables and report sections. Hillmann has also reviewed the list of unmapped sites (a.k.a. "Orphan List" sites). Unmapped sites identified as falling within an applicable specific search distance or warranting discussion in the report, if any, have been included in the information presented below. Detailed descriptions of the meaning and significance of the regulatory databases can be found in the regulatory database report in Appendix E.

Regulatory Database	Search Distance	Property Listed?	Adj. Properties Listed?	Total Listings Within Search Distance
Fed. NPL/Proposed NPL	1-mile	No	No	0
Fed. Delisted NPL	½-mile	No	No	0
Fed. SEMS	½-mile	No	No	0
Fed. SEMS-ARCHIVE	½-mile	No	No	0
Fed. RCRA CORRACTS	1-mile	No	No	0
Fed. RCRA TSD	½-mile	No	No	0
Fed. RCRA LQG	Site & Adj.	No	No	
Fed. RCRA SQG	Site & Adj.	No	No	
Fed. RCRA CESQG	Site & Adj.	No	No	
Fed. ENG Control List	Site	No		
Fed. INST Control List	Site	No		
Fed. ERNS	Site	No		
State/Tribal Hazardous Waste Site	1-mile	No	No	0
State/Tribal Landfill/Solid Waste	½-mile	No	No	0
State/Tribal Leaking Storage Tanks	½-mile	No	No	2
State/Tribal Registered Storage Tanks	Site & Adj.	No	No	
State/Tribal Eng. Control List	Site	No		
State/Tribal Inst. Control List	Site	No		
State/Tribal Voluntary Cleanup Sites	½-mile	No	No	0
State/Tribal Brownfields	½-mile	No	No	0
Supplemental Regulatory Databases	Site & Adj.	No	No	

4.3.1 Property Listings

The Property address was not identified on any of the databases searched.

4.3.2 Adjoining Property Listings

RCRA NonGen NLR/ – Camila Corp at 20845 Canada Road. This site is adjoining to the south-southeast and approximately 103 feet downgradient of the Property. This site is listed as a Non-generator of hazardous waste. There were no reported violations. Based on the absence of reported violations or releases and the relative hydraulic gradient this listing is not considered a REC in connection with the Property.

UST, SWEEPS UST, RCRA NonGEN/ NLR, HAZNET, CERS, CERS HAZWASTE – XPO Logistics Freight INC. UIV at 20697 Prism Place. The site is adjoining to the northwest and is approximately 277 feet cross- gradient of the Property. This site is registered on the UST database with Facility ID # FA0024234. The SWEEPS UST listing indicates a 10,000-gallon motor vehicle fuel - diesel underground storage tank was installed in 1988. RCRA NonGen/NLR listing indicates the site is non generator of hazardous waste. CERS HAZWASTE describes the site as a hazardous waste generator. The listings indicate several violations issued since 2012 to 2017 and were returned to compliance immediately. Several compliance evaluation inspection results are listed for the site. Based on the absence of reported violations or releases and the upgradient position relative to the Property, this site is not considered a REC in connection with the Property.

4.3.3 ASTM Search Distance Findings

The following is a summary of the findings of the regulatory database review with regard to sites identified as located within the ASTM specified search distance surrounding the Property. In order to keep this report informative and yet concise, Hillmann has provided a brief discussion of the listed site(s) for each database category that appears most likely to impact the Property based on distance, topography and/or case status. A copy of the full regulatory database report, including available details of all listed sites, is included in Appendix E.

Note that listings for the following databases, if identified, would be discussed above in Sections 4.3.1 and 4.3.2: Registered Storage Tanks, Federal RCRA Generators, Federal and State INST and ENG Controls, ERNS.)

Federal NPL: No NPL listing was identified within a one-mile radius of the Property.

Federal Delisted NPL: No DNPL listings were identified within a ½-mile radius of the Property.

Federal SEMS (formerly CERCLIS): No SEMS listing was identified within a ½-mile radius of the Property.

Federal SEMS-ARCHIVE (former CERC-NFRAP): No SEMS-ARCHIVE listings were identified within a ½-mile radius of the Property.

Federal RCRA-CORRACTS: No CORRACTS listing was identified within a one-mile radius of the Property.

Federal RCRA-TSD: No TSD listings were identified within a ½-mile radius of the Property.

State/Tribal Hazardous Waste Sites: No SHWS listings were identified within a one-mile radius of the Property on the EnviroStor database.

No SHWS listings were identified within a one-mile radius of the Property on the RESPONSE database.

State/Tribal Landfill/Solid Waste Disposal Sites: No SWF/LF listings were identified within a ½-mile radius of the Property.

State/Tribal Leaking Storage Tanks: Two (2) LUST listings were identified within a ½-mile radius of the Property. The closest listing is described as Chevron at 20731 Lake Forest located 1968 feet east of the Property. The site is listed with completed case -closed status dated 04/20/1998. Based on the distance, hydraulic gradient and case closed status the listed sites are not considered to be concern to the Property.

Based on the regulatory closure received and the relative distance from the Property, other LUST listing is not considered a REC in connection with the Property.

No SLIC listings were identified within a ½-mile radius of the Property.

State/Tribal Voluntary Cleanup Sites: No VCP listings were identified within a ½-mile radius of the Property.

State/Tribal Brownfields: No BROWNFIELDS listings were identified within a ½-mile radius of the Property.

Review of the sites identified within the ASTM search parameters did not identify any nearby or surrounding area sites that are considered to be a REC in connection with the Property, unless as discussed otherwise previously in this section.

4.3.4 Tier I Vapor Encroachment Screening

Hillmann reviewed adjoining and vicinity database sites to identify potential off-site sources of sub-surface vapor encroachment. This review was based upon the current ASTM "Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions" (ASTM E 2600-15); and also utilizing the "Methodology for Identifying the Area of Concern Around a Property Potentially Impacted by Vapor Migration from Nearby Contaminated Sources" (Buonicore, 2011-S-103-AWMA). Vicinity database sites pertaining to non-petroleum product releases within 1,760 feet of the Property in the up-gradient direction, 365 feet of the Property in the cross gradient direction and 100 feet of the Property in the down gradient direction; and vicinity database sites pertaining to petroleum product releases within 528 feet of the Property in the up-gradient direction, 165 feet of the Property in the cross gradient direction and 100 feet of the Property in the down gradient direction were reviewed to identify active contamination sites with the potential to affect subsurface vapor conditions at the subject property. The potential for vapor encroachment was considered in assessing whether or not a REC exists in connection with the Property when reviewing applicable sites within those distances.

The 500- gallon gasoline underground storage tank is considered to be potential vapor instruction and therefore, considered to be REC to the Property.

4.4 Additional Environmental Record Sources

4.4.1 Supplemental Database Listings

Hillmann reviewed the regulatory database report for listings on supplemental databases that were searched in addition to the Standard Environmental Record Sources. Any property or adjoining property listings on such databases, if identified, would be discussed in Section 4.3.1 and 4.3.2. None of the other supplemental database listings identified by the regulatory database report are considered to be a REC in connection with the Property.

4.4.2 Local Agency & Internet Research

Hillmann has submitted requests to local and municipal agencies for pertinent records pertaining to the Property, particularly with regard to potential environmental concerns such as petroleum storage tanks, storage, and usage of hazardous substances and petroleum products, and/or known or suspected environmental contamination. Hillmann also conducted online research of government environmental regulatory databases where available, as well as a general cursory internet search of the Property address, for information indicative of a REC. The following table summarizes the findings of the research:

Source	Type of Request	Outcome
Environmental Protection Agency (EPA)	FOIA Request	The Property address was searched. No results for the Property were found.
Irvine Ranch Water District	FOIA Request	The Property address was searched. No results for the Property were found.
Department of Toxic Substances Control (DTSC)	FOIA Request	The Property address was searched. No results for the Property were found.
Regional Water Quality Control Board (RWQCB) – Santa Ana Region (8)	FOIA Request	The Property address was searched. No results for the Property were found.
South Coast Air Quality Management District (SCAQMD)	FOIA Request	The Property address was searched. No results for the Property were found.
Orange County Geographical Information System (GIS)	On-line search	No information indicative of a REC was identified.
CA DTSC EnviroStor database http://www.envirostor.dtsc.ca.gov/public/	Internet	The Property address was searched. No results for the Property were found.
CA GeoTracker database http://geotracker.waterboards.ca.gov/	Internet	The Property address was searched. No results for the Property were found.

Source	Type of Request	Outcome
USEPA Envirofacts search http://www.epa.gov/enviro/index.html	Internet	The Property address was searched. No results for the Property were found.
www.google.com	On-line search	The Property address search returns no results
www.realquest.com	On-line search	Basic Property information such as parcel number, date of construction, and building square footages were collected. Pertinent information, where obtained, is referenced in the appropriate sections of this report.
Other:	NA	

5.0 SITE RECONNAISSANCE

5.1 Methodology and Limiting Conditions

The site reconnaissance consisted of visual and/or physical observations of the Property and improvements, adjoining properties as viewed from the Property boundaries and the surrounding area based on visual observations from adjoining public thoroughfares. Building exteriors were observed at ground level unless otherwise indicated. Where applicable, Hillmann accessed and observed representative areas of building interiors to the extent they were made safely accessible with the cooperation of the site escort.

Site Inspection Personnel:	Ms. Shilpa Sunil
Property Escort/Company:	Mr. Steve Guzowski/ Great Scott Tree Service, Inc.
Inspection Date:	June 12, 2019 and June 26, 2019
Weather Conditions:	Clear Sunny, 85 degrees F

5.1.1 Significant Inaccessible Areas

Hillmann was not able to access the western portion of the Property due to thick and overgrown vegetation.

5.2 General Site Setting

5.2.1 Site and Vicinity Characteristics

The Property consists of irregular shaped is approximately 0.82-acres in size. Property consists of two parcels. Serrano Creek borders the Property to the north side of the Property. There are hiking trails observed along the border of the creek. The southern parcel is developed with a single-family residential house and a barn.

The vicinity of the Property is improved primarily by commercial/light industrial properties.

5.2.2 Topographic Characteristics

The terrain of the Property appeared to be relatively flat that slopes to the north. Serrano Creek borders northern portion of the Property.

5.2.3 General Description of Structures

The southern parcel is developed with a single story single-family residential house that has 4 bedrooms, 2 bathrooms and approximately 2,400 square feet of floor space; and a barn. A single-story wooden barn is located at the northeast of the Property.

5.2.4 Sources of Heating and Cooling

Heating is provided by fire place. There are no sources of heating or cooling at the Property.

5.2.5 Potable Water Source/Sewage Disposal System

Potable water and sewer services are provided via the public utility.

5.2.6 Current Use(s) of the Property

The current owner of the property currently resides at the residential home. The northwest portion of the site is used for storage of farm animals and horses. The northeastern portion of the Property is currently been occupied by the tenant- Richard Cohen Landscape and Construction, Inc.

5.2.7 Past Use(s) of the Property

No obvious indication of past Property usage likely to have involved the use, treatment, storage, disposal or generation of hazardous substances or petroleum products was observed at the time of the site visit. Please refer to Section 4.2 for findings of historical site use research.

5.2.8 Current Use(s) of the Adjoining Properties

The following table describes the current uses of the adjoining properties:

Dir	Street Address	Description
NW	20697 Prism Pl, Lake Forest	XPO Logistics
NE	20692 Prism Place	Global Power Technologies Group
S	20845 Canada Road	Camilo Corporation
SW	20941 Canada Road	American mini Storage

No visual observations indicative of a potential environmental concern was noted on the adjoining properties.

5.2.9 Past Use(s) of the Adjoining Properties

No indication of past uses of the adjoining properties was noted at the time of the site visit. Please refer to Section 4.2 for the findings of historical site use research.

5.2.10 Current/Past Uses of Surrounding Area

The vicinity of the Property consists primarily of commercial and light industrial properties. No indications of past Property use that differ substantially from current conditions were observed at the time of the site visit.

5.3 Interior & Exterior Observations

5.3.1 Storage/Usage of Hazardous Substances and Petroleum Products

The following hazardous substances and petroleum products were observed to be stored and used by property occupants:

Occupant	Substance	Qty/Container Type	Storage Conditions
Owner	Oil	4 / 55-gallon drums	No evidence of leaks or staining was observed in the vicinity of the drums.

5.3.2 Drums

Hillmann observed four 55-gallon drums of an unspecified oil located in the barn building. No evidence of leaks or staining was observed in vicinity of the drums. The drums are not considered to be a REC; however, they should be properly removed and disposed of at an authorized off-site location.

5.3.3 Unidentified Substance Containers

No unidentified containers suspected of containing hazardous substances or petroleum products were noted on the Property.

5.3.4 Other Hazardous Substances/Petroleum Products

No other containers of hazardous substances or petroleum products were noted on the Property at the time of the site visit.

5.3.5 Bulk Petroleum/Hazardous Material Storage Tanks

The following storage tanks for bulk petroleum or hazardous material storage were identified or reported to be present; or are suspected to be present based on visual observations:

AST/ UST	Product	Capacity	Construction	Year Installed	Status	Location/Notes
UST	None	500-gal	Steel	Unknown	Inactive	Reportedly located

5.3.6 PCBs in Electrical/Hydraulic Equipment

There were no transformers noted on the Property. No signs of leaking or staining were observed in the area of the transformers.

No other electrical or hydraulic equipment suspected of containing PCBs was identified at the Property.

5.3.7 Odors

No strong, unusual or pungent odors were noted on the Property.

5.3.8 Pools of Liquid

No standing water or pools of liquid likely to contain hazardous substances or petroleum products were noted at the Property.

5.3.9 Interior Stains or Corrosion

No interior stains or corrosion due to hazardous substance/petroleum products spills/releases were observed.

5.3.10 Interior Drains/Sumps

No floor drains or sump pits were noted at the Property other than for storm water or sewage management.

5.3.11 Exterior Pits/Ponds/Lagoons

No evidence of exterior pits, ponds or lagoons was identified on the Property in connection with waste treatment or disposal.

5.3.12 Stained Soil, Pavement/Stressed Vegetation

No stained soil, pavement or stressed vegetation was observed at the Property.

5.3.13 On-Site Solid Waste Disposal/Fill Material

No evidence of any on-site solid waste dumping was noted at the Property.

No evidence of recently deposited fill materials was observed at the Property.

5.3.14 Wastewater

Sanitary sewage and storm water runoff generated on-site are discharged into municipal sewer systems. No other waste discharges were noted at the Property.

5.3.15 Septic Systems

Mr. Steve Guzowski mentioned that the residential property had a septic system in place. Due to the overgrown vegetation, septic system was not visible. There were new sewer lines in place that was laid out by the city observed in the vicinity of the Property. Hillmann recommends to remove the septic system and be capped under current regulations.

5.3.16 Wells

No indication of a well was noted on the Property.

5.3.17 Railroad Spurs

No railroad spurs were noted on the Property at the time of the assessment.

6.0 INTERVIEWS

6.1 Interviews with Past and Present Owners and Occupants

Subject	Name/Affiliation	Summary
Property Owner / Representative	Ms. Steve Guzowski/Great Scott tree Service Inc.	Ms. Steve Guzowski, of Great Scott tree Service Inc., was provided with an environmental questionnaire with instructions to have it completed by a party knowledgeable of the Property. As of the date of this report, the environmental questionnaire has not been returned.
Property Occupants	Not applicable	Property occupants were not available for interview at the time of the assessment.
Past Owners, Occupants, Operators	Not applicable	Past owners/occupants of the Property were not available for interview at the time of the assessment.
Owners/Occupants of Adjoining or Nearby Properties	Not applicable	The Property was not an abandoned property with evidence of unauthorized uses or uncontrolled access; therefore, interviews with adjoining or nearby property owners or occupants were not conducted.

6.2 Interviews with State and/or Local Government Officials

Written and on-line requests for environmental records of the Property from State and Local governmental agencies are detailed in Section 4.4.2.

7.0 BUSINESS ENVIRONMENTAL RISKS

In accordance with the contract agreement for this assessment, Hillmann has performed cursory reviews of several potential Business Environmental Risks (also known as "Non-Scope Considerations"). The ASTM E1527-13 standard defines the term business environmental risk (BER) as, *"a risk which can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of a parcel of commercial real estate, not necessarily limited to those environmental issues required to be investigated in this practice."*

7.1 Asbestos-Containing Material (ACM)

The contracted scope of work included a cursory visual screening of the accessed portions of buildings at the Property built prior to 1990 for suspect asbestos containing materials (ACM). The information provided in this section, where applicable, is limited to identification of potential suspect materials and their general condition. This is not intended to be a comprehensive survey for the presence of ACM, and no testing has been conducted.

Suspected ACM noted during a cursory visual screening of 20865 Canada Road included sheetrock wall systems, ceiling acoustical spray on material, suspended ceiling tiles, carpet mastics, and floor tile with associated mastics. Although not observed, the roofing materials may contain asbestos. Additional types of suspect ACM may exist in enclosed areas or areas not accessed during the assessment. It is emphasized that this limited screening does not constitute a comprehensive asbestos survey of the premises and is meant only to provide a cursory evaluation regarding the potential presence of ACM at the Property.

7.2 Lead-Based Paint

The contracted scope of work included a cursory visual screening of the condition of painted surfaces in the accessed areas of residential buildings/units built prior to 1980. This is not intended to constitute a comprehensive survey for LBP or potential lead hazards, and no testing has been conducted.

In general, interior painted surfaces within the space were observed to be in fair condition.

7.3 Radon

Hillmann reviewed data compiled by the USEPA, as summarized by the regulatory database report, which indicated that the Property is located in an area with a low potential for radon concentrations that exceed current USEPA action guidelines. Orange County is classified as a Zone 3 or 'low risk' area for radon.

7.4 Mold/Microbial Damage

As per the contracted scope of work, Hillmann conducted a cursory visual screening of the accessed areas of the building for evidence of significant damage to building materials and finishes as result of moisture intrusion and/or mold/microbial growth. Hillmann did not observe any other evidence of significant problems with moisture intrusion or mold/microbial growth at the Property.

Hillmann did not observe any evidence of significant problems with moisture intrusion or mold/microbial growth at the Property.

8.0 REFERENCES

ASTM E1527-13-Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process; ASTM International, 2013

ASTM E12600-15-Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transaction, ASTM International, 2015

EDR Radius Map Report with GeoCheck™, Environmental Data Resources, 2019

EDR City Directory Abstract Report, Environmental Data Resources, 2019

EDR Sanborn Map Report, Environmental Data Resources, 2019

www.historicaerials.com

Methodology for Identifying the Area of Concern Around a Property Potentially Impacted by Vapor Migration from Nearby Contaminated Sources; A. Buonicore, 2011

Orange County's On-line Geographical Information System

9.0 APPENDICES

Appendix A	Site Diagram / Vicinity Map
Appendix B	Site Photographs
Appendix C	Questionnaires / User Provided Information
Appendix D	Historical Records Documentation
Appendix E	Regulatory Records Documentation
Appendix F	Other Documents
Appendix G	Project Personnel Qualifications

APPENDIX A

SITE DIAGRAM / VICINITY MAP

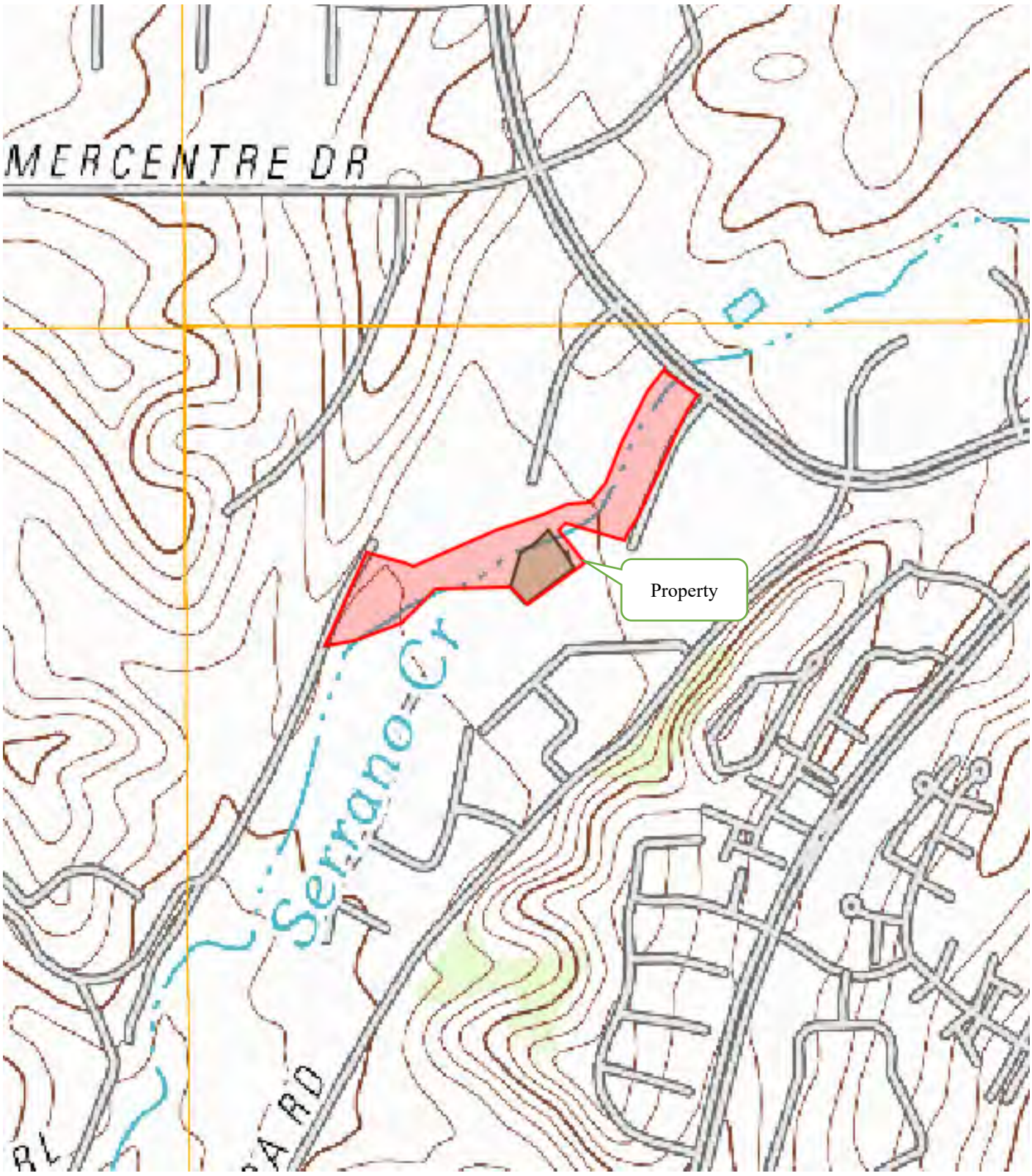


Figure 1: SITE VICINITY MAP	SCALE: (Not to Scale)	N

HILLMANN CONSULTING

Project Location:	20865 Canada Road Lake Forest, CA 92630
Project No.:	C3-7524

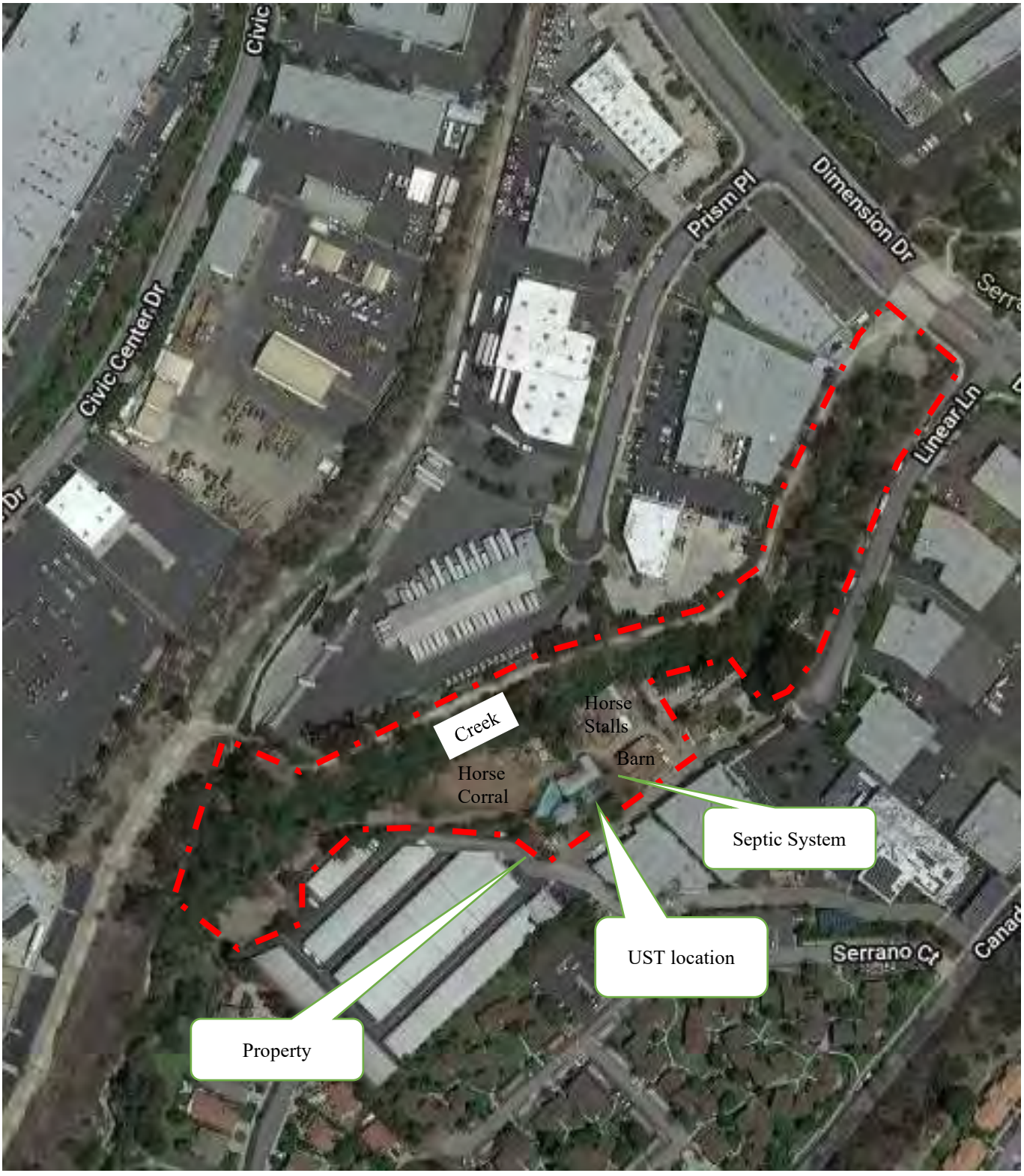


Figure 2: SITE DIAGRAM	SCALE: (Not to Scale)	N ↑

HILLMANN CONSULTING

Project Location:	20865 Canada Road Lake Forest, CA 92630
Project No.:	C3-7524

APPENDIX B

SITE PHOTOGRAPHS

PHOTO LOG
20568 Canada Road
Lake Forest, CA 92360
C3-7524

View of the Property, facing northeast

View of the barn on the Property, facing east

View of the Property, facing west

View of the horse corral

View of rear side of the Property to the west

View of the nursery garden area

PHOTO LOG
20568 Canada Road
Lake Forest, CA 92360
C3-7524

View of horse stalls

View of pool equipment

Rear side of the residential home

View of amenities at rear of the residential home

View of the garage on west side of the residential home

View of anticipated septic system location

PHOTO LOG
20568 Canada Road
Lake Forest, CA 92360
C3-7524

Interior view of the reasidetial home

View of common area

Interior view of living room

View of ceiling

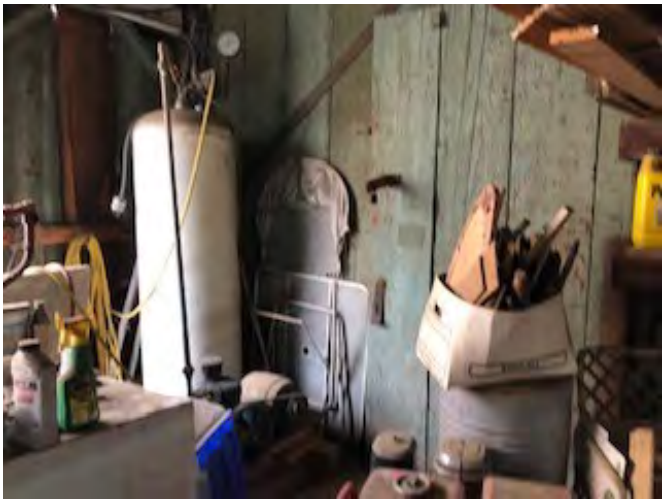
View of the Courtyard

Interror view of the barn

PHOTO LOG
20568 Canada Road
Lake Forest, CA 92360
C3-7524

View of 55-gallon drum

View of 15-gallon drum


View of unused compressor

View of empty 55-gallon drum

View of tool storage area

View of 55-gallon drum oil storage area

PHOTO LOG
20568 Canada Road
Lake Forest, CA 92360
C3-7524

View of 55-gallon drum of oil stored in the barn

View of northwest corner of the barn

View of 5-gallon drum of oil

View of empty AST

View of storage shed located at rear side of the Property

View of farm animal storage area

PHOTO LOG
20568 Canada Road
Lake Forest, CA 92360
C3-7524

View of RV store on rear side of the barn

View of ingress/egress area

View of northeaster potion occupied by Richard Cohen Landscape tenant

View of landscaping company manure storage area

View of trash

View of homeless camping area by the creek

PHOTO LOG
20568 Canada Road
Lake Forest, CA 92360
C3-7524

View of the creek

View of water tank locate on east side of the residential home

View of propane tank storage area by the barn

View of the former UST location

View of south adjacent property

View of north adjacent property

PHOTO LOG
20568 Canada Road
Lake Forest, CA 92360
C3-7524

View of south east adjacent property across Linear Lane

View of southeast adjacent property

APPENDIX C

QUESTIONNAIRES/USER PROVIDED INFORMATION

HILLMANN CONSULTING

Phase I ESA - Environmental Questionnaire

Instructions: The following questionnaire should be completed by a person designated by the Property Owner/Manager that is most knowledgeable about its usage, condition and history. Please complete and return to Hillmann via email, fax at 908-686-2636, or in person during the site inspection.

General:

Property Name: Hess Property

Street Address: 20865 Canada

City, ST Zip: Lake Forest CA

Completed by: Steve Guzowski (Name)

Company: Great Scott Tree Service, Inc.

Signature: _____

Date: 06-11-2019

Number of years at or familiar with the Property: 2yrs

Site Description:

Block & Lot #(s): APN 610-301-07, 610-391-20

Property Size: 2+ Acres

Number of building(s): 2

Building Size(s) ~70' x 50'; 70' x 40'

Year(s) Built: House Prior to 1910; Barn 1848

# of units: (if appl.) _____

Type of Property: Agriculture & Commercial

Utilities and Services: (please check "Yes", "No" or "NA-Not Applicable") and indicate provider if "Yes".

Utility	Yes	No	NA	Name of Provider	Service	Yes	No	NA	Name of Provider
Water	✔			IRWD	Fuel Oil				
Sewer		✔		Septic	HVAC Maint.	✔		✔	?
Power	✔	✔		SoCal Edison	Elev Maint.			✔	?
Nat Gas	✔		✔	SoCal Gas	Septic Maint.		✔		None
Telephone	✔		✔	Cable & AT&T	Pool Maint.	✔			?

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Instructions: Please answer each question. Check "D/K" if you don't know, or otherwise lack sufficient knowledge of the Property to answer the question.

PREVIOUS INVESTIGATIONS		
1.	Have any previous environmental investigations (e.g.- Phase I Environmental Site Assessment, soil/groundwater testing, radon testing, asbestos survey, tank closure/removal reports, etc.) been performed at the Property?	☐ Yes ☑ No ☐ D/K
2.	If yes, what concerns were indicated or recommendations made? *(please provide a copy of all previous environmental reports)* No Reports Available	
PROPERTY USAGE		
3.	To the best of your knowledge, is the Property or any adjoining property currently occupied or formerly occupied for industrial purposes? If yes, please elaborate:	Property: ☐ Yes ☑ No ☐ D/K Adj. Property: ☐ Yes ☑ No ☐ D/K
4.	Is the property or any adjoining property currently used, or have they ever been used, as a gasoline filling station, dry cleaning facility, automotive service/repair shop, auto body repair shop, commercial printing facility, photo development laboratory shop, junkyard, landfill, or as a waste treatment, storage disposal, recycling or processing facility? If yes, please elaborate: Current Owner Purchased in 1980 from Osterman Family. A 500 gal underground gas tank with pump was on property until 1984-1985 for Agriculture purposes. Under the guidance of the local environmental jurisdiction the pump was removed and the tank filled with water. The tank is still underground	Property: ☑ Yes ☐ No ☐ D/K Adj. Property: ☐ Yes ☑ No ☐ D/K
5.	Have any hazardous substances or petroleum products, unidentified waste materials, tires, automotive or industrial batteries,, or any other waste materials been dumped above grade, buried and/or burned on the property?	☐ Yes ☑ No
BULK STORAGE TANKS		
6.	Are there currently, or have there been previously, any registered or unregistered above ground or underground storage tanks located at the Property? *If YES, please provide number, size, age of tanks, permits, closure reports, regulatory agency correspondence, and related information.* A 500 gal underground gas tank with pump was on property until 1984-1985 for Agriculture purposes. Under the guidance of the local environmental jurisdiction the pump was removed and the tank filled with water. The tank is still underground	Current Tanks: ☑ Yes ☐ No ☐ D/K Previous Tanks: ☐ Yes ☑ No ☐ D/K
7.	Are there currently, or have there been previously, any vent pipes, or access ways indicating a fill pipe protruding from the ground on the property or adjacent to any structure located on the property? See Item 5&6. All are capped.	Current: ☑ Yes ☐ No ☐ D/K Previous: ☐ Yes ☐ No ☐ D/K
8.	Are there currently, or have there been previously, any leakage of hazardous substances or petroleum products from above ground or underground storage tank systems at the Property? Leak from Gasoline Tank - approximately 1984	Current: ☑ Yes ☐ No ☐ D/K Previous: ☐ Yes ☐ No ☐ D/K

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	SPILLS, RELEASES, WASTES	
9.	Are there currently, or have there been previously, any waste discharges on or adjacent to the property, other than storm water or into a municipal sanitary sewer system? If yes, please elaborate: Septic System	Current: ☑ Yes ☐ No ☐ D/K Previous: ☐ Yes ☐ No ☐ D/K
10.	Are there currently, or have there been previous, any septic systems, dry wells or leach fields on the property? If yes, please elaborate: Septic System Currently still in use	Current: ☑ Yes ☐ No ☐ D/K Previous: ☐ Yes ☐ No ☐ D/K
11.	Are there currently, or have there been previously, any flooring, drains or walls located within the facility that are, or have been, stained by substances (or, in the case of drains, used for) other than water or are emanating foul odors? If yes, please elaborate:	Current: ☐ Yes ☑ No ☐ D/K Previous: ☐ Yes ☑ No ☐ D/K
12.	Are there currently, or have there been previously, any spills or releases of hazardous substances or petroleum products within the building(s) or on the exterior of the Property?	Current: ☐ Yes ☑ No ☐ D/K Previous: ☐ Yes ☑ No ☐ D/K
13.	Has any non-native and/or contaminated fill material been deposited on the Property?	☐ Yes ☑ No ☐ D/K
14.	Have any current or former property occupants generated hazardous wastes or other wastes (such as waste oil, or medical wastes) that required non-conventional storage, handling and/or disposal methods? *If YES, please indicate type of waste and the name of the waste handling contractor:* _____	☐ Yes ☑ No ☐ D/K
	TRANSFORMERS/HYDRAULIC EQUIPMENT	
15.	Are any power transformers, capacitors or hydraulic equipment present at the Property? If yes, please elaborate:	☐ Yes ☑ No ☐ D/K
16.	If power transformers are present, who owns them? _____	☐ Yes ☑ No ☐ D/K
17.	If hydraulic equipment is present, indicate age of equipment and name/telephone # of service contactor: _____	☐ Yes ☑ No ☐ D/K

REGULATORY DISCLOSURE		
18.	Have there been any environmental liens or governmental notification or involvement relating to past or current use or disposal of hazardous substances with respect to the property of any facility or structure located on the property?	☐ Yes ☑ No ☐ D/K
19.	If the property is served by a private well or non-public water system, have contaminants been identified in the well or system that exceed guidelines applicable to the water system, or has the well been designated as contaminated by any government environmental/health agency? *(if not applicable, please check* NO*)*	☐ Yes ☑ No ☐ D/K
20.	Is there any environmental litigation, administrative action or cleanup action involving the property related to a release or threatened release of any hazardous substance or petroleum product?	☐ Yes ☑ No ☐ D/K
21.	Are you aware of testing of any environmental media (soil, groundwater, surface water, etc.) at the property which identified levels of contaminants in excess of regulatory standards and/or cleanup guidelines?	☐ Yes ☑ No ☐ D/K
ENVIRONMENTAL/BUILDING CONDITIONS		
22.	Has asbestos testing ever been conducted at the Property? *If YES, please forward a copy of test results and/or survey reports:*	☐ Yes ☑ No ☐ D/K
23.	Are any asbestos containing materials present at the Property? If yes, please elaborate: Possible Building Materials - Acoustic Ceiling and Room addition drywall (1964)	☐ Yes ☑ No ☐ D/K
24.	Has lead paint testing ever been conducted at the Property? *If YES, please forward a copy of test results.*	☐ Yes ☑ No ☐ D/K
25.	Is lead-based paint present at the Property? If yes, please elaborate:	☐ Yes ☑ No ☐ D/K
26.	Has radon testing ever been conducted at the Property? *If YES, please forward a copy of test results.*	☐ Yes ☑ No ☐ D/K
27.	Are there any problems with water intrusion, water damaged surfaces or excessive mold growth within the buildings? If yes, please elaborate:	☐ Yes ☑ No ☐ D/K

COMMENTS:

For any questions answered "YES" that warrant further elaboration, please use the following space as necessary:

HILLMANN
CONSULTING

Phase I ESA - User Questionnaire

Instructions: This form should be completed by a representative of the USER of the Phase I ESA report and returned to Hillmann via email, fax at 908-686-2636, or in person during the site inspection. Typically, the report USER is the entity on whose behalf the report is being prepared.

In order to qualify for one of the Landowner Liability Protections (LLPs)187 offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the "Brownfields Amendments"),188 the user must conduct the following inquiries required by 40 CFR 312.25, 312.28, 312.29, 312.30, and 312.31. These inquiries must also be conducted by EPA Brownfield Assessment and Characterization grantees. The user should provide the following information to the environmental professional. Failure to conduct these inquiries could result in a determination that "all appropriate inquiries" is not complete. Please complete the following questionnaire and provide any of the referenced information (if available) to Hillmann.

Respondent Name:	Steven J Guzowski
Company/Affiliation:	Great Scott Tree Service, Inc.
Address:	10761 Court Ave Stanton, CA 90680
Response Date:	06-06-19

1. Environmental liens that are filed or recorded against the property (40 CFR 312.25).

Did a search of recorded land title records identify any environmental liens filed or recorded against the property under federal, tribal, state or local law?

Yes ☐ *No* ☑

2. Activity and use limitations that are in place on the property or that have been filed or recorded against the property (40 CFR 312.26(a)(1)(v) and vi)).

Did a search of recorded land title records (or judicial records where appropriate, identify any AULs, such as engineering controls, land use restrictions or institutional controls that are in place at the property and/or have been filed or recorded against the property under federal, tribal, state or local law?

Yes ☐ *No* ☑

3. Specialized knowledge or experience of the person seeking to qualify for the LLP (40 CFR 312.28).

Do you have any specialized knowledge or experience related to the property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?

Yes ☐ *No* ☑

4. Relationship of the purchase price to the fair market value of the property if it were not contaminated (40 CFR 312.29).

Does the purchase price being paid for this property reasonably reflect the fair market value of the property? If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the property?

Yes ☑ *No* ☐

5. Commonly Known or Reasonably Ascertainable Information

Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example,

5a. Do you know the past uses of the property?

Yes ☑ *No* ☐

5b. Do you know of specific chemicals that are present or were once were present at the property?

Yes ☑ *No* ☑

5c. Do you know of spills or other chemical releases that have taken place at the property?

Yes ☐ *No* ☑

5d. Do you know of any environmental cleanups that have taken place at the property?

Yes ☐ *No* ☑

6. The degree of obviousness of the presence or likely presence of contamination at the property, and the ability to detect the contamination by appropriate investigation:

Based on your knowledge and experience related to the property are there any obvious indicators that point to the presence or likely presence of releases at the property?

Yes ☐ *No* ☑

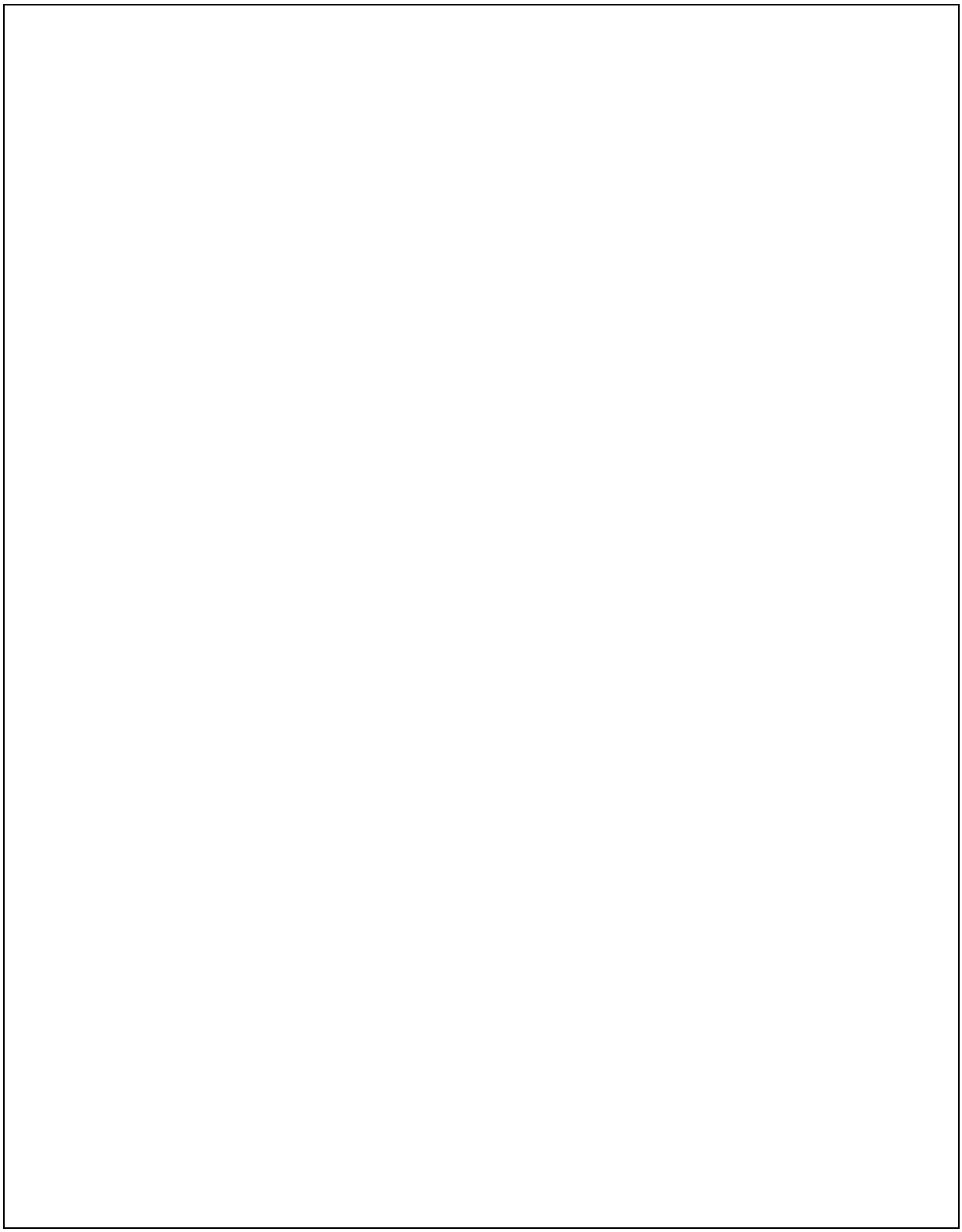
7. Litigation/Administrative Proceedings/Government Notices

As the User of this ESA, do have knowledge of *(1)* any pending, threatened, or past litigation relevant to *hazardous substances* or *petroleum products* in, on, or from the *property*; *(2)* any pending, threatened, or past administrative proceedings relevant to *hazardous substances* or *petroleum products* in, on or from the *property*; and *(3)* any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to *hazardous substances* or *petroleum products*.

Yes ☑ *No* ☑

Where applicable, provide additional details regarding any questions that were answered "Yes".

8. Reason for Performing Phase I ESA: Purchase, Financing, Development



APPENDIX D

HISTORICAL RECORDS DOCUMENTATION

Lake Forest

20865 Canada Road

Lake Forest, CA 92630

Inquiry Number: 5678687.8

June 11, 2019

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

06/11/19

Site Name:

Lake Forest
20865 Canada Road
Lake Forest, CA 92630
EDR Inquiry # 5678687.8

Client Name:

Hillmann Environmental Co.
1745 W Orangewood Avenue
Orange, CA 92868-0000
Contact: Shilpa Sunil

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

Year	Scale	Details	Source
2016	1"=500'	Flight Year: 2016	USDA/NAIP
2012	1"=500'	Flight Year: 2012	USDA/NAIP
2009	1"=500'	Flight Year: 2009	USDA/NAIP
2005	1"=500'	Flight Year: 2005	USDA/NAIP
1994	1"=500'	Acquisition Date: June 01, 1994	USGS/DOQQ
1990	1"=500'	Flight Date: August 29, 1990	USDA
1989	1"=500'	Flight Date: August 03, 1989	USDA
1980	1"=500'	Flight Date: November 21, 1980	USGS
1974	1"=500'	Flight Date: November 06, 1974	USGS
1972	1"=500'	Flight Date: October 30, 1972	USGS
1967	1"=500'	Flight Date: May 07, 1967	USGS
1963	1"=500'	Flight Date: February 28, 1963	USGS
1952	1"=500'	Flight Date: December 12, 1952	USDA
1949	1"=500'	Flight Date: May 05, 1949	USDA
1946	1"=500'	Flight Date: December 29, 1946	USGS
1938	1"=500'	Flight Date: June 21, 1938	USDA

When delivered electronically by EDR, the aerial photo images included with this report are for ONE TIME USE ONLY. Further reproduction of these aerial photo images is prohibited without permission from EDR. For more information contact your EDR Account Executive.

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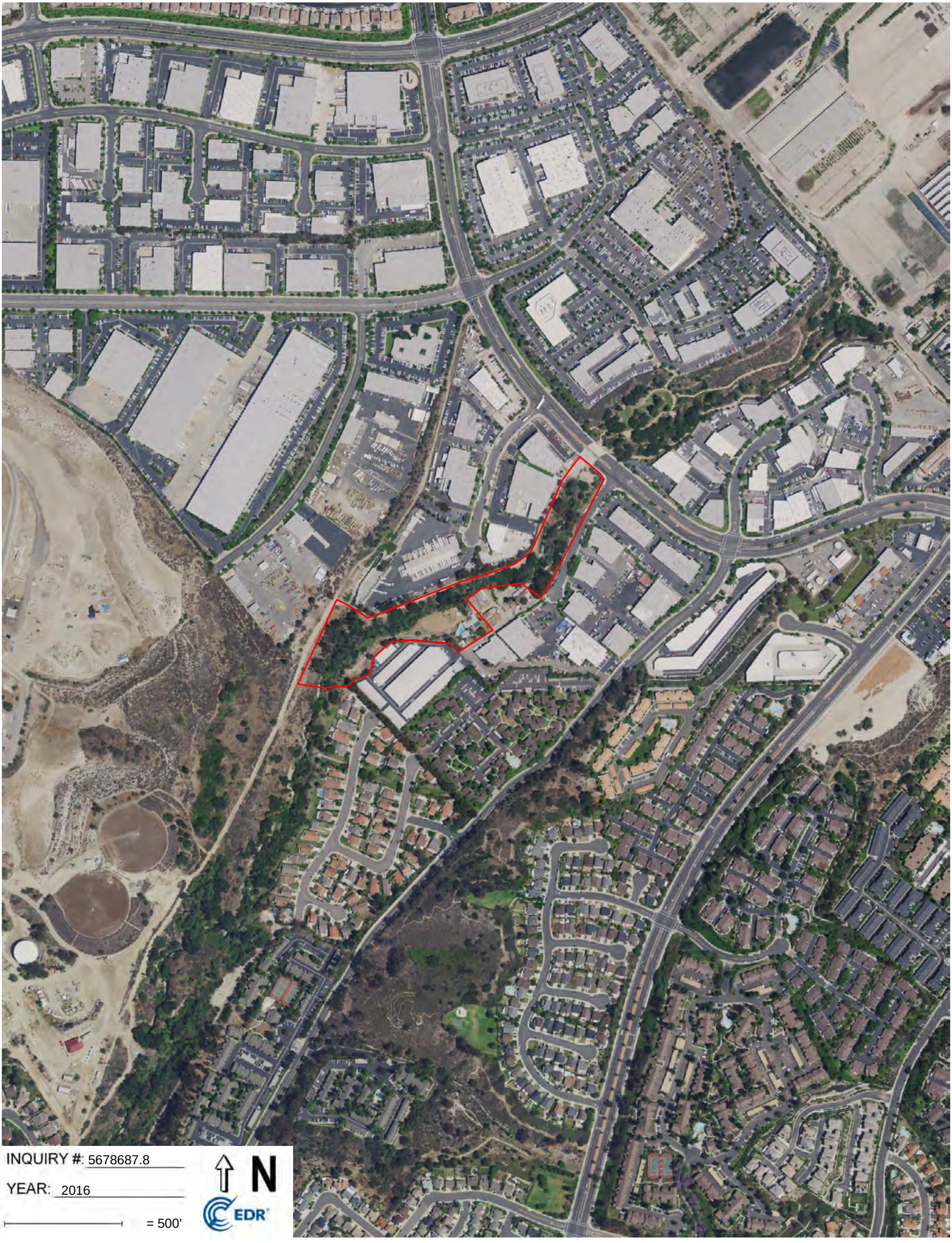
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YEAR: 2016
= 500'
N
EDR

INQUIRY #: 5678687.8
YEAR: 2012
= 500'
N
EDR

INQUIRY #: 5678687.8
YEAR: 2009
= 500'
N
EDR

INQUIRY #: 5678687.8
YEAR: 2005
= 500'
N
EDR

INQUIRY #: 5678687.8
YEAR: 1994
= 500'
N
EDR

INQUIRY #: 5678687.8
YEAR: 1990
= 500'
N
EDR

INQUIRY #: 5678687.8

YEAR: 1989

= 500'

N

EDR

Subject boundary not shown because it exceeds image extent or image is not georeferenced.

INQUIRY #: 5678687.8
YEAR: 1980
= 500'
N
EDR

INQUIRY #: 5678687.8
YEAR: 1974
= 500'
N
EDR

INQUIRY #: 5678687.8

YEAR: 1972

= 500'

N

EDR

Subject boundary not shown because it exceeds image extent or image is not georeferenced.

INQUIRY #: 5678687.8
YEAR: 1967
= 500'
N
EDR

INQUIRY #: 5678687.8
YEAR: 1963
= 500'
N
EDR

INQUIRY #: 5678687.8

YEAR: 1952

= 500'

N

EDR

INQUIRY #: 5678687.8

YEAR: 1949

= 500'

N

EDR

Subject boundary not shown because it exceeds image extent or image is not georeferenced.

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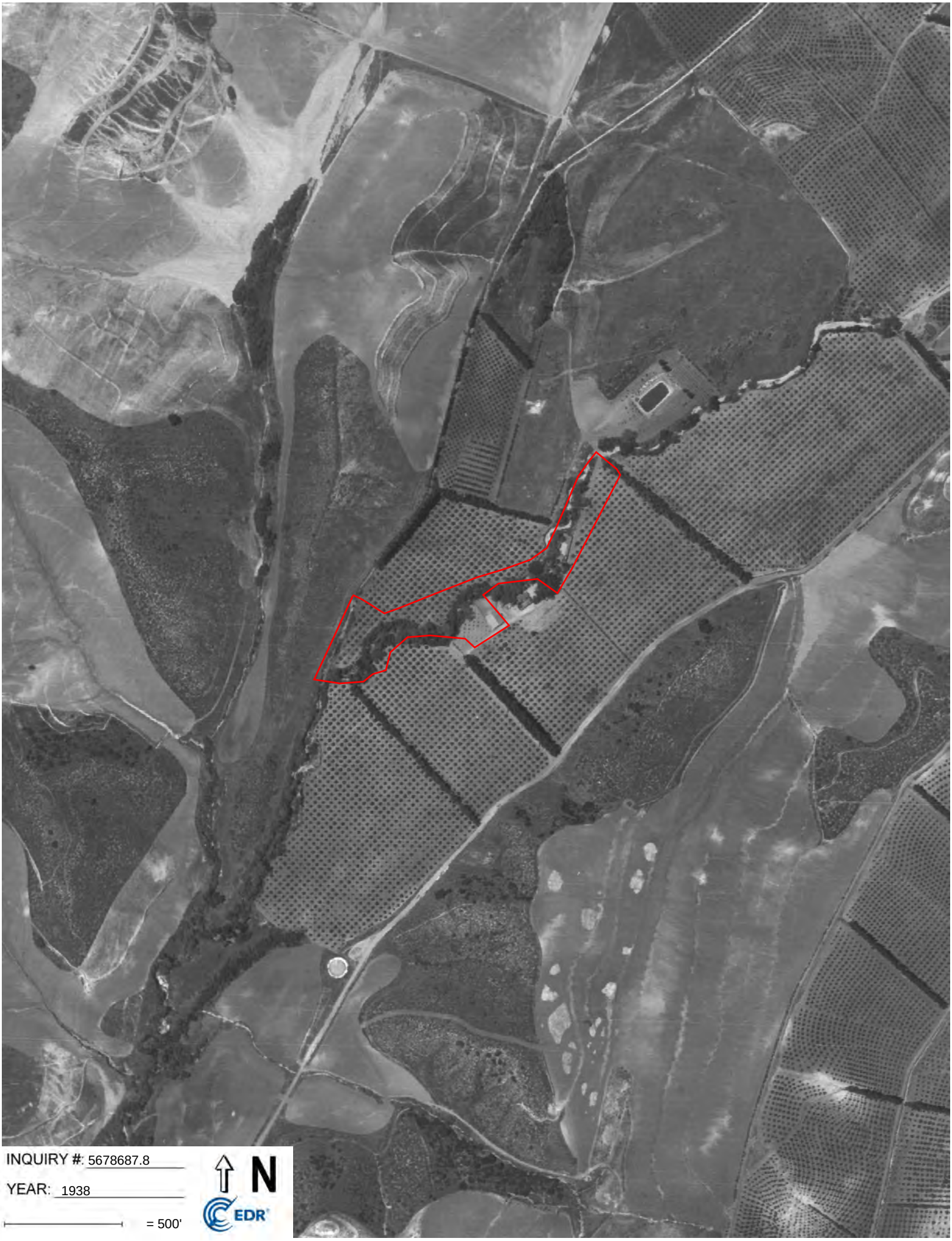
YEAR: 1946
= 500'
N
EDR



INQUIRY #: 5678687.8

YEAR: 1938

= 500'

N

EDR

Lake Forest
20865 Canada Road
Lake Forest, CA 92630

Inquiry Number: 5678687.5
June 12, 2019

The EDR-City Directory Image Report

Environmental Data Resources Inc
6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

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Findings

City Directory Images

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. **NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OR DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT.** Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction orforecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

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EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available city directory data at 5 year intervals.

RECORD SOURCES

EDR's Digital Archive combines historical directory listings from sources such as Cole Information and Dun & Bradstreet. These standard sources of property information complement and enhance each other to provide a more comprehensive report.

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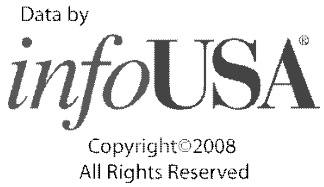

RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

Year	Target Street	Cross Street	Source
2014	☑	☐	EDR Digital Archive
2010	☑	☐	EDR Digital Archive
2005	☑	☐	EDR Digital Archive
2000	☑	☐	EDR Digital Archive
1995	☑	☐	EDR Digital Archive
1992	☑	☐	EDR Digital Archive
1985	☑	☐	Haines Criss-Cross Directory
1980	☑	☐	Haines Criss-Cross Directory
1975	☑	☐	Haines Criss-Cross Directory
1972	☑	☐	Haines Criss-Cross Directory

FINDINGS

TARGET PROPERTY STREET

20865 Canada Road
Lake Forest, CA 92630

Year	*CD Image*	*Source*
CANADA RD		
2014	pg A2	EDR Digital Archive
2010	pg A8	EDR Digital Archive
2005	pg A14	EDR Digital Archive
2000	pg A21	EDR Digital Archive
1995	pg A28	EDR Digital Archive
1992	pg A33	EDR Digital Archive
1985	pg A36	Haines Criss-Cross Directory
1980	pg A37	Haines Criss-Cross Directory
1975	pg A38	Haines Criss-Cross Directory
1975	pg A39	Haines Criss-Cross Directory
1972	pg A40	Haines Criss-Cross Directory

FINDINGS

CROSS STREETS

No Cross Streets Identified

City Directory Images

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

CANADA RD 2014

20747 ESQUIVEL, MARIA
20761 IMEX VISION LLC
LULYBOO LLC
20781 IRVINE AUTO REPAIRCOM
MCLAREN UNIBODY INC
20792 SHMAZE INDUSTRIES INC
20795 COHEN RICHARD LDSCP & CNSTR
20845 CAMALI CORPORATION
ENERGY SUPPORT PRODUCTS
20941 AMERICAN MINI STORAGE
21140 NAVA, STEPHANIE
21141 A-WESTGIFTSCOM LLC
AMAYA, ANA O
ANDERSON, TERRA
ASSOIAN, SILVA
BARACALDO, JORGE
BAYOTLAMIREZ, MAEMAE
BEARDEN, ARTHUR L
BERUMEN-MEZA, LUIS
BOWERS, CHERYL L
BRADY, BARBARA
BUBOI, REBEKAH L
BUKHARI, ALI S
BUNCH, SHERVIN S
BUTATZ, WILLIAM A
CALDERON, HECTOR L
CARLOS, IRESA M
CARTER, DARRYL
CASTANEDA, ESTEFANY
CASTRILLON, OSCAR A
CHATONEY, GERALD D
CHAVEZ, OLELDA
CHERDOUD, ZINO
CHRENOW, CHRIS
CLARK, GEORGE W
CLEVELAND, LORENA V
COATS-PARIS, PATRICIA A
COPPOLA, MARSHA
COTTERELL, MICHAEL W
CRANE, MARK A
DAHLKE, DELORES
DANH, DANNY
DASHTESTANI, AREZOU
DELANO, DOUGLAS H
DELATORRE, IMELDA
DEPPE, RANDALL I
DEROSA, FRANCO
DESROSIERS, DANA L
DUNN, KARI J
EKHTIAR, ALEN

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

CANADA RD 2014 (Cont'd)

21141 EMENS, ROBERT R
FAZIO, SUSANA S
FERNANDEZ, CARMEN
FISHER, CURTIS R
FLINT, PEARL
FOSTER, GERALD
GALVEZ, EDWARD G
GARCIA, MARIO A
GONZALES, GEMMA G
GUEVARA, ADA
GURON, AJAY P
HAMILTON, JASON H
HARDY, DENISE S
HERNANDEZ, OSCAR E
HIGGINS, DUSTIN
HILL, EDGAR J
HUERTA, LUCY
ISKANDER, SARWAT A
JEON, THERESA
JOHN, WENDY
JOHNSON, DAVE B
JONES, DANIEL A
KEZMOH, JUSTIN M
KHAN, AMIR
KIRK, BRANNON
KUCHINSKY, DAVID W
LAMBA, ROHIT
LARA, MARISOL
LECOMPTE, JEFFREY L
LEE, GEORGE
LIBEJAS, GABRIELA E
LIESENFELT, ANNA M
MARIOTTI, FERESHTEH
MARTINEZ, GUSTAVO
MEYERS, JOHN A
MOGHANI, KAMBIZ
MORADO, HELEN
MORALES, RUFINO
MORENO, BERNARDITTA G
MUHTAR, HIDAYAT
MULLINS, SHIRLEY A
NAVIDI, MOE H
OLIN, JOSHUA
PANTHI, SUNIL
PASSMORE, RANDY N
PEREZ, ALMA
PETTY, FELICIA
PIKALOV, PAVEL A
PINTO, JASMINE
PISTEY, JOSEPH V

CANADA RD 2014 (Cont'd)

21141	POLANCO, RAYMUND
	RECTO, HEIDI R
	REYES, CIRO
	REYES, MICHAEL F
	RIVERS, CYNTHIA A
	ROBERTS, MARTHA B
	RODRIGUEZ, VICTOR R
	ROMERO, RALPH M
	RORMAN, LAURIE A
	SOMMERS, ADAM
	SRIKANTAIAH, NAVEEN A
	STEINFELD, TAMISHA
	STOPYRO, EDWARD J
	SUNIL, JAYA
	SUTTON, JEANETTE
	TREBLE, CHRISTOPHER D
	TRIPATHI, KAMYA
	VALADEZ, OLGA
	VALDOVINOS, RAMIRO L
	WALKER, MONA
	WESTPHAL, SARAH
	WOLFE, DANIEL A
	WORHMAN, RICHARD R
	YOUS, KIMBERLY
21142	AFSHAR, FARHAD I
	ARTUZ, CHRISTEL
	BARBACANO, RAYMOND T
	BENZINGER, BARBARA J
	CATON, BRITTNEY
	CHATONEY, CHRISTOPHER A
	CHRSITIAN BOOKS CHEAP
	CLINTON, MICHAEL
	CRUZ, ROBERT
	DELA, CRUZ
	DINESH, KUMAR M
	EISELE, AMANDA
	FALK, BELINDA D
	FOSTER, CHRIS B
	FROST, NATHAN T
	GILLESPI, NICOL N
	HALLMAN, JOHN E
	HAMIDI, FARNOUSH
	HERNANDEZ, EDILBERTO
	HULTBURG, KIMBERLY A
	IMANI, VANDAUD
	JOHNSON, RONALD L
	KEEGAN, MICHAEL
	KONIECZKA, KELLI L
	LUNA, ELIZABETH A
	MEYER, TRACY

CANADA RD 2014 (Cont'd)

21142	MOCHIZUKI, JON A
	MORSE, TEENA M
	MOSICH, RACHEL L
	NESTOROVA, LILYANA
	OAKLEY, STEPHEN
	OPANASIK, EVGENIYA
	PADLAVAN, MARGIE
	PEREZ, FERNANDO G
	PETERS, SAPPHIRE X
	PLEASANT, ERIC
	ROJAS, MIRIAM M
	SAMIMI, VARGHA
	SANCHEZ, JORGE
	SCIOLINI, VANINA M
	SIKKA, PANKAJ
	SMITH, HARRY
	SMITH, LAURA
	TARZJANI, PAYAM D
	TEPATZI, JAMES
	THOMAS, DUANE
	VALENCIA, GUSTAVO
	WAY, WILLIAM A
	WETENKAMP, HERB D
	WRIGHT, JOSEPH J
	YEE, DARREN
	ZUNINO, MARIO R
21631	RICHARDSON, MARYANN
21641	ALLEN, MARGARET A
	ALSAYIL, TAHANI
	ANDERSON, MELBA L
	ANDREW, WILLIAM M
	BANG, ESMAT
	BONN, LEACY E
	BREESE, BONNIE L
	BREISCH, CHRISTINE A
	BUKACEK, ROXANE D
	BURCHELL, LAUREL D
	BYKOVSKY, IRINA
	CARNEY, MIA
	CASTILLO, JOSE
	CHANCHANI, RAVIN
	CLEMENTS, GEOFFREY S
	CONWAY, SHAR E
	CROOK, BRANDON N
	CUERVO, JORGE A
	DADDIO, MARIA
	DEFLORA, MAUKALI W
	DEMAREE, MARCEL H
	DIMALANTA, JILLIAN M
	DUPONT, ROGER A

Target Street	Cross Street	Source
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CANADA RD 2014 (Cont'd)

21641 EGGEN, MARK R
ELIAS, DEREK
ELIAS, JACQUELIN E
ENAYATI, REZA
ENG, HO
FAJARDO, JOSE M
FIANDACH, SANDRA G
FIELDS, JENNIFER L
FITZ, TIMOTHY M
FLORES, VICTOR M
FREGOSO, TRAVIS
GALICIA, ANDRES
GAMEZ, KEIKO Y
GARCIA, ARACELI
GARCIA, JUDY A
GARFIAS, PAULO
GILBERT, JAMES R
GUTSCHE, DIANE E
GUTSCHE, MARY C
HEIZER, BRETT E
HENN, SHELLY
HENNING, CHRISTOPHER R
HILL, JULIE C
HUANG, ALEX C
HUERTA, ARGELIA
JENNINGS, THOMAS
JUAREZ, JUAN
KALLAO, ALEXANDER
KEENAN, HUNTER A
KENNEN, W U
KOZICK, MARGARET
LAVARDENZ, DOUGLAS
LE, KENNY B
LOPEZ, ISAAC
LUDOLPH, CHRISTOPHER
MARTIN, RAY J
MATA, KRISTINE D
MAYS, KHRISTINE
MEADOWS, JULIE M
MILLER, KRISTI D
MOERAD, IRMA I
MOFIDI, SHAMSI
NANI, ELVERA
NECULAU, NADIA E
NELSON, WILLIAM E
PADDEN, LISA A
PARTIN, MARCI L
PAYKOV, SERGEY L
PELIYAGODA, PRA
PENA, AIDA

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

CANADA RD 2014 (Cont'd)

21641
PHILLIPS, JOSHUA
PHILLIPS, M
ROBINSON, MICHAEL D
RODRIGUEZ, CELIA
RODRIGUEZ, FIDEL R
ROTH, JINA J
RUIZ, MARY
RUNGTHIRAKUL, SHAUNA
RUSSELL, CHUCK D
RYNSBURGER, JASON
SALCEDO, JOSELUIS C
SANCHEZ, BRIAN A
SANCHEZ, ROSA E
SAVLOV, MELISSA Z
SCHWARTZ, NAILA E
SCOTT, DORAN L
SMITH, KEISHA M
SMITH, RUTH G
STANTON, VICTORIA
STATLER, NOREEN
SULEK, ZENON
TAMASHIRO, HIROKAZU
TAYLOR, KALEE D
VANN, JACOB M
VARGAS, LUCINA
VIVAS, FELIPE
WATI, HARMA
WATT, MARY
WEERASURIYA, ENOKA D
WESTERN NATIONAL SECURITIES
WHALEN, MAUREEN T
WHITLEY, BRANDON
WILLIAMS, CRAIG
WOOD, HARLA J
ZHENG, ANGELA L

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

CANADA RD 2010

20747 ESQUIBEL, MARIA
20749 GUZMAN, MIKE J
20761 FLAME & WAX INC
ICP
20781 MCLAREN UNIBODY INC
20792 SHMAZE INDUSTRIES INC
20795 COHEN RICHARD LDSCP & CNSTR
20845 CAMALI CORPORATION
ENERGY SUPPORT PRODUCTS
20865 CANADA RANCH STABLES
HESS RONALD CONSTRUCTION
20941 AMERICAN MINI STORAGE
21141 A-WESTGIFTSCOM LLC
ABDULLA, FARHAD
ADAMS, KELLY
ALIJAFARI, PARVIZ
ARATOUNIANS, ARSINEH
BABCOCK, PHIL
BEJEREA, MIHAI
BRADY, BARBARA
BUNCH, SHERVIN S
BUTATZ, WILLIAM A
CARRACO, DANIEL
CASTELLANOS, LEON
CHATONEY, GERALD D
CLAVER, DAVID J
CLEMENS, JOE
COLLINS, GENE C
CORRAL, TERESA
COTTERELL, MICHAEL W
CRECELIUS, RYAN
CRUZATE, SUSANA S
DAM, WILLIAM A
DANH, ROSE T
DANIELS, MARK A
DELANO, DOUGLAS H
DESROSIERS, DANA L
DRIGGERS, JUSTIN B
ELIASON, DONALD
ESPOSITO, MARY V
FAHANDEZ-SADI, SHAGHAYEGH
FREYDOONI, MIKE
FRIED, ROBERT J
GAO, HONGXIA
GARNER, ANGELIQUE M
GERAMI, MENOOSH E
GIFFORD, S
GONZALEZ, ANA
GRAY, KATHLEEN A
GRUENER DREW

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

CANADA RD 2010 (Cont'd)

21141 GUTIERREZ, ISAIAS M
HAMILTON, JASON H
HARDY, DENISE S
HENTON, CHANDRA L
HERNANDEZ, JOSEPH
HERNANDEZ, OSCAR
HERNANDEZ, PEDRO
HOANG, EVA D
HONGXIA, GAO
HUERTA, LUCY
ISKANDER, SARWAT
JABR, SAED
JOHNSON, DAVE B
KANNAN, KRISHNAN
KAUPERT, KEVIN
KAZIMI, MOHAMMAD
KEITH, HOWARD R
KEZMOH, JUSTIN
KUDTARKAR, PRAVI
KUMAR, ARUN
KVAERNER, SUNHWA
LEE, GRACE
LICEDA, FEDERICO
LINE, REBECCA
LUNARIA, ROGELIO
MACIEL, EUGENE
MACKLIN, KYLA L
MADAR, PATRICIA S
MARTINEZ, GUSTAVO
MCKEMMA, TIFFANY S
MERITT, GEORGE
MOGHANI, AAMBIZ
MORENO, BERNARDITTA G
MOSICH, RACHEL L
MULLINS, SHIRLEY A
MUNSHOWER, CHRISTINE
MURADYAN, ARMAN
NAIR, SANDEEP
NANCE, KAREEM
NARAPUREDDY, SARATH
OCONNOR, DAVE L
PASCHKE, RAYMOND N
PATTON, STEVE W
PENG, JAYSON B
PERONA, MAE
POWELL, NICHOLAS J
PRISCO, GERALD J
PROGRESSIVE SOFT TECH INC
RAMIREZ, JESSICA
RAMSDEN, SHAULA V

CANADA RD 2010 (Cont'd)

21141 REVELL, SHIRLEY A
ROBERTS, MARTHA B
ROBINSON, HEIDI M
ROBLES, MARIANA
RODRIGUEZ, JAIME
ROJAS, ISAAC
SANTOS, RUBEN V
SCHLICHT, JEANNE S
SEGUI, HECTOR
SEXTON, NICOLE
SHAH, ANSUYA
SHENOY, SHARATH
SHRIVER, JUDY M
SOMMERS, ADAM
STAMBAUGH, LISA L
SUAREZ, MIRYAM P
SWANSON, DARLENE K
TABASSO, JASON T
TAJONAR, HORACIO
TAMEZ, RONALD
TJIAUW, YULIA
TOLMICH, RICHARD F
TOM, JAMES E
TRAMBLAY, MATTHEW
URRUTIA, ASHLEY
URRUTIA, MARIA A
VAHDAT, NONA
VOS, WHITNEY L
WADE, MELLISSA
WAREH, BEVERLY
WINEMAN, MICHAEL L
WINSLOW, SCOTT C
WOLFE, DANIEL
WOOSLEY, KELLY J
ZANANIAN, ALI
ZUNINO, KORI

21142 AFSHAR, FARHAD I
AGUIAR, ANTHONY
ALL THE RAVE ENTERTAINMENT
AMANTE, PAUL L
BAUTISTA, NATHANIEL S
BLAKE, PHILLIP
BOLOURIRAD, BLAKE
BORZONI, KELLY
CATON, BRITTNEY
CHRSITIAN BOOKS CHEAP
COOMBS, KELLY
COTTEN, JENNIFER C
DE, CINTORA E
DRENNEN, ROGER

CANADA RD 2010 (Cont'd)

21142 GILLESPIE, NICOL
GONZALEZ, CATALI
GONZALEZ, MARLENE
GOPINATH, BIJU
GUERRA, E
HERNANDEZ, EDILBERTO
HILL, EDGAR J
HOUSER, LAVALLE
HULL, JENNIFER
HULTBURG, KIMBERLY
JACOBS, KIMBERLY A
JACSEN, JAMAL
JOHNSON, TERESA A
KELKA, MICHELLE
KONIECZKA, KELLI L
MANNI, CABBY
MARTINEZ, JUAN
MOCHIZUKI, JON
MORALES, SAMUEL
MOSICH, RACHEL
NGUYEN, TIFFANY N
ORTIZ, FERNANDO R
PARKER, CHRISTOPHER
PASSARELLA, RACHEL
PEREZ, FERNANDO G
PLANTE, ALLISON
POWELL, ROGER A
RAHIM, ALI M
ROACH, KATLIN
ROBIN, FENY
RODRIGUEZ, MIGUEL J
RUIZ-SILVA, JESICA
RUSSO, DANIEL
SAHEB, MINA
SILVA WOOD FINISHING
SWAIM, BENJAMIN
TEPATZI, JAMES
THOMAS, DALIA
TORRES, EDUARDO L
TUAZON, RUEL Q
VALENCIA, GUSTAVO
WAY, WILLIAM
WELLS, R
WRIGHT, JOSEPH J

21641 ALVARADO, RENE A
ANDERSON, GARRETT
ANDREW, WILLIAM M
ARNOSIO, FRANCO
AROUZA, KEVIN J
ARTESANI, MARY

CANADA RD 2010 (Cont'd)

21641 BAILEN, MARTY
BAKER, CELESTE E
BARAY, LIELA
BAYOTAS, HENRI B
BILOW, JOSEPH
BINGHAM, TAMMIE L
BONHAM, JASON P
BRADLEY, JOSE F
BREISCH, CHRISTINE A
BROWN, JAMES C
BURCHELL, LAUREL D
CALDWELL, KAREN A
CHAIREZ, CONSUELO
CHINO, YURIKO
CHOI, JOO S
CHRENOW, CHRIS
CLEMENTS, GEOFF S
COLLIER, DANIEL
COONEY, CHRISTOPHER
CROWE, JODI A
DEHIPOLA, ERANPHI
DELEON, JORGE
DEZOYSA, HEMAMALI
DMARIE LAND AND SEA TRAVEL
DOAN, DIRISSY D
DONDAPATI, RAVI
ELIAS, DEREK
ENG, HO
ESPINOZA, RAFAEL
FALK, BELINDA D
FARFAN, DORA
FIELDS, RYAN M
FLORES, ANGELICA
GALICIA, ANDRES
GALLAGHER, MARK A
GARCIA, ABEL
GARCIA, ARACELI
GARFIAS, PAULO
GIL, ANGELICA
GRANADOS, ANTONIA
GUNARATNE, OBERIYAGE
HAWKINS, RON G
HERNANDEZ, DAMARIS
HOCKERSMITH, MATTHEW T
HOPKINS, LEO
HUERTA, ARGELIA
JENNINGS, THOMAS
JUAN, CARMELA
JUAREZ, MARTINA
KNIGHT, PATRICIA A

Target Street	Cross Street	Source
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CANADA RD 2010 (Cont'd)

21641 LAMAR, FREDERICK
LITTLE, SCOTT A
LUK, LINCOLN
MAGALLANES, JOSE L
MALDINI, AXEL C
MARTIN, RAY J
MEJIA, JUANITA
MILLWARD, ADAM
MOAYEDGHIASI, REZA
MOUTUNES, MANSOL
NECULAU, NADIA E
NGUYEN, HIEU
OHARE, NICHOLAS
PELAYO, DANIEL
PHILLIPS, M
PHOENIX, GLENN
RAMIREZ, CARMEN
REEDER, JODY S
RICHARDSON, PAUL H
ROBINSON, MICHAEL D
ROBLES, SIRIA
RODRIGUE, VICTOR
RODRIGUEZ, GREGORIO
ROTH, ASHTON
RUSSELL, CHUCK D
SANCHEZ, BRIAN
SATHEES, THANABALASINGAM
SCOTT, SARAH
SERRANO, GILBERTO
SHAH, MAULIK D
SOLOMON, ZENON
STOPNIK, ERIC C
SULEK, ZENON
TAMASHIRO, HIROKAZU
TAYLOR, KALEE D
TSHCHUDY, JERRY
URCIA, REGINALD I
VICTORIANO, QUIRINO
VIDAL, FERNANDO
WATSON, LYNDA L
WEERASURIYA, SARATH
WESTERN NATIONAL SECURITIES
WHALEN, MAUREEN T
WILLIAMS, CRAIG
WILSON, COLLEEN
WILSON, MICHELLE B
ZHENG, ANGELA L
ZHOU, YOUWEI

Target Street	Cross Street	Source
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CANADA RD 2005

20683	BAKER RANCH
	SHAE PROPERTIES BAKER RANCH CO
20749	GUZMAN, MIKE
20761	GRAPHIC ACQUISITION INC
20781	MCLAREN UNIBODY INC
20792	SHMAZE INDUSTRIES INC
20795	COHEN RICHARD LDSCP & CNSTR
20849	CAMALI CORPORATION
20865	CANADA RANCH STABLES
	HESS RONALD CONSTRUCTION
20941	AMERICAN MINI STORAGE
21141	ANDERSON, ERIC C
	AZIZ, ZAHRA
	BAKHTJOU, RITA
	BARBAZON, RYAN P
	BARKER, MELISSA
	BETHEA, DAVID
	BLOOM, CHRISTOPHER
	BLUME, JENNIFER
	BUNCH, SHERVIN S
	CALDERON, LUIS A
	CANTOLA, SHAYNE A
	CARPENTER, STEVEN W
	CARTER, JASON
	CESPITES, THOMAS
	CHOI, ANDREW
	CIPRES, JESUS J
	CLEARWATER, LINDA
	COOLS, EUGENE L
	CORNING, SUE C
	COTTERELL, MICHAEL W
	COWAN, KEITH
	COX, SALLY A
	DELANO, DOUGLAS H
	DEMATEO, VICKY
	DESROSIERS, DANA L
	DOHERTY, KEVIN
	DOMINGUEZ, JOHN A
	ELLIOTT, ROBERT M
	EMERALD COURT APTS
	ESPARZA, EYOWYNE
	FANNYAM, DEHROUZ
	FELDKAMP, THOMAS R
	FISHER, CARLY
	FLINT, TIM R
	FLOWERS, NATANIEL
	FORBES, J
	GAINOR, RICHARD H
	GAN, JIM
	GHABIMIAN, VAHIK

CANADA RD 2005 (Cont'd)

21141 GLAZE, LORI
GOVINDARAJU, SOM
GRAU, NEIL R
GRAY, BILL O
GUBBRUD, ALLYSON
GUNTAKA, P
GUPTA, POONAM
HAMILTON, JASON
HASS, DAVID G
HENTON, CHANDRA L
HERRERA, ALMA D
HOANG, EVA D
HYMEL, KATHRYN
ISKANDER, HABIB M
JOHNSON, DAVE B
JONES, EMMA
KAMAL, GAD
KAMALI, SHAHED
KENNEDY, ANGELA
KEZMOH, JUSTIN
KHAN, REHAN
KIM, UNA A
KING, REGINA M
KINNAL, PRAKASH S
KIRK, DEBORAH A
KOSMIS, JAN
KUDTARKAR, PRAVI
LACY, RAESHAUNTA S
LADNIER, KELLIE W
LAMBA, ROHIT
LEA, SANDRA
LINDSAY, JON B
MAGANA, PATRICIA L
MAKARESHIAN-HAMEDANI, R
MAKSOUD, KARIM A
MANDUJANO, MARTHA
MCCONNELL, MEGAN
MCCOY, MICHAEL
MCKEMMA, TIFFANY
MILLER, FRANK
MORENO, ALMA D
MUELLER, PAUL N
MURPHY, ANDREW D
NGHIEM, TONY
ONEIL, COREY S
ORTIZ, DARREN
PARHAM, BILL
PAVICH, ELVIRA E
PETERSON, TROY F
PIFER, NICK

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CANADA RD 2005 (Cont'd)

21141	PIKALOV, PAVEL A
	PONG, JOHNNY
	POUIAN, FRED
	PREZIOSI, MARK C
	RABINOWITZ, DENISE M
	RECHDAN, RAESHAUNTA
	RECHDEN, RAESCHAUNT
	REVELL, SHIRLEY A
	RIVERA, DAVID L
	ROCHELEAU, BRUCE
	RODRIQUE, KENNY
	ROZANCE, RICHARD J
	RUNION, TAMARA
	SACKS, NANCY
	SANTOS, RUBEM V
	SENYO, DENISE
	SHINTSUBO, ICHIRO
	SIMON, JANENE
	SMITH, TAYLOR A
	SPEAKMAN, KATHY T
	STAIMER, NORBERT
	STAMBAUGH, LISA L
	STEWART, GINA F
	STRAWN, MICHAEL S
	SULLIVAN, CINDY
	TA, HUONG
	TEEL, TRACI
	TELLEZ, RAFAEL C
	THOMAS, PATRICIA A
	TO, THONG L
	UHL, JEFF S
	URBANSKI, LAWRENCE
	VILLA, MIRIANNA
	VIOLETTE, SUSAN R
	VOSS, GORDON B
	WAITMAN, JOE
	WALDE, AL G
	WALKER, SUSAN B
	WALL, BRIAN
	WEAVER, CURTIS G
	WESTERN NATIONAL PROPERTIES
	WHITAKER, THOMAS E
	YELLETI, SRINIVASA
	YOUNGS, ROY
21142	AMANTE, PAUL L
	BEHMANESH, PARVIN
	BRADARICH, DANA
	CAIN, DAVEE
	CONTREAS, B
	CONTRERAS, BELEN R

CANADA RD 2005 (Cont'd)

21142 COX, TROY D
DREW, KIRK
DYESS, PATRICIA J
EPPINGER, EDWARD J
ESPINOZA, ROSA
FLETCHER, JASON
GARCIA-GOMEZ, DAVE
GAY, CARRIE
GEULD, RUI
GILLESPIE, NICOLE
GOULD, LYNDA M
HENSON, PEGGY
HERNANDEZ, PEDRO
HILL, EDGAR J
HOEHN, ED C
HOUPT, JOE E
JOHNSON, BRIAN D
JOHNSON, TERESA A
KELLEY, BRIAN W
KIMBER, H
LAM, VINCENT
LOPEZ, R D
MILES, JASMINE
MYERS, STACEY
NEIDERMAYER, LYLIA
NOENICKX, EDWARD
OROZCO, ARTURO
PATHAK, AMISH
PETERS, JERI
PETERSON, KENNETH R
POE, SHANNA S
RAVINDRANATH, ANIL K
READY, RON E
RIFKIN, LINDA M
ROSANELLI, LOUIS L
SABILLON, ALICIA
SHIFT CONSULTING
SIDDIQUI, FORHAN
SUPER, DAVID
TOWNLEY, ASHLEY
TRAN, LIEM
TREXLER, SHARON
TRIEU, HUY G
VALENCIA, JESSICA
VEJAS, PAULINE
VICTORIANO, QUIRINO
VIDAURE, MAGDALENA S
VIRAMONTES, JONATHAN
WHITE, TERRY A
WHITNEY, HEATHER

CANADA RD 2005 (Cont'd)

21142 WICKLUND, WALTER J
WONG, ALONSO
WORDEN, ALIX E
WRIGHT, JOSEPH J
ZHANG, WEMGFANG
21143 MALDANODO, CARLOS
21641 ADLPARVAR, PAYAM U
ANDERSON, PAUL A
ARAGON, ANGIE L
ARDITO, MARGARET A
ARTESANI, MARY
BARAY, LIELA
BARRIOS, MARICELA
BEAL, ALEXIS
BISHOP, FREDRIC L
BOAG, WILLIAM
BRANT, GABRIEL
BREISCH, CHRISTINE
BROWN, ASHLEY
BRUNO, SHARI D
BURCH, CHRIS
CARMONA, HERIBERTO
CASTELLANOS, CESAR
CASTRO, REMIGIO R
CHANCHANI, RAVIN
CHAVEZ, MARINO
CHIVUKULA, KALPANA
CORTES, LOUIS
DAOANG, ROBIN A
DEALMEIDA, ROBERT
ENG, HO
ENRIQUEZ, STEPHEN
ENTEZAM, MAJID
ETEMADI, HOSSEIN
FABULA, NEIL W
FALK, BELINDA
FINELL, MARLENE C
GALLAGHER, MARK G
GARCIA, BENEDICTO
GEEVARGHESE, SAJU
GENOVENE, L
GERAMI, BEHNAM
GIRAS, RANDALL
GOMEZ, WALTER G
GONZALEZ, GRACIELLA
GOOD, ROBERT
GREEN, GREGORY P
GUALBERTO, VIRGINIA N
GUNATILAKE, SHAN
HAWKINS, RON G

CANADA RD 2005 (Cont'd)

21641 HERNANDEZ, GRACIELA
HERSCHBERGER, T
HILL, MELBA L
HUNTER, GAYLE L
JANG, OSCAR
JENNINGS, THOMAS
KANCHERLA, VENKAT
KAYVON, SABRINA W
KAZEMINY, NASSER S
KHOGYANI, RONA
KRISHUAPPANAIDU, VASEDEVAN
LALJEE, FAISAL
LAUER, WAYNE S
LAUREL, RICARDO P
LOGASUNDARAM, KARTHIK
MACE, TODD
MANION, MIMI
MARTIN, RAY J
MAZZO, JOSEPH
MCCASOLN, JILLIAN
MCLAY, SUZANNE
METLAPALLI, RAMANA V
MEYER, ROBERT D
MILLER, ADAM
MIRANDA, A F
MISAGHI, ALI
MOAYEDGHIASI, REZA
MONTOYA, CARLOS E
MORENO, MARTHA
NECULAU, NADIA E
NURTANTO, YANTI
OJEDA, MARIBEL
ONG, PAULA
ORTEGA, CARLOS
PADALIKAR, RAHUL
PARK, EUI Y
PARRA, JAVIER
PECK, LUCAS
PEREZ, GARCIA F
PERUSINGHE, AMIT
PETERSON, JAMES S
PETRINO, RICHARD
PHAM, YUEN
PINEDA, KENIA
PURVIS, NANCY A
RIGGLE, STEVEN L
RILEY, SUZANNE
ROBINSON, JANET L
ROLLINS, THOMAS J
RORACA, GABRIEL

CANADA RD 2005 (Cont'd)

21641 RUIZ, M
SADEK, AHMRAD
SAEIDI, KHOSROW
SAMARANAYAKE, PADMA
SANCHEZ, ADRIAN
SCHIFF, JOHN E
SCHRENZEL, EDWARD
SHAH, MAULIK D
SPEARS, ANN
SPENCE, CARRIE
STARLING, JENNIFER
STRATTON, VALERI
SWOAGER, JAMES M
SYEDMOHAMMED, HARISH
TAMASHIRO, HIROKAZU
TOLOSA, DANIEL
TRACY, ERIC J
UPPALAPATI, SARAT
VALENTIN, ORLANDO L
VILLEDA, MA R
VISWANATHAN, MURUGAN V
WANG, JOYCE
WATSON, LYNDA
WATSON, STEPHANIE
WEERASINHA, HARIN
WEERASURIYA, ENOKA D
WLCO, L F
YOSHIOKA, RANDY J
ZHENG, ANGELA L

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CANADA RD 2000

20683 BAKER V P ET AL
20749 GUZMAN, MIKE
20761 GRAPHIC ACQUISITION INC
GUERINEAU, CLAIRE A
INTERNATIONAL COLOR POSTERS
20781 MCLAREN UNIBODY INC
20792 SHMAZE INDUSTRIES INC
20795 COHEN RICHARD LDSCP & CNSTR
OCCUPANT UNKNOWN,
20865 CANADA RANCH STABLES
GAHN, ALICIA C
HESS RONALD CONSTRUCTION
HESS, DON
20941 AMERICAN MINI STORAGE LTD
21124 LEESEBERG, DARCY E
21141 1ST CALL PRODUCE BROKERAG
ABDUL, SOHEILA
ADL, MAZIAR
AHMAD, M
ALEXANDRA GROUP
ALONZO, OLIVIA R
ALVAREZ, ALMA F
AMIN, ADEL
ANNESI, PETER T
ARRIOLA, SUDELE B
ASLAMI, FAROOK M
BARNES, JUSTIN
BAUER, MARK D
BELL, JOHN N
BERNARD, DANIEL J
BLUME, J
BOOTH, DAVID
BOWMAN, C
BROOKS, S A
BURT, TIMOTHY
CALDWELL, BRANDON L
CALLAHAN, C J
CANNON, G
CARREON, ANGELA
CASTILLO, K
CHANG, KENNETH
CHUNG, SANG W
CORTINO, RUDY L
COSTELLO, DANIEL
CROCKETT, DAVID
CRONIN, SARAH E
DELL, A
DEMATEO, VICKY
DESROSIERS, D L
DUBOVOY, DMITRY

CANADA RD 2000 (Cont'd)

21141 ELIA, VICTOR A
ERICKSON, LAURIE A
FARMER, KENNETH D
FREISTROFFER, TAM M
FULTZ, JOHN
GARCIA-GARCIA, JUAN C
GARNER, A L
GARRISON, LLOYD
GAUDETTE, STEPHEN M
GOMEZ, RAUL
GONZALES, J
GREGG, S A
GRIMSHAW, JACK D
HAMILTON, JASON
HASAN, SYED S
HAYDEN, BEBORAH
HEDRICK, JEFFREY V
HERNANDEZ, RAUL D
HOVEN, PIPER V
INTEGRATED NETWORK CONSUL
JAGANNATHAN, S
JANCZAK, JASON M
JAVID, ANIS
JAVIER, ELISEO A
JENKINS, DEBORAH L
JHANG, MIRRA
JOHNSON, M
JOHNSTON, THOMAS
JORDAN, CHRIS J
KATZMARK, LYNN
KEENER, RAYMOND B
KEITH, JEFFREY
KHAN, REHAN
KINGSBURY, MELISSA L
KISNER, BRUCE D
KOSITARUT, J L
LALISBURY, ELENA
LAMOTTE, JOY
LAY, CHARLES
LAYTEN, BRYAN D
LEWICKE, ROSA I
LICHTL, MATEI I
LITTLETON, JANET
LIU, FIONA
LOWE, DANIEL C
LOYO, RICHARD
LUTTER, JOEL
MAPLES, LISA
MENDEZ, PETER S
MERRILL, DIANE M

CANADA RD 2000 (Cont'd)

21141 METZ, LISA I
MILLER, A J
MOSHER, SANDRA
MUELLER, PAUL N
NAPOLI, R
OCONNOR, DAVE
OGDEN, ART
ORR, RUSSELL E
OVERTURF, JOHN
PADILLA, K R
PANAGGIO, KEITH J
PARHAM, MARTHA M
PASSWATER, MILDRED R
PAUL, LORENA
PAVICH, ELVIRA E
PAYNTER, EDWIN
POURHASSANI, MOSTAFA
POWELL, MARIA E
PRIGMORE, CHRIS Y
PURSLEY, JOHN T
RAZO, FREDY
REAGAN, ROBERT
REICHERT, S
ROCHELEAU, BRUCE
ROMO, JESSE
SALISBURY, LESLIE A
SATORRES, MARCELO A
SCHAFER, PETER
SIMMONS, EILEEN S
SMITH, JOSHUA A
SOLTANI, MELODY
SPENCER, MIKE
STANGO, GLENN
STANKAVICH, MATTHEW E
STROHMEIER, F
THOMPSON, MATTHEW
TRI STATE CONSULTING
URBANSKI, L
VANCE, WALTON C
VAZQUEZ, MONICA A
VENCES, P
VOGT, ANDREW T
WAHID, SOHEILA A
WALDE, AL G
WERT JEFFERY MR
WERT, JEFFERY
WESTERN NATIONAL PROPERTIES
WILLIAMS, EDITH
WOLTER, ROBERT
WONDERLIE, JOHN

CANADA RD 2000 (Cont'd)

21141 WONG, C H
WONG, M J
21142 AA, WENDY S
ADAMS, TEDD
AMIRGHAHARI, SEPEHR
ANDERSON, C
ANGELES, M
ANTONE, STACY M
BANNING, J
BASS, DAVID M
BHATT, NALIN V
BOHLEN, DANIEL
BREWER, C
CAIN, DAVEE
CHANG, PERRY
CHATONEY, GERALD D
CHOI, GENE
COLF, VINCE P
DALTON, ANDREW
DIDENHOVER, J D
DRAGOYEVICH, STACEY
ENOCHS, B
FOUNTAIN, JANET L
GRANADOS, ENRIQUE
HINSON, JOLENE C
HODES, JESSICA L
HOEHN, EDWARD G
HUTTON, WILLIAM
ISAACS, ROBERT J
JENSEN, BRAD
JOHNSON, GLENN C
JONES, TIM W
JUST GIFTS
KOLOSS, SEAN K
KURTZ, VICKI
LAY, CARL
LEBLANC, JAMES
LEESEBERG, DARCY E
LEVY, VALERIE A
LOPEZ, RUBEN L
MACK, BARRY
MARSH, MONIQUE
MOORE, STEPHEN L
MORROW, MARK
MUDGE, PETER
OKEEFE, DAVID G
PATHAK, ANISH
PAVLAK, CYNTHIA L
PENG, MARCUS
PETERSON, K R

CANADA RD 2000 (Cont'd)

21142 PETERSON, KEN
POJAR, BOND
POLLEY, JEFFREY C
READY, RON
REYES, RICARDO M
RIVERA, JOSE M
ROBERTS, J S
SCHANKERELI, KEMAL
STEBBINS, CAREY
TAYLOR, MICHAEL A
VALENCIA, JESSICA
VEJAR, PAULINE
WALKINGSTICK, APRIL M
WICKLUND, PAULINE V
WILSON, STEPHEN
WU, CHIA H
21192 WRIGGLE, MARK D
21641 ADAMS, SANDRA
ANDREWS, SCOTT V
ATALIWALA, KETAN N
BEALL, THOMAS L
BENNETT, ROBERT
BIGLARI, SAHLA Z
BOROUGHF, MARK S
BOWE, SHANE E
BURKE, STACY A
BURMESTER, EVELYN
CABRAL, RUAY J
CHANCHANI, ANITA
CONRAD, JAMES
CONTRERAS, JULIE A
COSTIGAN, KEVIN
COUBALL, JUSTIN P
COWIE, DANA L
DANG, THUONG D
DELA, R
DELEON, FREDY E
DRAGO, MARIA N
DURAISINGH, JOHN
EICHMANN, ADAM J
ELIAS, J
ELLIOTT, JEREMY A
ELLIS, ROBERT L
ENG, HO
FISHEL, GARY A
FROOME, MARK
GERAMI, BEHNAM
GORDON, SEAN M
GREEN, GREGORY P
GUEST, JAMES M

CANADA RD 2000 (Cont'd)

21641 GUYMON, JOHN J
HAMLIN, EUGENE C
HARRIS, PATRICK A
HATEFI, ALI
HAWKINS, RON
HEDLEY, RICHARD
HEGDE, ASHOK J
HTIDECHARCHOT, SAWI
HUH, JANICE H
HULETT, PHYLLIS R
HUNTER, GREGORY
INGRAM, DOROTHY
INTERNATIONAL NETWORK TECH
ISHIDA, M
ITTIDECHARCHOTI, SAWI
JOUPARI, MARYAM M
JURASIN, A
KANCHERLA, VENKAT
KAYLOR, MARK
KIMBER, MARY E
KLOTH, PHANNA
KULKARNI, PRADEEP
LAROSA, AURORA D
LEE, SANG
MALOOF, RACHAEL
MARTIN, RAY
MASTERSON, KAREN L
MCDERMOTT, DAVID A
MELIN, JOHN A
MIRZAI, MARY
MITCHELL, JIM S
MOLINA, Y
MONAGLE, DANIEL
MONTIEL, EDWIN
NARAYAN, GOPAL
NELSON, RUTH
NGO, TRINA H
ODDONE, F
OLVERA, TERESO
PERUSINGHE, AMITHA
PHILLIPS, KEVIN T
PITA, ANA L
PODLETE, R D
RAHNI, A T
RAMACHANDRUNI, S
RICHNER, C R
RODRIGO, PATRICK
ROMERO, CECILIA
SADIGH, KHOSROW
SAEIDI, KHOSROW

CANADA RD 2000 (Cont'd)

21641 SAJOR, M M
SCHRAMM, NATALIE J
SELMANAGIC, SELMA
SHERMAN, BRENT J
SHIMMONS, LAURIE A
SMITH, TASHA
SOPER, CLARA E
SOTO, ERNESTO
SPRING LAKES APARTMENTS
STEWART, MARC
SUNWOO, NICK Y
SVEEN, CHRIS
SWETT, BOB
TERRY, JANETTE
THAPA, SUMAN
TORABBAGI, M
VICK, ROBERT W
VU, PETER V
WARREN, LINDA
WEERATUNGA, GAMINI
WELCH, ARNOLD R
WESTERN NATIONAL PROPERTIES
WILSON, LUCILLE
WIMALASIRI, PRASAD S
WINNINGHOFF, TOM
WINSTON, KAY A
WYSE, BRENT J
XIAO, DI
YOO, JIN K
YOON, ADRIAN H

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CANADA RD 1995

20631	YERGLER CORPORATION
	YERGLER DONNA M
20745	GAYTAN, JUAN
20749	GUZMAN, MIKE
20761	OCCUPANT UNKNOWNN
	VALLEY GLASS & MIRROR
20781	MCLAREN UNIBODY INC
20795	COHEN RICHARD LDSCP & CNSTR
	OCCUPANT UNKNOWNN
20865	HESS, DON
20941	AMERICAN MINI STORAGE LTD
	OCCUPANT UNKNOWNN
21011	ATKINSON, RICHARD
	BLANCHARD, DAVID
	COOLS, CARRIE
	CURRY, K
	HAWKINS, BRYANT
	MAYFIELD, DEBRA
	MORRISON, EDWINA B
21041	OCCUPANT UNKNOWNN
21101	OCCUPANT UNKNOWNN
21141	ADHAM, M B
	ANDERSON, DEAN
	ARATA, YOKU
	BAUER, MARK D
	BEIFUSS, BILL
	BLAKE, JOHN
	BLEAKLEY, SUN Y
	BLUMHORST, PAUL
	BOTELLO, GEORGE
	BOULTON, MYRTLE M
	BROUGHTON, WILLIAM
	BROWN, LOIS
	BRUST, MATTHEW
	BURGOON, PAUL
	CAMARGO, M
	CASTILLO, CAROL
	CHANG, K C
	CHAVARRIA, TOMMY
	CHESTNEY, JEFF
	CHUNG, SANG W
	COTA, MARIO
	CRUZATE, SUSANA
	ELMER, MARVIN
	EMERALD COURT APARTMENTS
	ESSEX, MARK
	FANG, JUNPING
	FEDORCHAK, DONALD M
	FEINGERTS, GLENN A
	FLETCHER, DAVID R

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

CANADA RD 1995 (Cont'd)

21141	FOLTZ, JAMES
	FRITTS, TRAVIS
	GOVINDARAJAN, SRINIVA
	GUYETT, ERIC S
	HAWK, PAMELA
	HICKEY, JOHN M
	HIRAMAN, SURENDR
	HORAK, RONALD
	HUMPHREYS, LISA
	JAINE, DIANE
	JAVID, ANIS
	JOHNSON, DAVE
	KIPHEN, C
	LAI, M
	LAYTEN, BRYAN
	LEANDERS, JOHN E
	LEE, JONG H
	MAGANA, L
	MASON, DAN
	MEHVER, AGHDAS
	MOHAMED, RAFI
	NATARAJAN, RAM
	NOENICKX, EDWARD
	OCONNOR, DAVE
	ODIJK, H
	ORTEGON, JUAN
	OVERTURF, JOHN
	PARKER, C L
	PERKINS, STEVE
	POMERLEAU, DAVID
	POURHASSANI, MOSTAFA
	REA, VERNON
	REESE, J
	RICHNER, K
	RING, F
	RIZZO, DAVID
	RUFF, OREN R
	SAUCEDO, DARRELL
	SCHMIDT, DEBBIE
	SIMON, JANENE
	SMITH, GENE
	SNYDER, KYM
	SUMIOOKA, MONA
	THERIAULT, TINA
	TICHENOR, JOHN
	WEISELBERG, MELVIN F
	WILLIAMS, JOY
	YATES, JERRY
21142	ADAMS, KEITH L
	BAKER, MARIE L

CANADA RD 1995 (Cont'd)

21142 BELANGER, S
BENEVENTI, D
DUNN, BRETT
ENNS, BRUCE E
FLORES, WALTER
GERKEN, DANIEL P
GIRARD, O
HEPPY, GARY M
HOVENDEN, TODD D
HUTCHINSON, KIM M
KAPLAN, CAROLE
KAZARIAN, JOHN D
KELLER, S
KIM, TAEYONG
KLIPKA, DOUG
LETHER, ERIC
MAKALUAS, HUSIN
MCMURTRY, MARK
MILANI, RAANA
MILLER, ALLAN S
MOORE, AMY
MUNDA, LEO T
PITTMAN, BEN W
POSADA, D
RAMIREZ, DAVID
SLAWSON, SCOTT
STOKES, MELANIE
TAHERI, ALIREZA
WALKER, KYLE

21641 AGLER, DAVID
ALAIRE, JENNA
ATLES, ROBIN
BAILEY, KEN
BARRA, MARIA
BARRY, D J
BASSETT, GUADALU
BEAVERS, L
BHARADWAJ, ASHIM
BLOOM, ELISA R
BOND, SCOTT
BOSCO, K
BREED, MARK
DELEON, FREDY
DEVAPATLA, ANITA
DUNBAR, Z K
ESKINDE, ODESSA
ESSEX, MARK
FASMIRE, CHARLES T
FERNANDEZ, ARNOLD
FORNEY, JULIE

CANADA RD 1995 (Cont'd)

21641 GARCIA, JOSE
GREEN, D C
GUEST, JAMES M
HALE, MARY
HARPER, TERRY M
HERSCHMAN, WENDY
HICE, TOM D
JOHNSON, D
JOLLIE, BILL
KARP, ADAM
KHAN, ATIF M
KLING, TIMOTHY
KOENIG, FRED
LIEN, TERESA J
LOPEZ, LORENA
LOZANO, FELICIA
LYNCH, JAMES
MARTIN, RAY
MCCOY, GREG
MCNEILL, C
MEJIA, ESCALAN R
MITTELHOLTZ, ROBERT
MOLANO, JULIO
MOORE, SAMUEL
MRAZ, THOMAS
MUNOZ, ARTURO
NUNEZ, VICTOR S
OLIPHANT, YUNNACA
OROPALLO, JOHN
PADEN, G
PAJER, BRIAN L
PERRY, OLIVER A
PETERSON, L
PLATA, EDUARDO
PRITCHARD, MICHAEL
RAHNI, A T
RASHIDI, FATEMEH
REYES, HUGO
RODRIGUEZ, WILLIAM
ROST, M J
SHIN, SANGIK
SIKORSKI, ROBERT
SIMON, E M
SPRING LAKES APARTMENTS
STANO, GLENN
STEWART, DARCY
TILDEN, HELEN
VARGAS, JOSE L
VEIT, TRACY
WILSON, MARY A

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CANADA RD 1995 (Cont'd)

21641 WOODS, HELEN E
YOO, JIN K

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CANADA RD 1992

20631	DIXIE ICE CREAM INC
20683	BAKER, V P
	MCFADDEN FARMS
20745	GAYTAN, JUAN
20749	GUZMAN, MIKE
20761	AMERICAN FABRICATED GLASS
	VALLEY GLASS & MIRROR
20781	MCLAREN UNIBODY INC
20795	COHEN RICHARD LDSCP & CNSTR
20865	HESS, DON
20904	SANTA ANA MOUNTAINS
20941	LAWSON, ROBERT
21011	ALEXIS, SHIRENE
	BAIK, MIYOUNG
	BALL, JOHN
	ERK, RICHARD P JR
	FLORES, DAMIAN
	GREEN, THERESA A
	NETTLES, MELANIE
	POOL, THERESA
	VANVO, EM
21141	ABRAMOV, YUSHVA
	AMATO, A M
	ARATA, YOKU
	BEIFUSS, BILL
	BERG, M
	BORMANN, KEN
	CHAVARRIA, TOMMY
	CHIJIWA, T
	COFFEY, P
	COLIN, D H
	DAHLKE, STANLEY
	EMERALD COURT APARTMENTS
	FLETCHER, DAVID R
	GEHMAN, TOM
	GHAFFARIAN, MEHRDAD
	GUYETT, ERIC S
	HALE, JEFFREY
	HEBLER, PAUL E
	HUBER, L H
	KERKELA, TODD
	KERZEE, ROBERT
	KUMAR, PAUL
	KWAK, KELLY K
	LARSEN, RICHARD S
	MOORE, ALVIN B
	NAGASHIMA, K
	NEGORO, GEN
	OARAZAVI, JALIL S
	OCONNOR, DAVE

CANADA RD 1992 (Cont'd)

21141	ONAKA, MIKEL
	PAKJOU, AMIR
	PERKINS, STEVE
	RYERSON, N
	SANDERSON, TOM
	SERRANIA, DAVID
	SWANSON, SCOTT
	TEVIS, GREG C
21142	BULMAN, ALFRED
	CAVALLO, J G
	CONDEY, CARLOS
	FARIVAR, K
	GOWELL, S T
	KEARNEY, JOHN
	MAKALUAS, HUSIN
	MONROE, WILLIAM
	NADERI, KHALIL
	RICHARDSON, WALTER C
	SATO, S
	SATORIUS, LAURA
	SPRINGSTEEN, B R
	VANDERWENDE, J
	WHITE, FRANK
	YAO, M
21641	ABRAR, SYED
	ALTMAN, TAMMY
	ANDERSON, LARRY E
	ANDREWS, JACKIE
	BATISTE, FELTON
	CASTANEDA, M
	CHAVEZ, ISIDRO
	COBBS, BARRY
	FONTES, ROBERT
	FOSMIRE, CHARLES
	GADDIS, MARK E
	GRADY, MIKE
	GUELLO, JASON
	HARMON, TROY
	HASSETT, PAUL
	HUGHES, SEAN
	HUYNH, NIEN
	JOHNSON, BRIAN
	LEGARRETA, RUDY
	MALMGREN, KEVIN
	MCCREARY, RALPH V
	OKEEFE, ROBERT
	PIKULA, NANCY
	RASHIDI, FATEMEH
	ROST, M J
	SMITH, OWEN

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CANADA RD 1992 (Cont'd)

21641 SPRING LAKES APARTMENTS
SUSICH, D
VARGAS, JOSE L
WEED, MARTIN
YOUNG, KELVIN

Target Street	Cross Street	Source
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CANADA RD 1985

CANADA RD 92630
EL TORO

20571	**NAKASE WHSL NURSERY**	**855-4388**	1
20683	BAKER V P	830-0595	2
20714	XXXX	00	
20741	XXXX	00	
20743	USTARIZ JOS L	837-0650	7
20745	XXXX	00	
20747	LARIOS ANGEL	830-4145	
20749	GUZMAN MIKE	770-5035	4
20795	XXXX	00	
20865	HESS DON	859-5731	4
	PARADIGM CONSTRUCTN	**859-5731**	4
20904	**SANTA ANA MTNS WTR**	**837-2195**	
20931	WALLACE DAN	859-2048	+5
20941	BROOKS MICHAEL	581-5398	2
21041	STUTSMAN ALLEN W	837-0820	
21473	XXXX	00	

★ 3 BUS 13 RES 1 NEW

Target Street	Cross Street	Source
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CANADA RD 1980

CANADA RD 92630 EL TORO

20571	NAKASE BROTHERS	768-5208	9
20714	XXXX	00	
20741	BAKER V P ET AL	830-0595	2
20743	USTARIZ JOS L	837-0650	7
20745	MCFADDEN ED	951-7294	+0
20747	LARIOS ANGEL	830-4145	
20749	GUZMAN MIKE	837-9358	
20795	FISHER E KENNEN	768-1892	+0
	NUTTER DENNIA A	581-6554	9
20865	ANDERSON RALSTON	837-0312	
20901	ANDERSON BEN G	586-9547	5
20904	SANTA ANA MT CO WTR	837-2195	3
20931	SALATA GEO	830-8615	2
20941	NUTTER DENNY	837-0709	
	RANCHO ALEGRE STBLS	768-9848	7
	ROGERS MARK	770-9873	+0
21041	STUTSMAN ALLEN W	837-0820	2
21473	WHISLER ALISA	830-8954	+0

* 4 BUS 14 RES 4 NEW

Target Street	Cross Street	Source
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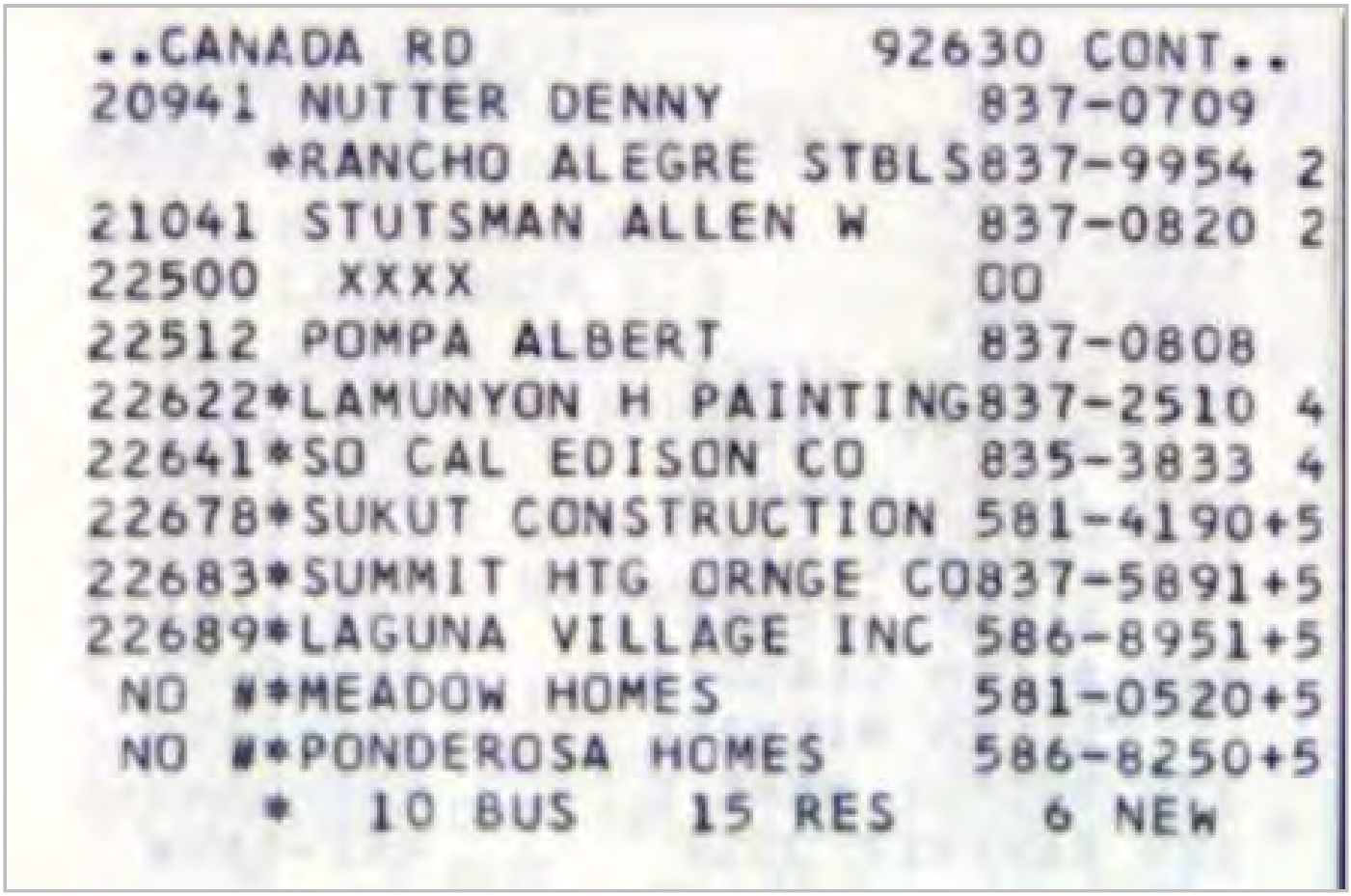
CANADA RD 1975

CANADA RD 92630 EL TORO

20571	MCFADDEN E T	837-0521	
20714	XXXX	OO	
20741*	BAKER V P ET AL	830-0595	2
20743	HEAVENER CHAS E	830-1301	4
20745	XXXX	OO	
20747	LARIOS ANGEL	830-4145	
20749	GUZMAN MIKE	837-9358	
20795	CHANGALA ANTHONY J	830-5580	3
	MERGELER RONALD	837-6490	
20865	ANDERSON RALSTON	837-0312	
20901	ANDERSON BEN G	586-9547	+5
20904*	STA ANA MNTN CO WTR	837-2195	3
20931	SALATA GEO	830-8615	2

Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

CANADA RD 1975



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..CANADA RD                    92630 CONT..
20941 NUTTER DENNY               837-0709
     *RANCHO ALEGRE STBLS        837-9954 2
21041 STUTSMAN ALLEN W           837-0820 2
22500  XXXX                      OO
22512 POMPA ALBERT               837-0808
22622*LAMUNYON H PAINTING        837-2510 4
22641*SO CAL EDISON CO           835-3833 4
22678*SUKUT CONSTRUCTION         581-4190+5
22683*SUMMIT HTG ORNGE CO        837-5891+5
22689*LAGUNA VILLAGE INC         586-8951+5
 NO  #*MEADOW HOMES              581-0520+5
 NO  #*PONDEROSA HOMES           586-8250+5
      *  10 BUS   15 RES    6 NEW
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Target Street	Cross Street	Source
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CANADA RD 1972

CANADA RD 92630 EL TORO

20571	MCFADDEN E T	837-0521
20714	XXXX	OO
20741	*BAKER V P ET AL	830-0595+2
20743	RAMOS JOSE	837-9477
20745	SANCHEZ DOMINGO	837-5627
20747	LARIOS ANGEL	830-4145
20749	GUZMAN MIKE	837-9358
20795	CHANGALA ANTHONY J	830-5580+2
	MERGELER RONALD	837-6490
20865	ANDERSON RALSTON	837-0312
20904	*SANTA ANA MTN WATER	837-2195
20931	SALATA GEO	830-8615+2
20941	NUTTER DENNY	837-0709
	*RANCHO ALEGRE STBLS	837-9954+2
21041	STUTSMAN ALLEN W	837-0820+2
22500	NOUTARY JOE	837-0429
22512	POMPA ALBERT	837-0808
NO #	*ALVARADO BUILDERS	830-4790+2
NO #	*SWARTZ STANLEY C CO	830-4790+2

* 5 BUS 14 RES 7 NEW

Lake Forest
20865 Canada Road
Lake Forest, CA 92630

Inquiry Number: 5678687.3
June 10, 2019

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Shelton, CT 06484
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06/10/19

Site Name:

Lake Forest
20865 Canada Road
Lake Forest, CA 92630
EDR Inquiry # 5678687.3

Client Name:

Hillmann Environmental Co.
1745 W Orangewood Avenue
Orange, CA 92868-0000
Contact: Shilpa Sunil

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The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # A9E3-49F7-8156

PO # C3-7524

Project C3-7524

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

Sanborn® Library search results

Certification #: A9E3-49F7-8156

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

The Sanborn Library LLC Since 1866™

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Lake Forest
20865 Canada Road
Lake Forest, CA 92630

Inquiry Number: 5678687.4
June 10, 2019

EDR Historical Topo Map Report

with QuadMatch™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Historical Topo Map Report

06/10/19

Site Name:

Lake Forest
20865 Canada Road
Lake Forest, CA 92630
EDR Inquiry # 5678687.4

Client Name:

Hillmann Environmental Co.
1745 W Orangewood Avenue
Orange, CA 92868-0000
Contact: Shilpa Sunil

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by Hillmann Environmental Co. were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:

P.O.# C3-7524

Project: C3-7524

Coordinates:

Latitude:	33.660536 33° 39' 38" North
Longitude:	-117.675122 -117° 40' 30" West
UTM Zone:	Zone 11 North
UTM X Meters:	437406.48
UTM Y Meters:	3724722.33
Elevation:	631.89' above sea level

Maps Provided:

2012	1942
1997	1935
1982	1902
1981	
1978	
1968	
1950	
1949	

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Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2012 Source Sheets

Lake Forest
2012
7.5-minute, 24000

1997 Source Sheets

El Toro
1997
7.5-minute, 24000
Aerial Photo Revised 1994

1982 Source Sheets

El Toro
1982
7.5-minute, 24000
Aerial Photo Revised 1980

1981 Source Sheets

El Toro
1981
7.5-minute, 24000
Aerial Photo Revised 1978

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1978 Source Sheets

El Toro
1978
7.5-minute, 24000
Aerial Photo Revised 1974

1968 Source Sheets

El Toro
1968
7.5-minute, 24000
Aerial Photo Revised 1967

1950 Source Sheets

El Toro
1950
7.5-minute, 24000
Aerial Photo Revised 1946

1949 Source Sheets

El Toro
1949
7.5-minute, 24000
Aerial Photo Revised 1946

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1942 Source Sheets

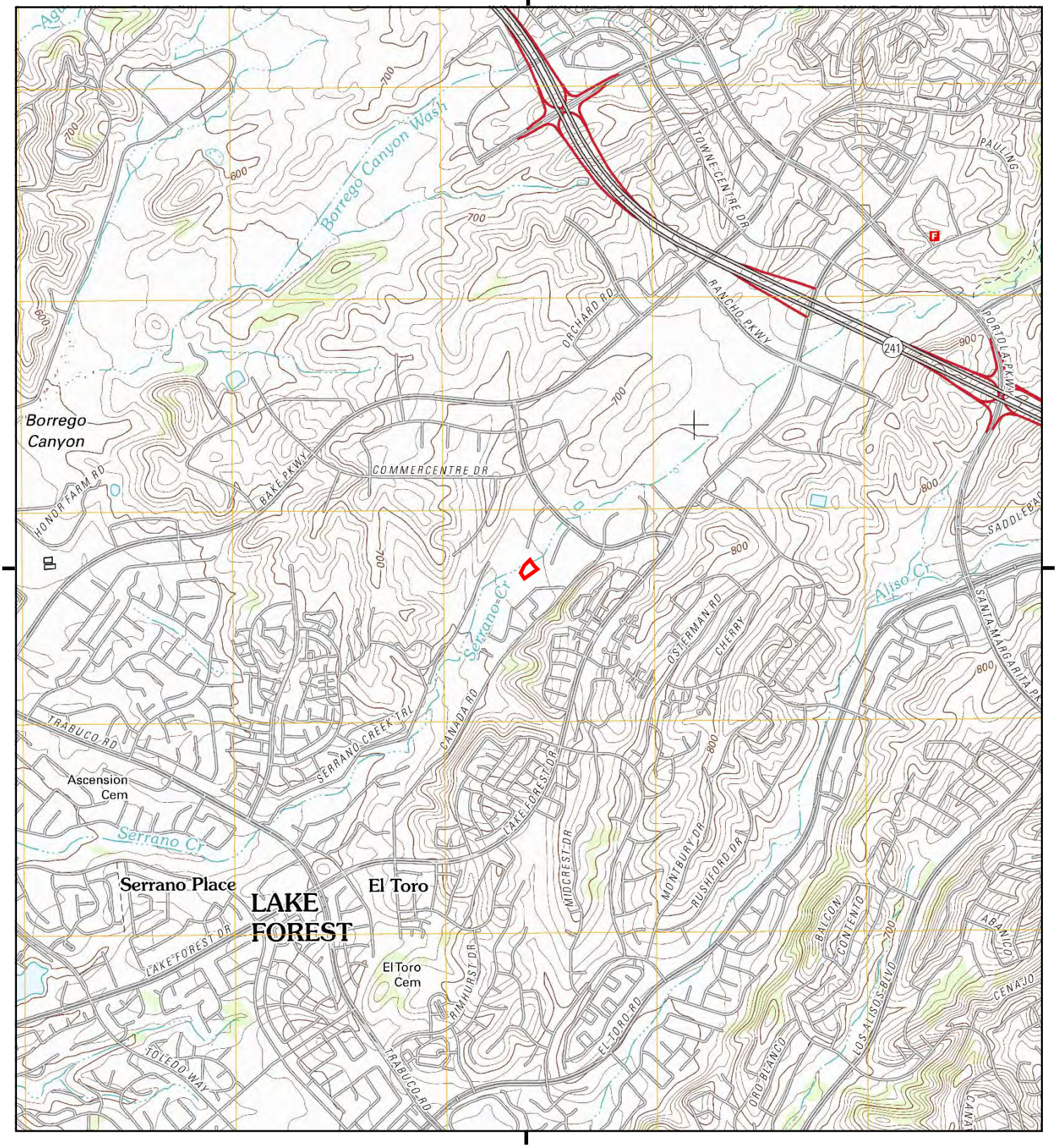
SANTIAGO PEAK
1942
15-minute, 50000

1935 Source Sheets

El Toro
1935
7.5-minute, 31680

1902 Source Sheets

Corona
1902
30-minute, 125000



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

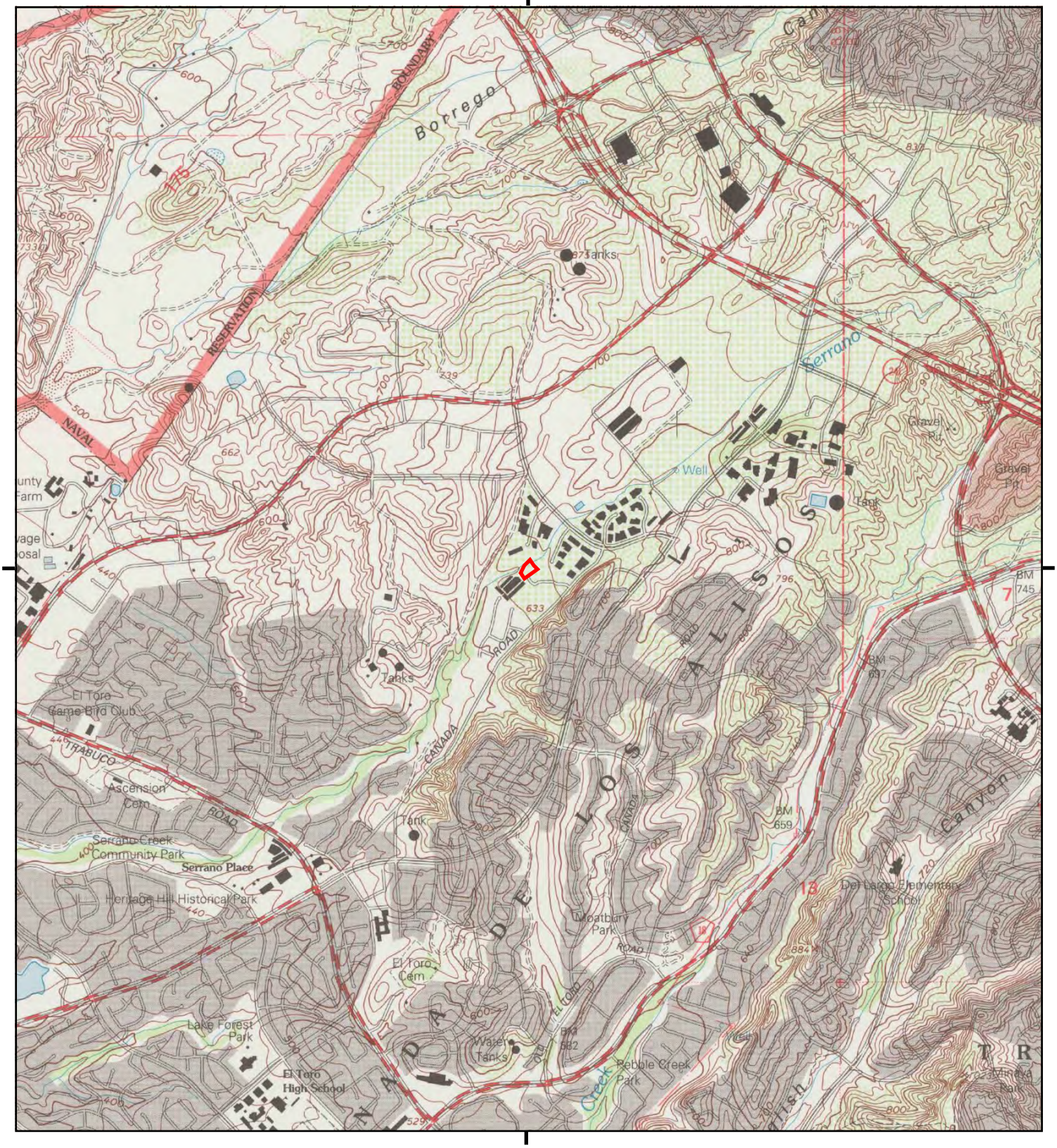
TP, Lake Forest, 2012, 7.5-minute

SITE NAME: Lake Forest
ADDRESS: 20865 Canada Road
Lake Forest, CA 92630
CLIENT: Hillmann Environmental Co.

N

Historical Topo Map

1997



This report includes information from the following map sheet(s).

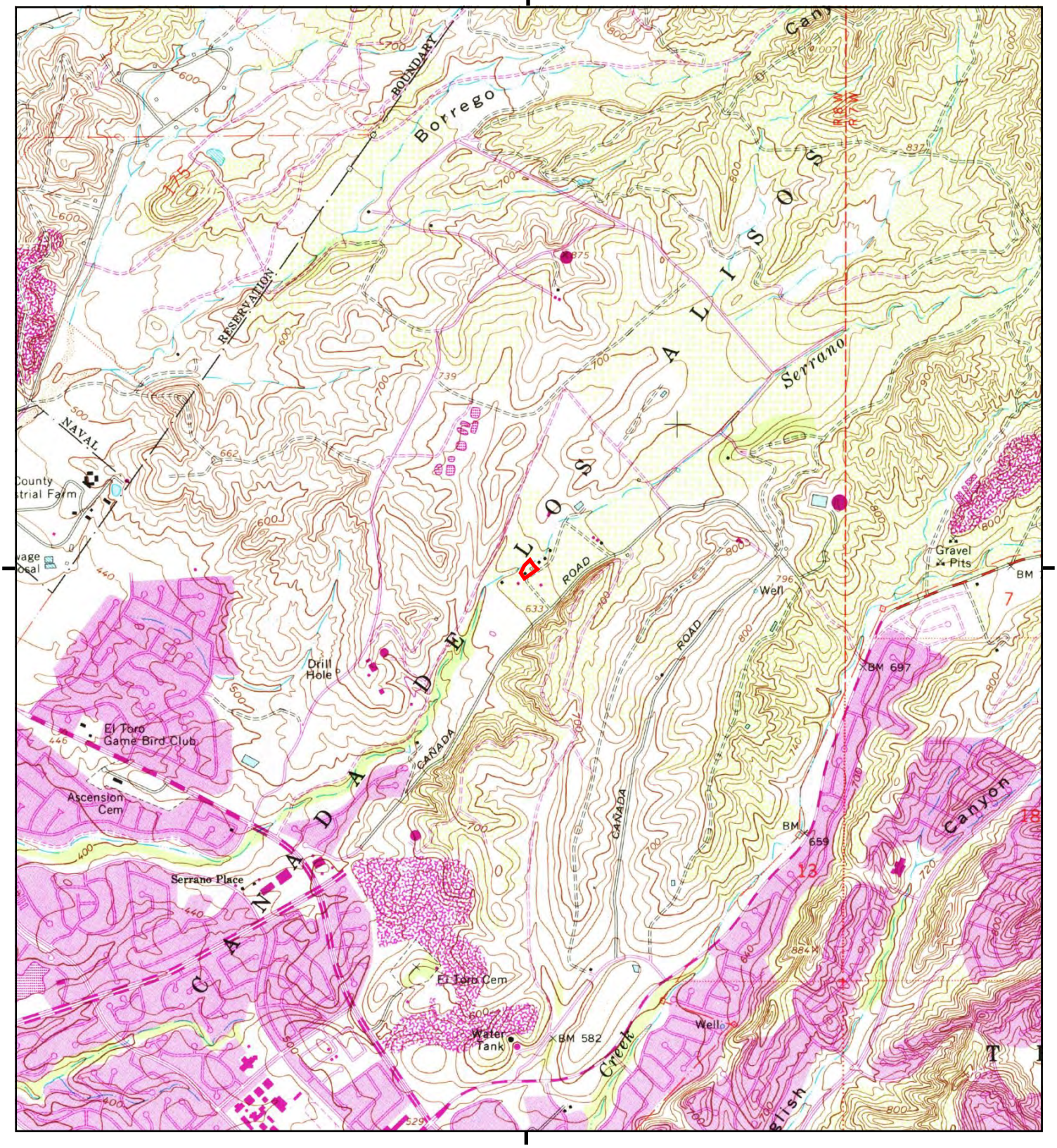
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, El Toro, 1997, 7.5-minute

SITE NAME: Lake Forest
ADDRESS: 20865 Canada Road
Lake Forest, CA 92630
CLIENT: Hillmann Environmental Co.

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, El Toro, 1982, 7.5-minute

SITE NAME: Lake Forest
ADDRESS: 20865 Canada Road
Lake Forest, CA 92630
CLIENT: Hillmann Environmental Co.

N

This report includes information from the following map sheet(s).

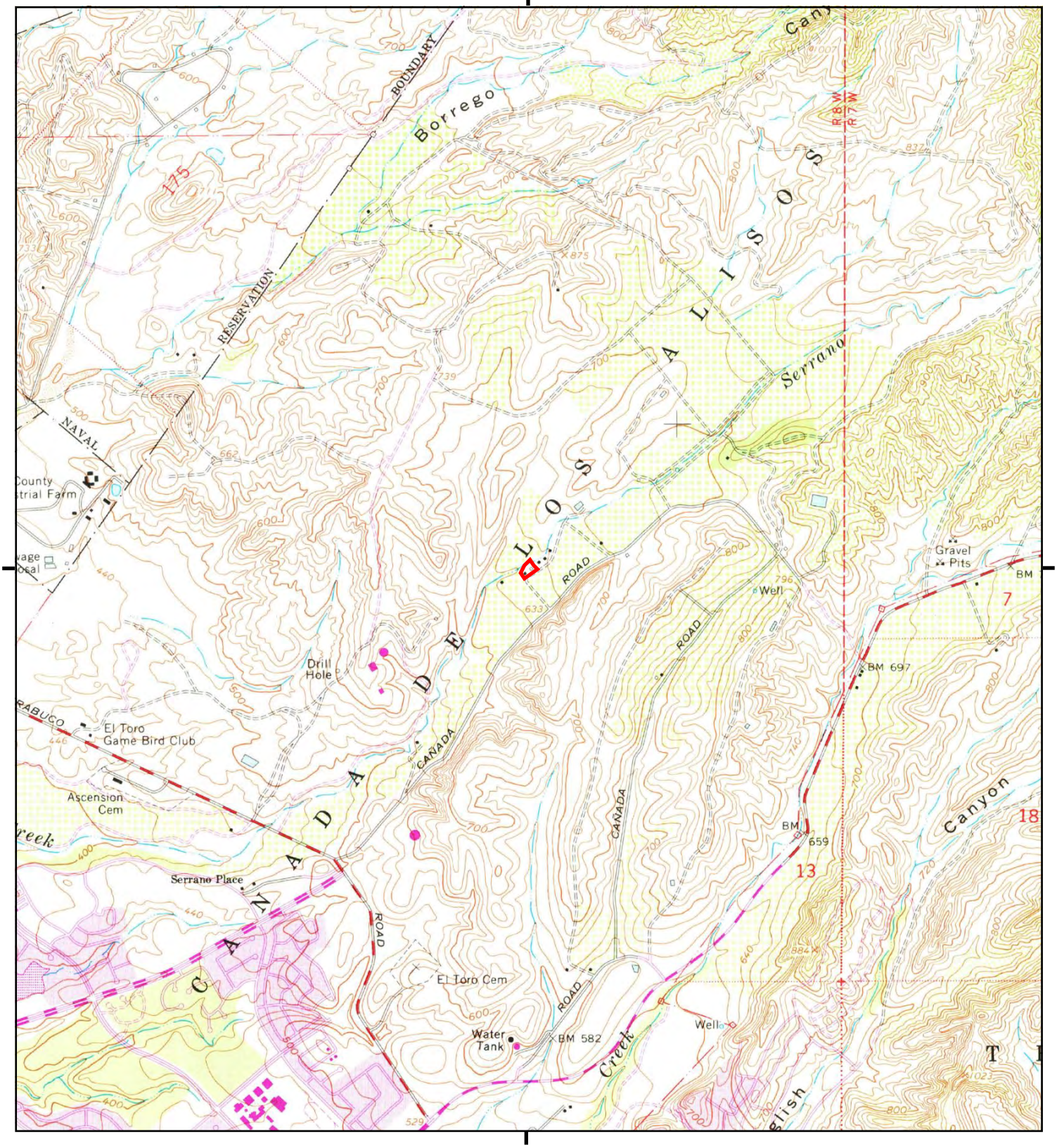
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, El Toro, 1981, 7.5-minute

SITE NAME: Lake Forest
ADDRESS: 20865 Canada Road
Lake Forest, CA 92630
CLIENT: Hillmann Environmental Co.

N



This report includes information from the following map sheet(s).

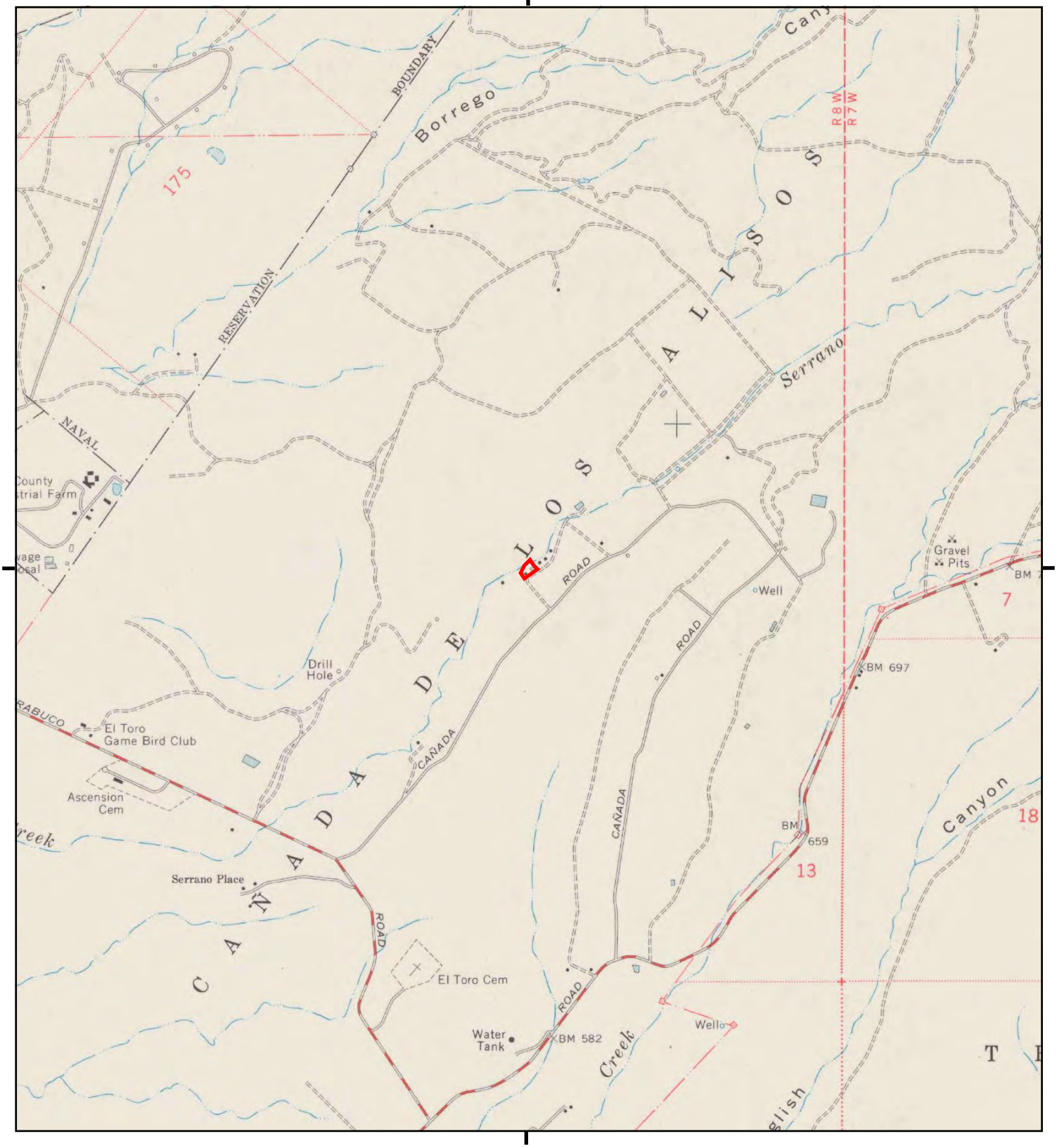
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, El Toro, 1978, 7.5-minute

SITE NAME: Lake Forest
ADDRESS: 20865 Canada Road
Lake Forest, CA 92630
CLIENT: Hillmann Environmental Co.

N



This report includes information from the following map sheet(s).

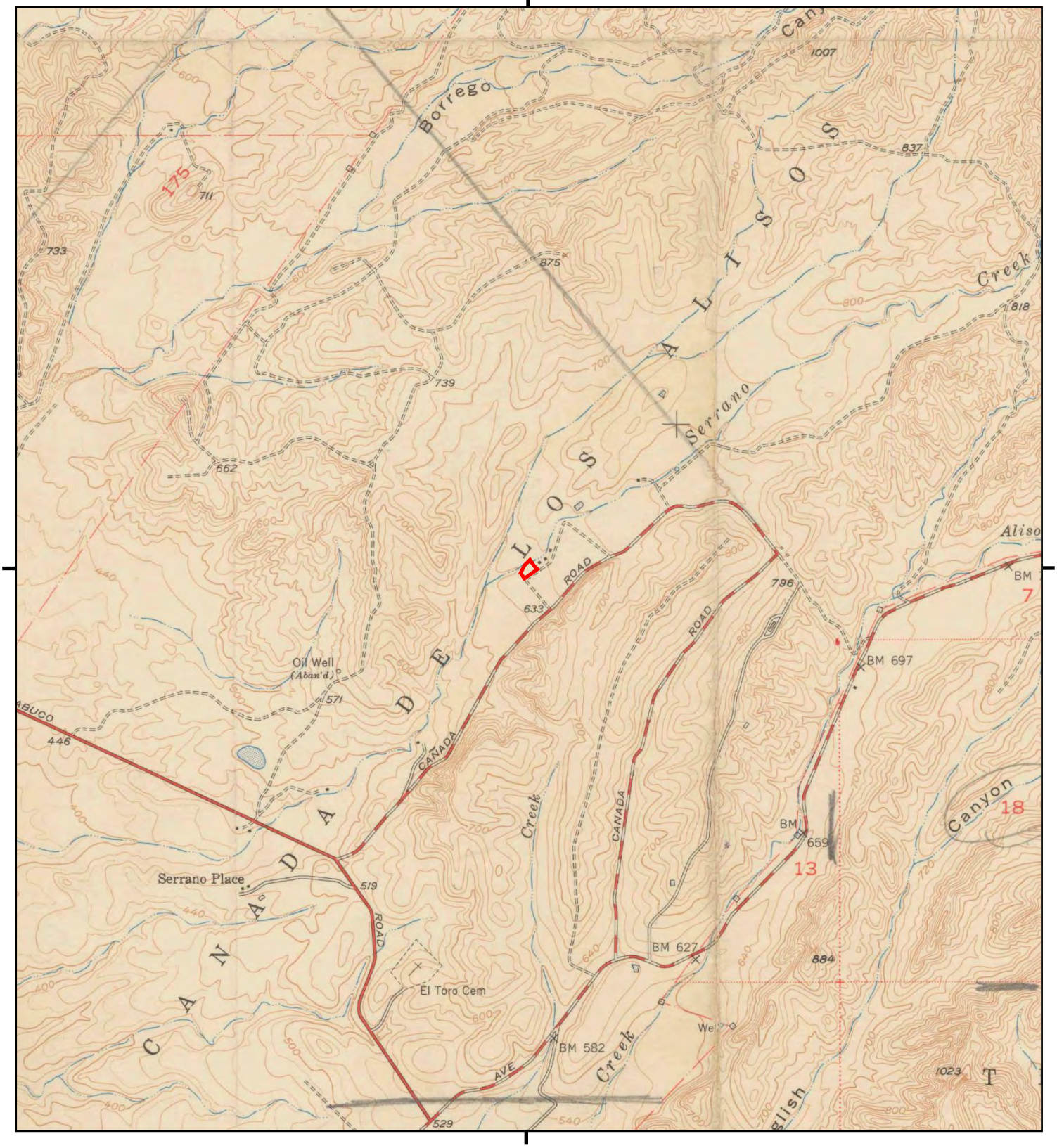
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, El Toro, 1968, 7.5-minute

SITE NAME: Lake Forest
ADDRESS: 20865 Canada Road
Lake Forest, CA 92630
CLIENT: Hillmann Environmental Co.

N



This report includes information from the following map sheet(s).

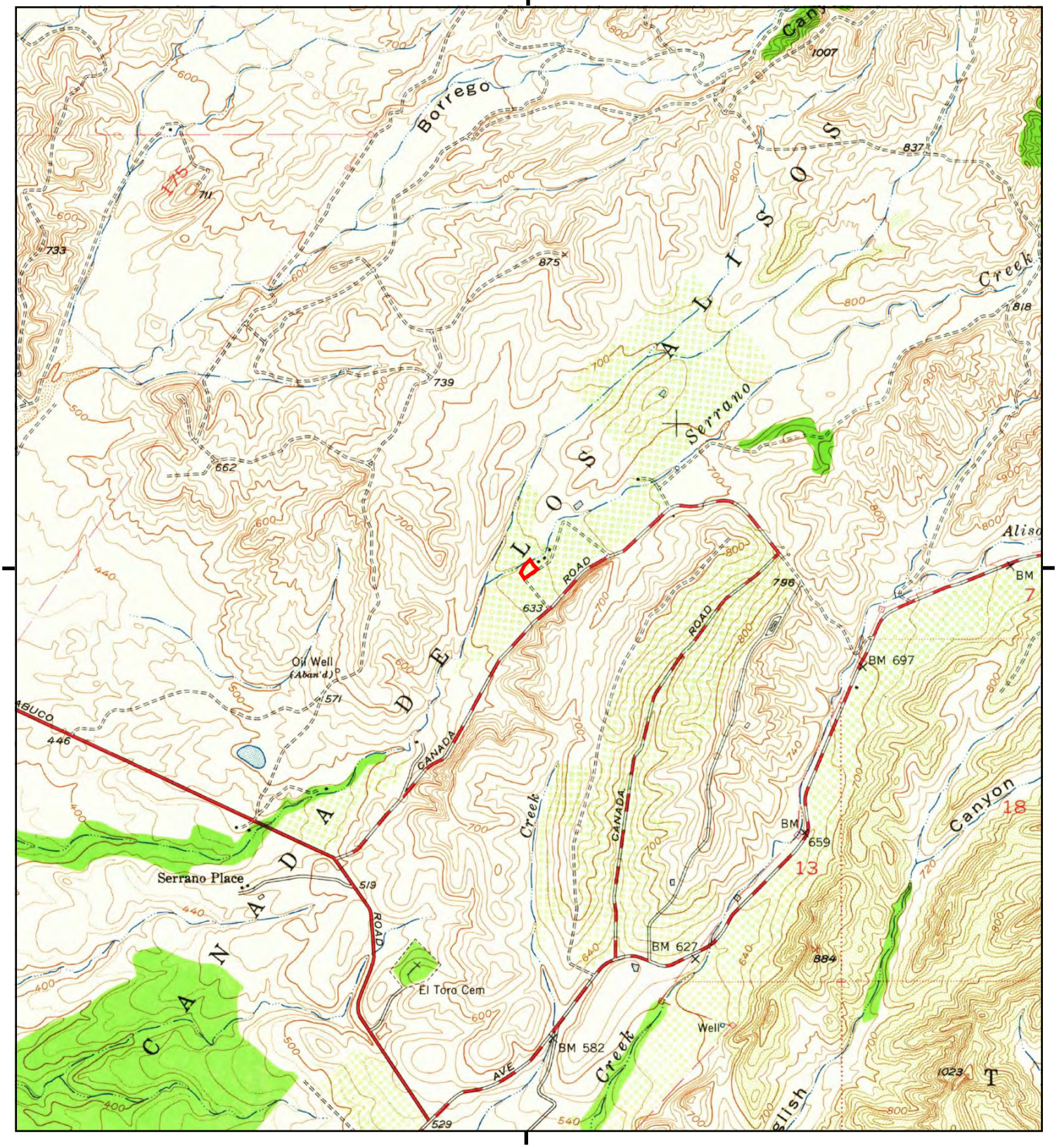
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, El Toro, 1950, 7.5-minute

SITE NAME: Lake Forest
ADDRESS: 20865 Canada Road
Lake Forest, CA 92630
CLIENT: Hillmann Environmental Co.

N



This report includes information from the following map sheet(s).

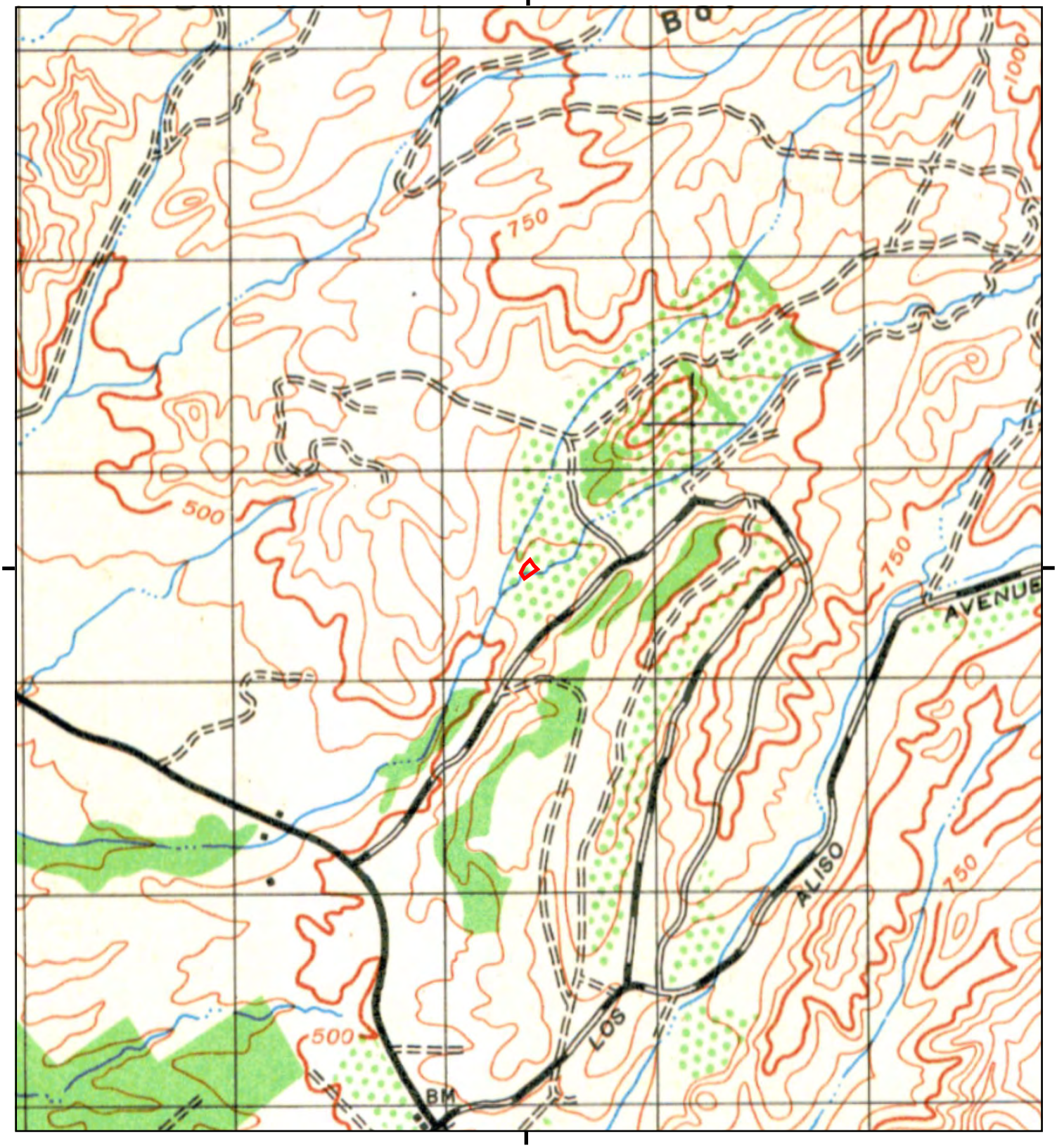
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, El Toro, 1949, 7.5-minute

SITE NAME: Lake Forest
ADDRESS: 20865 Canada Road
Lake Forest, CA 92630
CLIENT: Hillmann Environmental Co.

N



This report includes information from the following map sheet(s).

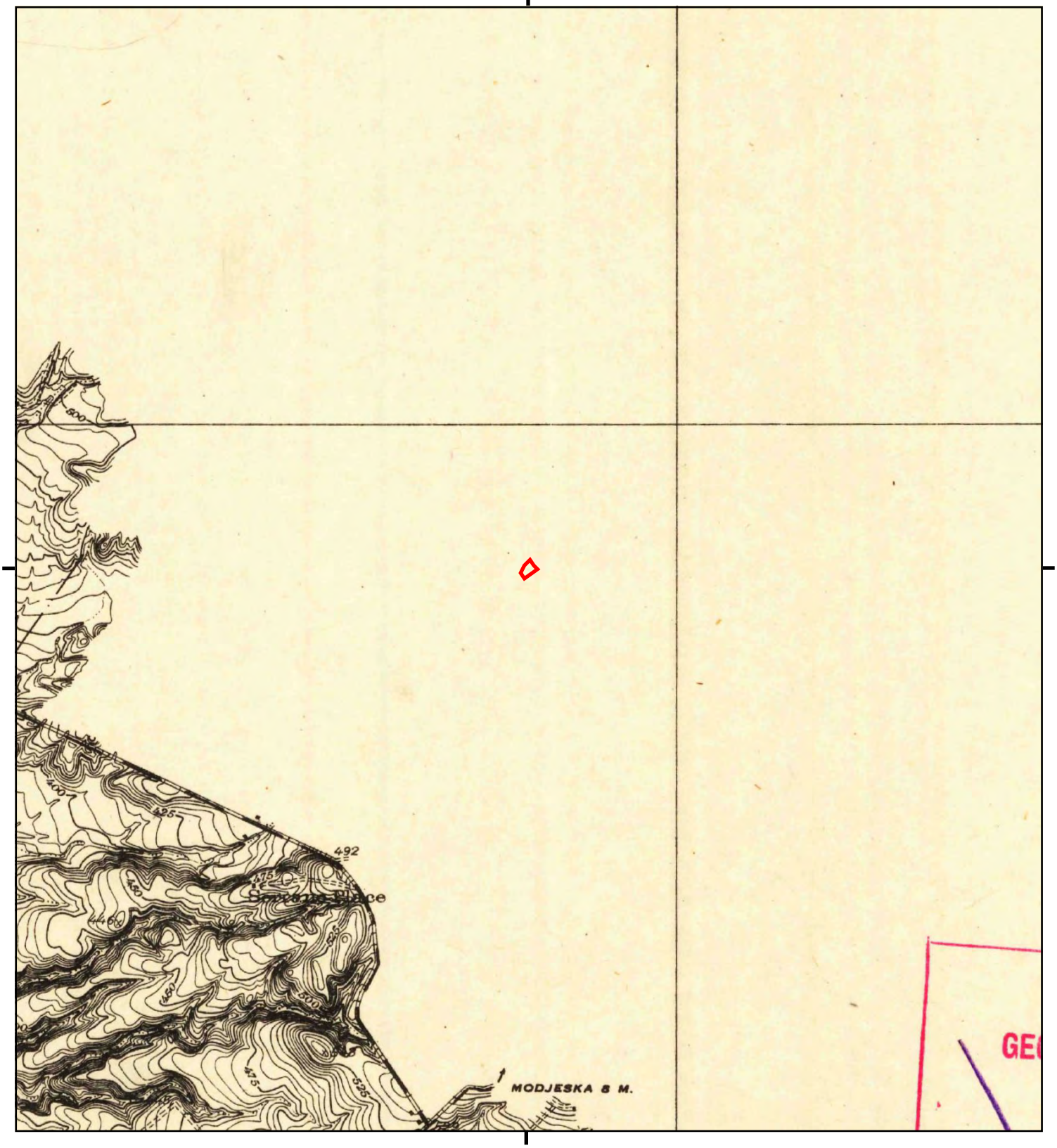
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, SANTIAGO PEAK, 1942, 15-minute

SITE NAME: Lake Forest
ADDRESS: 20865 Canada Road
Lake Forest, CA 92630
CLIENT: Hillmann Environmental Co.

N



This report includes information from the following map sheet(s).

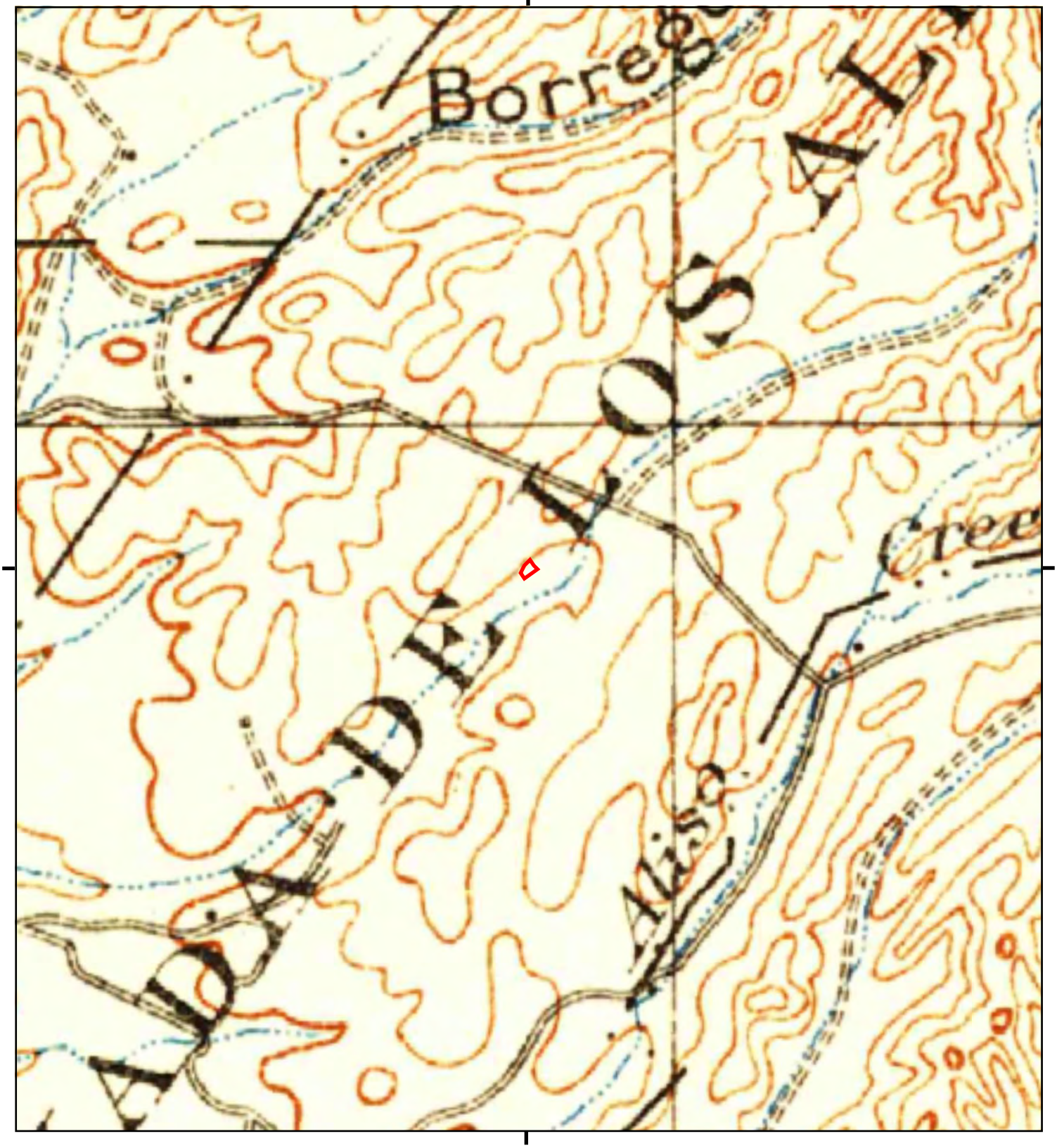
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, El Toro, 1935, 7.5-minute

SITE NAME: Lake Forest
ADDRESS: 20865 Canada Road
Lake Forest, CA 92630
CLIENT: Hillmann Environmental Co.

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Corona, 1902, 30-minute

SITE NAME: Lake Forest
ADDRESS: 20865 Canada Road
Lake Forest, CA 92630
CLIENT: Hillmann Environmental Co.

N

APPENDIX E

REGULATORY RECORDS DOCUMENTATION

Lake Forest
20865 Canada Road
Lake Forest, CA 92630

Inquiry Number: 05678687.2r
June 10, 2019

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

20865 CANADA ROAD
LAKE FOREST, CA 92630

COORDINATES

Latitude (North):	33.6605360 - 33° 39' 37.92''
Longitude (West):	117.6751220 - 117° 40' 30.43''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	437405.1
UTM Y (Meters):	3724529.0
Elevation:	631 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	5636489 EL TORO, CA
Version Date:	2012

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20140603
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
20865 CANADA ROAD
LAKE FOREST, CA 92630

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
1	CAMALI CORP	20845 CANADA RD	RCRA NonGen / NLR	Higher	103, 0.020, SSE
A2	XPO LOGISTICS FREIGH	20697 PRISM PL	UST, SWEEPS UST	Lower	277, 0.052, NW
A3	XPO LOGISTICS FREIGH	20697 PRISM PL	RCRA NonGen / NLR	Lower	277, 0.052, NW
A4	XPO LOGISTICS FREIGH	20697 PRISM PL	CERS HAZ WASTE, CERS TANKS, HAZNET, CERS	Lower	277, 0.052, NW
B5	AFAB PRECISION MACHI	20742 LINEAR LN	CERS HAZ WASTE, HAZNET, CERS	Higher	359, 0.068, East
C6	SHMAZE INDUSTRIES IN	20792 CANADA RD	RCRA-SQG	Higher	507, 0.096, ESE
C7	SHMAZE CUSTOM COATIN	20792 CANADA RD	CERS HAZ WASTE, EMI, CERS	Higher	507, 0.096, ESE
B8	MCLAREN UNIBODY INC	20781 CANADA RD	CERS HAZ WASTE, EMI, CERS	Higher	515, 0.098, East
D9	SEA COUNTRY TOWING/S	20611 PRISM PL	CERS HAZ WASTE, HAZNET, CERS	Higher	678, 0.128, North
D10	SEA COUNTRY TOWING &	20611 PRISM PL	RCRA NonGen / NLR	Higher	678, 0.128, North
11	V P BAKER RANCH	20745 CANADA RD	SWEEPS UST, CA FID UST	Higher	722, 0.137, East
E12	ARB INC	20602 CIVIC CENTER D	UST	Higher	806, 0.153, NNW
E13	ARB INC	20602 CIVIC CENTER D	CERS HAZ WASTE, CERS TANKS, CERS	Higher	806, 0.153, NNW
F14	SUNSTATE EQUIPMENT C	20772 CIVIC CENTER D	CERS HAZ WASTE, CERS TANKS, CERS	Higher	808, 0.153, West
15	GREENWASTE COMPOSTIN	20712 INDIAN OCEAN D	WMUDS/SWAT	Higher	825, 0.156, WNW
F16		20772 INDIAN OCEAN D	AST	Higher	936, 0.177, WNW
F17	SUNSTATE EQUIPMENT C	20772 INDIAN OCEAN D	AST	Higher	936, 0.177, WNW
E18	ARB INC	20602 INDIAN OCEAN	RCRA-SQG, UST, AST, FINDS, ECHO	Higher	965, 0.183, NNW
19	BLAIRS TOWING	26100 DIMENSION DR	CERS HAZ WASTE, HAZNET, CERS	Higher	983, 0.186, North
20	PANASONIC AVIONICS C	26229 ENTERPRISE CT	CERS HAZ WASTE	Higher	1180, 0.223, NNE
21	ARB INC	20632 CIVIC CENTER D	CERS HAZ WASTE, CERS TANKS, CERS	Higher	1216, 0.230, NNW
G22	FOREVER GREEN ART IN	20611 CANADA RD	RCRA-SQG, FINDS, ECHO, HAZNET	Higher	1258, 0.238, ENE
G23	LOS ALISOS RANCH	20571 CANADA RD	HIST UST	Higher	1284, 0.243, ENE
24	ARB INC	26032 COMMERCENTRE D	UST	Higher	1302, 0.247, North
G25	SALEEN ALLEN R R R S	20622 CANADA RD	RCRA-SQG, FINDS, ECHO	Higher	1314, 0.249, ENE
26	CHEVRON	20731 LAKE FOREST	LUST, SWEEPS UST, HIST CORTESE, CERS	Higher	1968, 0.373, East
27	BEACON BAY CAR WASH	20602 LAKE FOREST	LUST, CERS	Higher	2583, 0.489, ENE

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL ---------- National Priority List Deletions

Federal CERCLIS list

FEDERAL FACILITY ---------- Federal Facility Site Information listing
SEMS ---------- Superfund Enterprise Management System

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE ---------- Superfund Enterprise Management System Archive

Federal RCRA CORRACTS facilities list

CORRACTS ---------- Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-LQG ---------- RCRA - Large Quantity Generators
RCRA-CESQG ---------- RCRA - Conditionally Exempt Small Quantity Generator

Federal institutional controls / engineering controls registries

LUCIS ---------- Land Use Control Information System
US ENG CONTROLS ---------- Engineering Controls Sites List
US INST CONTROL ---------- Sites with Institutional Controls

EXECUTIVE SUMMARY

Federal ERNS list

ERNS ---------- Emergency Response Notification System

State- and tribal - equivalent NPL

RESPONSE ---------- State Response Sites

State- and tribal - equivalent CERCLIS

ENVIROSTOR ---------- EnviroStor Database

State and tribal landfill and/or solid waste disposal site lists

SWF/LF ---------- Solid Waste Information System

State and tribal leaking storage tank lists

INDIAN LUST ---------- Leaking Underground Storage Tanks on Indian Land
CPS-SLIC ---------- Statewide SLIC Cases

State and tribal registered storage tank lists

FEMA UST ---------- Underground Storage Tank Listing
INDIAN UST ---------- Underground Storage Tanks on Indian Land

State and tribal voluntary cleanup sites

VCP ---------- Voluntary Cleanup Program Properties
INDIAN VCP ---------- Voluntary Cleanup Priority Listing

State and tribal Brownfields sites

BROWNFIELDS ---------- Considered Brownfieds Sites Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ---------- A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

SWRCY ---------- Recycler Database
HAULERS ---------- Registered Waste Tire Haulers Listing
INDIAN ODI ---------- Report on the Status of Open Dumps on Indian Lands
ODI ---------- Open Dump Inventory
DEBRIS REGION 9 ---------- Torres Martinez Reservation Illegal Dump Site Locations
IHS OPEN DUMPS ---------- Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL ---------- Delisted National Clandestine Laboratory Register

HIST Cal-Sites	Historical Calsites Database
SCH	School Property Evaluation Program
CDL	Clandestine Drug Labs
Toxic Pits	Toxic Pits Cleanup Act Sites
US CDL	National Clandestine Laboratory Register
PFAS	PFAS Contamination Site Location Listing

Local Land Records

LIENS	Environmental Liens Listing
LIENS 2	CERCLA Lien Information
DEED	Deed Restriction Listing

Records of Emergency Release Reports

HMIRS	Hazardous Materials Information Reporting System
CHMIRS	California Hazardous Material Incident Report System
LDS	Land Disposal Sites Listing
MCS	Military Cleanup Sites Listing
Orange Co. Industrial Site	List of Industrial Site Cleanups
SPILLS 90	SPILLS 90 data from FirstSearch

Other Ascertainable Records

FUDS	Formerly Used Defense Sites
DOD	Department of Defense Sites
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR	Financial Assurance Information
EPA WATCH LIST	EPA WATCH LIST
2020 COR ACTION	2020 Corrective Action Program List
TSCA	Toxic Substances Control Act
TRIS	Toxic Chemical Release Inventory System
SSTS	Section 7 Tracking Systems
ROD	Records Of Decision
RMP	Risk Management Plans
RAATS	RCRA Administrative Action Tracking System
PRP	Potentially Responsible Parties
PADS	PCB Activity Database System
ICIS	Integrated Compliance Information System
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS	Material Licensing Tracking System
COAL ASH DOE	Steam-Electric Plant Operation Data
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER	PCB Transformer Registration Database
RADINFO	Radiation Information Database
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS	Incident and Accident Data
CONSENT	Superfund (CERCLA) Consent Decrees
INDIAN RESERV	Indian Reservations
FUSRAP	Formerly Utilized Sites Remedial Action Program
UMTRA	Uranium Mill Tailings Sites
LEAD SMELTERS	Lead Smelter Sites
US AIRS	Aerometric Information Retrieval System Facility Subsystem
US MINES	Mines Master Index File

EXECUTIVE SUMMARY

ABANDONED MINES	Abandoned Mines
FINDS	Facility Index System/Facility Registry System
DOCKET HWC	Hazardous Waste Compliance Docket Listing
UXO	Unexploded Ordnance Sites
ECHO	Enforcement & Compliance History Information
FUELS PROGRAM	EPA Fuels Program Registered Listing
CA BOND EXP. PLAN	Bond Expenditure Plan
Cortese	"Cortese" Hazardous Waste & Substances Sites List
CUPA Listings	CUPA Resources List
DRYCLEANERS	Cleaner Facilities
EMI	Emissions Inventory Data
ENF	Enforcement Action Listing
Financial Assurance	Financial Assurance Information Listing
HAZNET	Facility and Manifest Data
ICE	ICE
HWP	EnviroStor Permitted Facilities Listing
HWT	Registered Hazardous Waste Transporter Database
MINES	Mines Site Location Listing
MWMP	Medical Waste Management Program Listing
NPDES	NPDES Permits Listing
PEST LIC	Pesticide Regulation Licenses Listing
PROC	Certified Processors Database
Notify 65	Proposition 65 Records
UIC	UIC Listing
UIC GEO	UIC GEO (GEOTRACKER)
WASTEWATER PITS	Oil Wastewater Pits Listing
WDS	Waste Discharge System
MILITARY PRIV SITES	MILITARY PRIV SITES (GEOTRACKER)
PROJECT	PROJECT (GEOTRACKER)
WDR	Waste Discharge Requirements Listing
CIWQS	California Integrated Water Quality System
CERS	CERS
WIP	Well Investigation Program Case List
NON-CASE INFO	NON-CASE INFO (GEOTRACKER)
OTHER OIL GAS	OTHER OIL & GAS (GEOTRACKER)
PROD WATER PONDS	PROD WATER PONDS (GEOTRACKER)
SAMPLING POINT	SAMPLING POINT (GEOTRACKER)
WELL STIM PROJ	Well Stimulation Project (GEOTRACKER)

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP	EDR Proprietary Manufactured Gas Plants
EDR Hist Auto	EDR Exclusive Historical Auto Stations
EDR Hist Cleaner	EDR Exclusive Historical Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF	Recovered Government Archive Solid Waste Facilities List
RGA LUST	Recovered Government Archive Leaking Underground Storage Tank

EXECUTIVE SUMMARY

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Federal RCRA generators list

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 03/25/2019 has revealed that there are 4 RCRA-SQG sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
SHMAZE INDUSTRIES IN EPA ID:: CAR000204040	20792 CANADA RD	ESE 0 - 1/8 (0.096 mi.)	C6	150
ARB INC EPA ID:: CAR000076760	***20602 INDIAN OCEAN***	***NNW 1/8 - 1/4 (0.183 mi.)***	***E18***	***262***
FOREVER GREEN ART IN EPA ID:: CAR000020172	***20611 CANADA RD***	***ENE 1/8 - 1/4 (0.238 mi.)***	***G22***	***311***
SALEEN ALLEN R R R S EPA ID:: CAR000090308	***20622 CANADA RD***	***ENE 1/8 - 1/4 (0.249 mi.)***	***G25***	***315***

State and tribal leaking storage tank lists

LUST: Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

A review of the LUST list, as provided by EDR, has revealed that there are 2 LUST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CHEVRON	***20731 LAKE FOREST***	***E 1/4 - 1/2 (0.373 mi.)***	***26***	***317***
Database: LUST REG 8, Date of Government Version: 02/14/2005 Database: ORANGE CO. LUST, Date of Government Version: 05/01/2019 Database: LUST, Date of Government Version: 12/10/2018				

Status: Completed - Case Closed
Facility Status: Case Closed
Global Id: T0605902102
Global ID: T0605902102
Facility Id: 97UT037

BEACON BAY CAR WASH ***20602 LAKE FOREST*** ***ENE 1/4 - 1/2 (0.489 mi.)*** ***27*** ***321***
Database: LUST REG 8, Date of Government Version: 02/14/2005
Database: ORANGE CO. LUST, Date of Government Version: 05/01/2019
Database: LUST, Date of Government Version: 12/10/2018
Status: Completed - Case Closed
Facility Status: Case Closed
Global Id: T0605999998
Global ID: T0605999998
Facility Id: 02UT003

State and tribal registered storage tank lists

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database.

A review of the UST list, as provided by EDR, and dated 12/10/2018 has revealed that there are 4 UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
ARB INC Facility Id: FA0024287 Facility Id: FA0024287	20602 CIVIC CENTER D	NNW 1/8 - 1/4 (0.153 mi.)	E12	204
ARB INC	***20602 INDIAN OCEAN***	***NNW 1/8 - 1/4 (0.183 mi.)***	***E18***	***262***
ARB INC Facility Id: 18624	26032 COMMERCENTRE D	N 1/8 - 1/4 (0.247 mi.)	24	315

Lower Elevation	Address	Direction / Distance	Map ID	Page
XPO LOGISTICS FREIGH Facility Id: FA0024234 Facility Id: FA0024234	***20697 PRISM PL***	***NW 0 - 1/8 (0.052 mi.)***	***A2***	***9***

AST: A listing of aboveground storage tank petroleum storage tank locations.

A review of the AST list, as provided by EDR, has revealed that there are 3 AST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
Not reported Database: AST, Date of Government Version: 07/06/2016	20772 INDIAN OCEAN D	WNW 1/8 - 1/4 (0.177 mi.)	F16	260
SUNSTATE EQUIPMENT C Database: AST, Date of Government Version: 07/06/2016	20772 INDIAN OCEAN D	WNW 1/8 - 1/4 (0.177 mi.)	F17	261
ARB INC Database: AST, Date of Government Version: 07/06/2016	***20602 INDIAN OCEAN***	***NNW 1/8 - 1/4 (0.183 mi.)***	***E18***	***262***

EXECUTIVE SUMMARY

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT: The Waste Management Unit Database System is used for program tracking and inventory of waste management units. The source is the State Water Resources Control Board.

A review of the WMUDS/SWAT list, as provided by EDR, and dated 04/01/2000 has revealed that there is 1 WMUDS/SWAT site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
GREENWASTE COMPOSTIN	20712 INDIAN OCEAN D	WNW 1/8 - 1/4 (0.156 mi.)	15	259

Local Lists of Hazardous waste / Contaminated Sites

CERS HAZ WASTE: List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, and RCRA LQ HW Generator programs.

A review of the CERS HAZ WASTE list, as provided by EDR, and dated 04/09/2019 has revealed that there are 10 CERS HAZ WASTE sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
AFAB PRECISION MACHI	***20742 LINEAR LN***	***E 0 - 1/8 (0.068 mi.)***	***B5***	***135***
SHMAZE CUSTOM COATIN	***20792 CANADA RD***	***ESE 0 - 1/8 (0.096 mi.)***	***C7***	***151***
MCLAREN UNIBODY INC	***20781 CANADA RD***	***E 0 - 1/8 (0.098 mi.)***	***B8***	***177***
SEA COUNTRY TOWING/S	***20611 PRISM PL***	***N 1/8 - 1/4 (0.128 mi.)***	***D9***	***193***
ARB INC	***20602 CIVIC CENTER D***	***NNW 1/8 - 1/4 (0.153 mi.)***	***E13***	***205***
SUNSTATE EQUIPMENT C	***20772 CIVIC CENTER D***	***W 1/8 - 1/4 (0.153 mi.)***	***F14***	***242***
BLAIRS TOWING	***26100 DIMENSION DR***	***N 1/8 - 1/4 (0.186 mi.)***	***19***	***264***
PANASONIC AVIONICS C	26229 ENTERPRISE CT	NNE 1/8 - 1/4 (0.223 mi.)	20	285
ARB INC	***20632 CIVIC CENTER D***	***NNW 1/8 - 1/4 (0.230 mi.)***	***21***	***287***

Lower Elevation	Address	Direction / Distance	Map ID	Page
XPO LOGISTICS FREIGH	***20697 PRISM PL***	***NW 0 - 1/8 (0.052 mi.)***	***A4***	***11***

Local Lists of Registered Storage Tanks

SWEEPS UST: Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

A review of the SWEEPS UST list, as provided by EDR, and dated 06/01/1994 has revealed that there are 2 SWEEPS UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
V P BAKER RANCH	***20745 CANADA RD***	***E 1/8 - 1/4 (0.137 mi.)***	***11***	***204***

Status: A
Tank Status: A
Comp Number: 10

Lower Elevation	Address	Direction / Distance	Map ID	Page
XPO LOGISTICS FREIGH	***20697 PRISM PL***	***NW 0 - 1/8 (0.052 mi.)***	***A2***	***9***

Status: A
Tank Status: A
Comp Number: 11358

HIST UST: Historical UST Registered Database.

A review of the HIST UST list, as provided by EDR, and dated 10/15/1990 has revealed that there is 1 HIST UST site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
LOS ALISOS RANCH	20571 CANADA RD	ENE 1/8 - 1/4 (0.243 mi.)	G23	314

Facility Id: 00000023543

CERS TANKS: List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs.

A review of the CERS TANKS list, as provided by EDR, and dated 04/09/2019 has revealed that there are 4 CERS TANKS sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
ARB INC	***20602 CIVIC CENTER D***	***NNW 1/8 - 1/4 (0.153 mi.)***	***E13***	***205***
SUNSTATE EQUIPMENT C	***20772 CIVIC CENTER D***	***W 1/8 - 1/4 (0.153 mi.)***	***F14***	***242***
ARB INC	***20632 CIVIC CENTER D***	***NNW 1/8 - 1/4 (0.230 mi.)***	***21***	***287***

Lower Elevation	Address	Direction / Distance	Map ID	Page
XPO LOGISTICS FREIGH	***20697 PRISM PL***	***NW 0 - 1/8 (0.052 mi.)***	***A4***	***11***

CA FID UST: The Facility Inventory Database contains active and inactive underground storage tank locations. The source is the State Water Resource Control Board.

A review of the CA FID UST list, as provided by EDR, and dated 10/31/1994 has revealed that there is 1 CA FID UST site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
V P BAKER RANCH	***20745 CANADA RD***	***E 1/8 - 1/4 (0.137 mi.)***	***11***	***204***

Facility Id: 30017405
Status: A

Other Ascertainable Records

RCRA NonGen / NLR: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 03/25/2019 has revealed that there are 3 RCRA NonGen / NLR sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CAMALI CORP EPA ID:: CAL000399808	20845 CANADA RD	SSE 0 - 1/8 (0.020 mi.)	1	8
SEA COUNTRY TOWING & EPA ID:: CAL000371066	20611 PRISM PL	N 1/8 - 1/4 (0.128 mi.)	D10	202

Lower Elevation	Address	Direction / Distance	Map ID	Page
XPO LOGISTICS FREIGH EPA ID:: CAL000078604	20697 PRISM PL	NW 0 - 1/8 (0.052 mi.)	A3	9

HIST CORTESE: The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

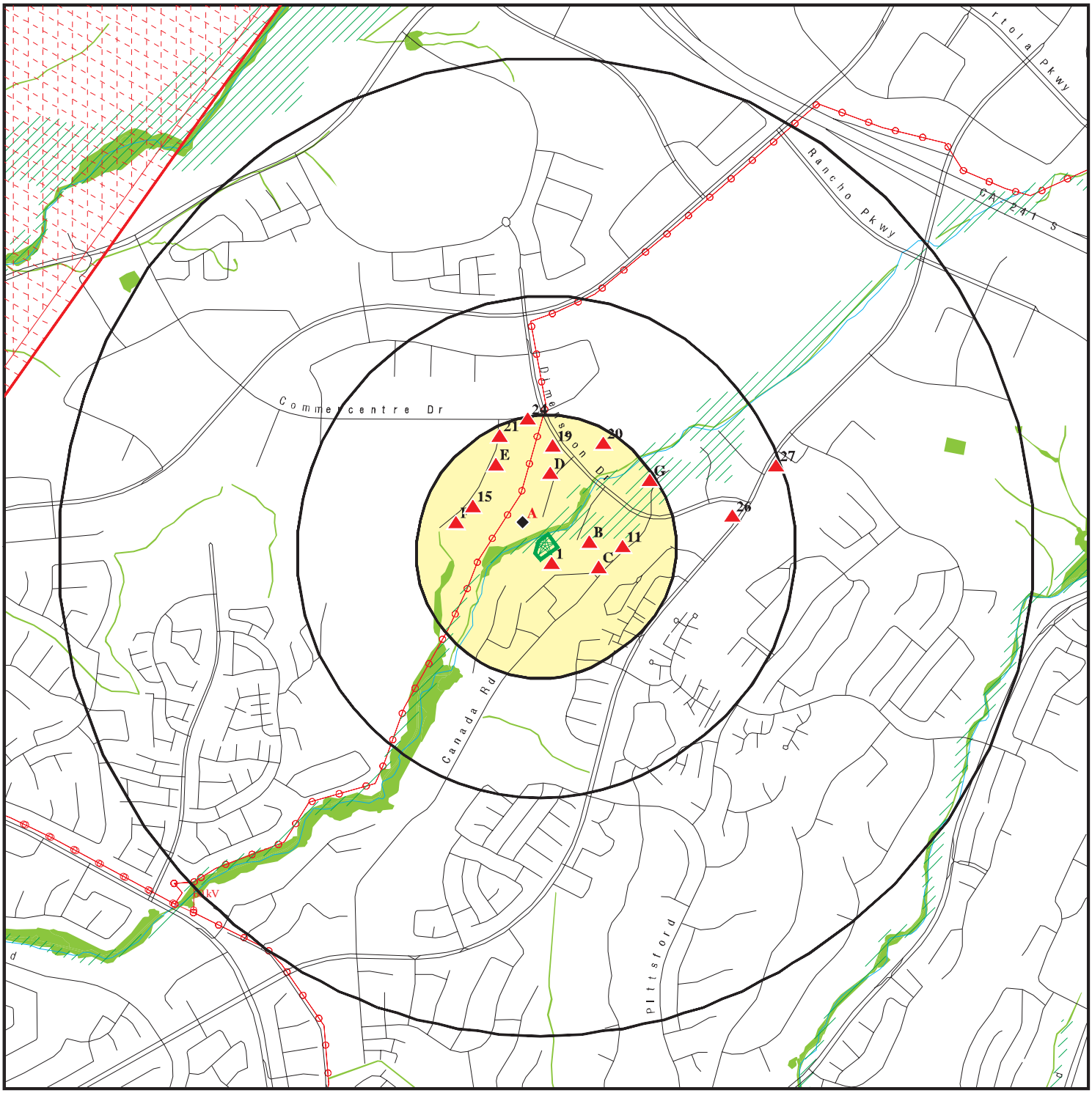
A review of the HIST CORTESE list, as provided by EDR, and dated 04/01/2001 has revealed that there is 1 HIST CORTESE site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CHEVRON Reg Id: 083003083T	***20731 LAKE FOREST***	***E 1/4 - 1/2 (0.373 mi.)***	***26***	***317***

EXECUTIVE SUMMARY

There were no unmapped sites in this report.

OVERVIEW MAP - 05678687.2R



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- State Wetlands
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Lake Forest ADDRESS: 20865 Canada Road Lake Forest CA 92630 LAT/LONG: 33.660536 / 117.675122	CLIENT: Hillmann Environmental Co. CONTACT: Shilpa Sunil INQUIRY #: 05678687.2r DATE: June 10, 2019 1:46 pm

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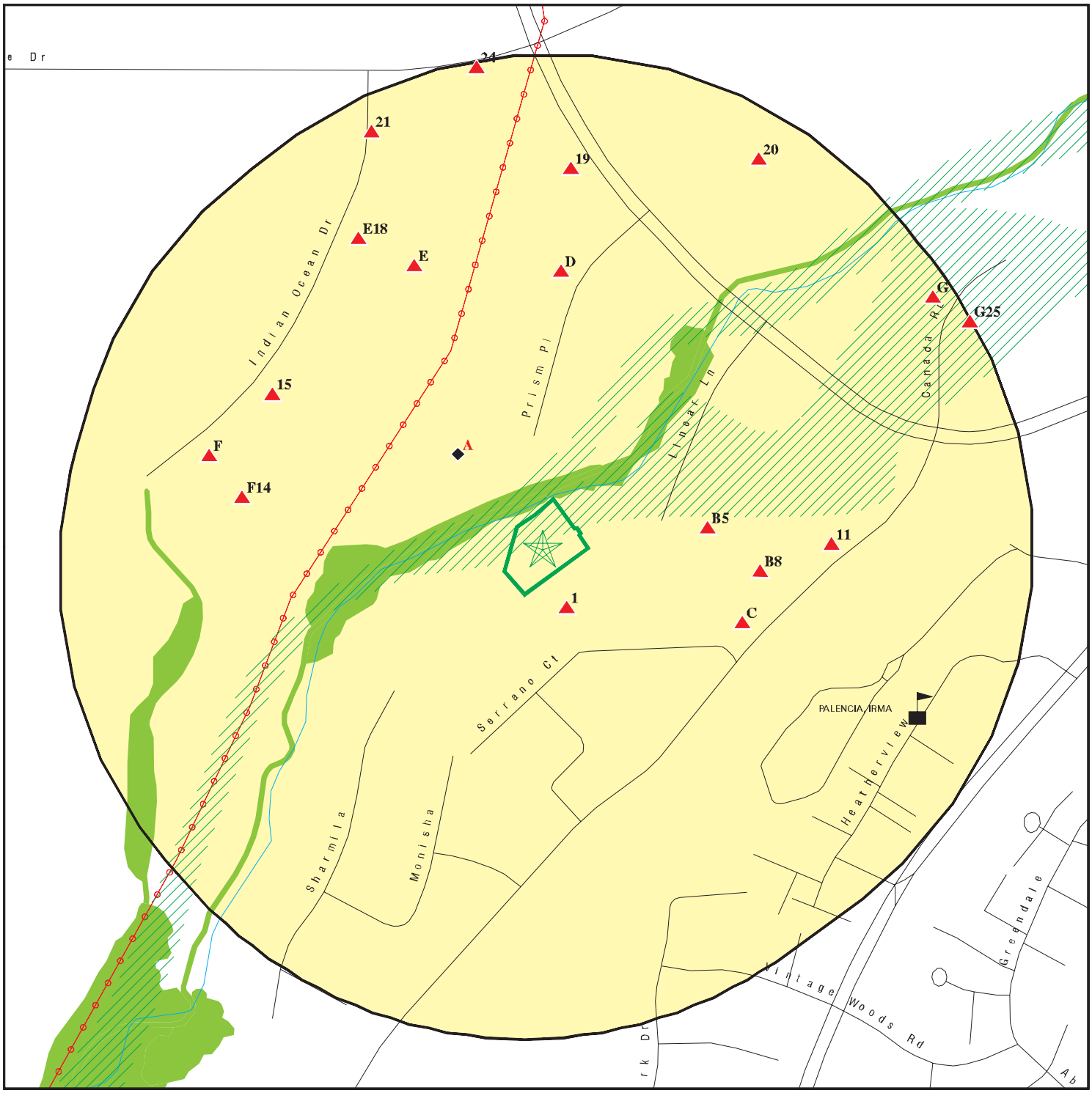
DETAIL MAP - 05678687.2R



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- State Wetlands
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Lake Forest	CLIENT: Hillmann Environmental Co.
ADDRESS: 20865 Canada Road Lake Forest CA 92630	CONTACT: Shilpa Sunil
LAT/LONG: 33.660536 / 117.675122	INQUIRY #: 05678687.2r DATE: June 10, 2019 1:47 pm

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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	0.001		0	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site list								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		1	3	NR	NR	NR	4
RCRA-CESQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	0.001		0	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
RESPONSE	1.000		0	0	0	0	NR	0
State- and tribal - equivalent CERCLIS								
ENVIROSTOR	1.000		0	0	0	0	NR	0
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST	0.500		0	0	2	NR	NR	2

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN LUST	0.500		0	0	0	NR	NR	0
CPS-SLIC	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		1	3	NR	NR	NR	4
AST	0.250		0	3	NR	NR	NR	3
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal voluntary cleanup sites								
VCP	0.500		0	0	0	NR	NR	0
INDIAN VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
WMUDS/SWAT	0.500		0	1	0	NR	NR	1
SWRCY	0.500		0	0	0	NR	NR	0
HAULERS	0.001		0	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	0.001		0	NR	NR	NR	NR	0
HIST Cal-Sites	1.000		0	0	0	0	NR	0
SCH	0.250		0	0	NR	NR	NR	0
CDL	0.001		0	NR	NR	NR	NR	0
CERS HAZ WASTE	0.250		4	6	NR	NR	NR	10
Toxic Pits	1.000		0	0	0	0	NR	0
US CDL	0.001		0	NR	NR	NR	NR	0
PFAS	0.001		0	NR	NR	NR	NR	0
Local Lists of Registered Storage Tanks								
SWEEPS UST	0.250		1	1	NR	NR	NR	2
HIST UST	0.250		0	1	NR	NR	NR	1
CERS TANKS	0.250		1	3	NR	NR	NR	4
CA FID UST	0.250		0	1	NR	NR	NR	1
Local Land Records								
LIENS	0.001		0	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
LIENS 2	0.001		0	NR	NR	NR	NR	0
DEED	0.500		0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS	0.001		0	NR	NR	NR	NR	0
CHMIRS	0.001		0	NR	NR	NR	NR	0
LDS	0.001		0	NR	NR	NR	NR	0
MCS	0.001		0	NR	NR	NR	NR	0
Orange Co. Industrial Site	0.001		0	NR	NR	NR	NR	0
SPILLS 90	0.001		0	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		2	1	NR	NR	NR	3
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	0.001		0	NR	NR	NR	NR	0
EPA WATCH LIST	0.001		0	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	0.001		0	NR	NR	NR	NR	0
TRIS	0.001		0	NR	NR	NR	NR	0
SSTS	0.001		0	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	0.001		0	NR	NR	NR	NR	0
RAATS	0.001		0	NR	NR	NR	NR	0
PRP	0.001		0	NR	NR	NR	NR	0
PADS	0.001		0	NR	NR	NR	NR	0
ICIS	0.001		0	NR	NR	NR	NR	0
FTTS	0.001		0	NR	NR	NR	NR	0
MLTS	0.001		0	NR	NR	NR	NR	0
COAL ASH DOE	0.001		0	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	0.001		0	NR	NR	NR	NR	0
RADINFO	0.001		0	NR	NR	NR	NR	0
HIST FTTS	0.001		0	NR	NR	NR	NR	0
DOT OPS	0.001		0	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	0.001		0	NR	NR	NR	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	0.001		0	NR	NR	NR	NR	0
US AIRS	0.001		0	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.001		0	NR	NR	NR	NR	0
FINDS	0.001		0	NR	NR	NR	NR	0
DOCKET HWC	0.001		0	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
ECHO	0.001		0	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	0	0	0	NR	0
Cortese	0.500		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
CUPA Listings	0.250		0	0	NR	NR	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
EMI	0.001		0	NR	NR	NR	NR	0
ENF	0.001		0	NR	NR	NR	NR	0
Financial Assurance	0.001		0	NR	NR	NR	NR	0
HAZNET	0.001		0	NR	NR	NR	NR	0
ICE	0.001		0	NR	NR	NR	NR	0
HIST CORTESE	0.500		0	0	1	NR	NR	1
HWP	1.000		0	0	0	0	NR	0
HWT	0.250		0	0	NR	NR	NR	0
MINES	0.001		0	NR	NR	NR	NR	0
MWMP	0.250		0	0	NR	NR	NR	0
NPDES	0.001		0	NR	NR	NR	NR	0
PEST LIC	0.001		0	NR	NR	NR	NR	0
PROC	0.500		0	0	0	NR	NR	0
Notify 65	1.000		0	0	0	0	NR	0
UIC	0.001		0	NR	NR	NR	NR	0
UIC GEO	0.001		0	NR	NR	NR	NR	0
WASTEWATER PITS	0.500		0	0	0	NR	NR	0
WDS	0.001		0	NR	NR	NR	NR	0
MILITARY PRIV SITES	0.001		0	NR	NR	NR	NR	0
PROJECT	0.001		0	NR	NR	NR	NR	0
WDR	0.001		0	NR	NR	NR	NR	0
CIWQS	0.001		0	NR	NR	NR	NR	0
CERS	0.001		0	NR	NR	NR	NR	0
WIP	0.250		0	0	NR	NR	NR	0
NON-CASE INFO	0.001		0	NR	NR	NR	NR	0
OTHER OIL GAS	0.001		0	NR	NR	NR	NR	0
PROD WATER PONDS	0.001		0	NR	NR	NR	NR	0
SAMPLING POINT	0.001		0	NR	NR	NR	NR	0
WELL STIM PROJ	0.001		0	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA LF	0.001		0	NR	NR	NR	NR	0
RGA LUST	0.001		0	NR	NR	NR	NR	0
- Totals --		0	10	23	3	0	0	36

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

1
SSE
< 1/8
0.020 mi.
103 ft.

CAMALI CORP
20845 CANADA RD
LAKE FOREST, CA 92630

RCRA NonGen / NLR

1024846083
CAL000399808

Relative:
Higher

Actual:
633 ft.

RCRA NonGen / NLR:

Date form received by agency:	08/18/2014
Facility name:	CAMALI CORP
Facility address:	20845 CANADA RD LAKE FOREST, CA 92630
EPA ID:	CAL000399808
Contact:	JOSE PULIDO
Contact address:	20845 CANADA RD LAKE FOREST, CA 92630
Contact country:	Not reported
Contact telephone:	949-580-0250
Contact email:	JOSEP@CAMALICORP.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	CAMALI CORP
Owner/operator address:	20845 CANADA RD LAKE FOREST, CA 92630
Owner/operator country:	Not reported
Owner/operator telephone:	949-580-0250
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	JOSE PULIDO
Owner/operator address:	20845 CANADA RD LAKE FOREST, CA 92630
Owner/operator country:	Not reported
Owner/operator telephone:	949-580-0250
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	Yes
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No

CAMALI CORP (Continued) **1024846083**

Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

A2 **XPO LOGISTICS FREIGHT INC - UIV** **UST** **U003432928**
NW **20697 PRISM PL** **SWEEPS UST** **N/A**
< 1/8 **LAKE FOREST, CA 92630**
0.052 mi.
277 ft. **Site 1 of 3 in cluster A**

Relative:
Lower

Actual:
628 ft.

UST:
Facility ID: FA0024234
Permitting Agency: Orange County Environmental Health
Latitude: 33.66129
Longitude: -117.67587

ORANGE CO. UST:
Facility ID: FA0024234

SWEEPS UST:
Status: Active
Comp Number: 11358
Number: 9
Board Of Equalization: Not reported
Referral Date: 09-30-92
Action Date: 09-15-92
Created Date: 02-29-88
Owner Tank Id: Not reported
SWRCB Tank Id: 30-000-011358-000001
Tank Status: A
Capacity: 10000
Active Date: Not reported
Tank Use: M.V. FUEL
STG: P
Content: DIESEL
Number Of Tanks: 1

A3 **XPO LOGISTICS FREIGHT INC. - UIV** **RCRA NonGen / NLR** **1024790138**
NW **20697 PRISM PL** **CAL000078604**
< 1/8 **LAKE FOREST, CA 92630**
0.052 mi.
277 ft. **Site 2 of 3 in cluster A**

Relative:
Lower

Actual:
628 ft.

RCRA NonGen / NLR:
Date form received by agency: 08/06/1993
Facility name: XPO LOGISTICS FREIGHT INC. - UIV
Facility address: 20697 PRISM PL
LAKE FOREST, CA 92630-7803
EPA ID: CAL000078604
Mailing address: 2211 OLD EARHART RD STE 100

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **1024790138**

ANN ARBOR, MI 48105-0000
Contact: JEFF SEXTEN
Contact address: 2211 OLD EARHART ROAD, SUITE 100
ANN ARBOR, MI 48105
Contact country: Not reported
Contact telephone: 734-757-1657
Contact email: JEFF.SEXTEN@XPO.COM
EPA Region: 09
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: XPO LOGISTICS FREIGHT, INC.
Owner/operator address: 2211 OLD EARHART RD STE 100
ANN ARBOR, MI 48105
Owner/operator country: Not reported
Owner/operator telephone: 734-757-1657
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: JEFF SEXTEN
Owner/operator address: 2211 OLD EARHART ROAD, SUITE 100
ANN ARBOR, MI 48105
Owner/operator country: Not reported
Owner/operator telephone: 734-757-1657
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: Yes
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

A4 **XPO LOGISTICS FREIGHT, INC.-UIV** **CERS HAZ WASTE** **S113051905**
NW **20697 PRISM PL** **CERS TANKS** **N/A**
< 1/8 **LAKE FOREST, CA 92630** **HAZNET**
0.052 mi. **CERS**
277 ft. **Site 3 of 3 in cluster A**

Relative: Lower
Actual: 628 ft.

CERS HAZ WASTE:

Site ID:	107675
CERS ID:	10449481
CERS Description:	Hazardous Waste Generator

Violations:

Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	03-03-2014
Citation:	HSC 6.7 25286(a) - California Health and Safety Code, Chapter 6.7, Section(s) 25286(a)
Violation Description:	Failure to prepare, maintain, and submit accurate CUPA UST Operating Permit Application for Facility information and/or Tank information.
Violation Notes:	Returned to compliance on 03/05/2014. A copy of the monitoring plan is not available on site. Please submit a copy of the monitoring plan to this Agency within 30 days of this inspection.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS

Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	08-25-2014
Citation:	HSC 6.95 25508(d) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(d)
Violation Description:	Failure to complete and/or electronically submit a business plan when storing/handling a hazardous material at or above reportable quantities.
Violation Notes:	Returned to compliance on 04/13/2015. Please be advised that in the inspection report dated 3/3/14, this Agency requested electronic submittal of hazardous business emergency plan. To date, this information has not been submitted. Emergency plan must be submitted within 30 days of this inspection.
Violation Division:	Orange County Environmental Health
Violation Program:	HMRRP
Violation Source:	CERS

Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	08-25-2014
Citation:	HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description:	Failure to complete and electronically submit a site map with all required content.
Violation Notes:	Returned to compliance on 04/13/2015. Please be advised that in the inspection report dated 3/3/14, this Agency requested electronic submittal of site map. To date, the site map has not been submitted. The site map must be submitted within 30 days of this inspection.
Violation Division:	Orange County Environmental Health
Violation Program:	HMRRP
Violation Source:	CERS

Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Violation Date:	04-30-2015
Citation:	23 CCR 16 2638 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2638
Violation Description:	Failure to test leak detection equipment as required every 12 months (VPH, sensor, LLD, ATG, etc.) and/or submit monitoring system certification to the CUPA within 30 days of completion of the test
Violation Notes:	Returned to compliance on 06/26/2015. Monitoring system certification activities were performed at the facility on 3/20/15. A copy of the monitoring system certification report must be submitted to this Agency within 30 days of testing. To date, this Agency has not received a copy of the report. A copy of this report must be submitted by 5/15/15.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	03-03-2015
Citation:	HSC 6.7 25284.2 - California Health and Safety Code, Chapter 6.7, Section(s) 25284.2
Violation Description:	Failure to test the spill bucket annually.
Violation Notes:	Returned to compliance on 04/30/2015. The last spill bucket test conducted at this facility was on 3/3/14. Spill bucket must be tested annually. Spill bucket test must be scheduled and conducted within 30 days of this inspection report. Notify this Agency 48 hours in advance of testing.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	11-05-2014
Citation:	23 CCR 16 2637(e) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2637(e)
Violation Description:	Failure to submit a copy of the secondary containment test results to the CUPA within 30 days after the test.
Violation Notes:	Returned to compliance on 06/26/2015. Results of secondary containment test (SB989) for activities conducted on 8/15/14, have not been received by this Agency within 30 days of testing. A copy of the secondary containment testing report form must be submitted to this Agency within 30 days of this inspection report.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	03-13-2017
Citation:	HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Description:	Failure to annually review and electronically certify that the business plan is complete and accurate on or before the annual due date.
Violation Notes:	Returned to compliance on 04/07/2017. Annual Hazardous Materials Business Plan (HMBP) have not been submitted. Please be advised that

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

	HMBP documents must be submitted annually by March 1st. HMBP documents must be submitted within 30 days of this inspection.
Violation Division:	Orange County Environmental Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	03-03-2015
Citation:	23 CCR 16 2638 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2638
Violation Description:	Failure to test leak detection equipment as required every 12 months (VPH, sensor, LLD, ATG, etc.) and/or submit monitoring system certification to the CUPA within 30 days of completion of the test
Violation Notes:	Returned to compliance on 04/30/2015. The last monitoring system certification test conducted at this facility was on 3/3/14. Monitoring system certification must be conducted annually. Monitoring system certification must be scheduled and conducted within 30 days of this inspection report. Notify this Agency 48 hours in advance of testing.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	07-01-2005
Citation:	2014-0057-DWQ - Industrial General Permit
Violation Description:	SW - Late Report
Violation Notes:	Failure to submit 04-05 Annual Report by 7/1/05.
Violation Division:	Water Boards
Violation Program:	INDSTW
Violation Source:	SMARTS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	05-06-2016
Citation:	23 CCR 16 2638 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2638
Violation Description:	Failure to test leak detection equipment as required every 12 months (VPH, sensor, LLD, ATG, etc.) and/or submit monitoring system certification to the CUPA within 30 days of completion of the test
Violation Notes:	Returned to compliance on 05/11/2016. This agency has not received a copy of of monitoring system certification report for tests conducted on 3/2/16. Please be advised that test results must be submitted to this agency within 30 days of testing. A copy of test results must be submitted to this agency by 5/20/16. Failure to submit test results may result in further enforcement action.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	04-30-2015
Citation:	HSC 6.7 25286(a) - California Health and Safety Code, Chapter 6.7, Section(s) 25286(a)

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Violation Description:	Failure to submit an complete and accurate application for a permit to operate an underground storage tank, or for renewal of the permit.
Violation Notes:	Returned to compliance on 07/11/2015. UST documents submitted to CERS on 10/9/13, 3/4/14, 9/25/14 and 3/10/15 have not been accepted due to inaccurate information. All requested corrections must be made within 30 days of this inspection report.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	03-03-2014
Citation:	HSC 6.7 25286(a) - California Health and Safety Code, Chapter 6.7, Section(s) 25286(a)
Violation Description:	Failure to prepare, maintain, and submit accurate CUPA UST Operating Permit Application for Facility information and/or Tank information.
Violation Notes:	Returned to compliance on 03/05/2014. UST Facility and tank pages are not available on site. Please submit copies of these forms to this Agency within 30 days of this inspection.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	05-04-2017
Citation:	23 CCR 16 2715(i) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(i)
Violation Description:	Failure to have a properly qualified service technician test leak detection equipment as required every 12 months (vapor, pressure, hydrostatic (VPH) system, sensors, line-leak detectors (LLD), automatic tank gauge (ATG), etc.).
Violation Notes:	Returned to compliance on 05/26/2017. Please be advised that this agency has not received a copy of monitoring system certification report for tests conducted on 3/13/17. Test results must be submitted to this agency within 30 days of testing. A copy of monitoring system certification report must be submitted to this agency by 5/18/17 to avoid enforcement action.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	01-26-2012
Citation:	2014-0057-DWQ - Industrial General Permit
Violation Description:	SW - Denied Access
Violation Notes:	The on-site manager would not allow inspection or review of SWPPP without presence of safety staff. Safety staff is located in Fontana.
Violation Division:	Water Boards
Violation Program:	INDSTW
Violation Source:	SMARTS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	08-25-2014

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Citation:	HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description:	Failure to complete and electronically submit hazardous material inventory information for all reportable hazardous materials on site at or above reportable quantities.
Violation Notes:	Returned to compliance on 04/13/2015. Please be advised that in the inspection report dated 3/3/14, this Agency requested electronic submittal of hazardous materials inventory forms for hazardous materials at or above the thresholds quantities of 55 gallons/500 lbs/200 cubic feet. To date, this information has not been submitted. The requested forms must be submitted within 30 days of this inspection.
Violation Division:	Orange County Environmental Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	03-03-2017
Citation:	23 CCR 16 2715(i) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(i)
Violation Description:	Failure to have a properly qualified service technician test leak detection equipment as required every 12 months (vapor, pressure, hydrostatic (VPH) system, sensors, line-leak detectors (LLD), automatic tank gauge (ATG), etc.).
Violation Notes:	Returned to compliance on 03/13/2017. Please be advised that this Agency has reviewed the file for this facility. The last monitoring system certification testing for this facility was conducted on 3/2/16. Monitoring system certification test must be conducted annually. To date, this Agency has not received a notification for scheduled testing or a copy of the monitoring system certification report documenting that the test was conducted. The monitoring system certification test must be scheduled and conducted within 30 days of this inspection report to avoid any enforcement action.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	03-02-2016
Citation:	HSC 6.75 25299.30-25299.34 - California Health and Safety Code, Chapter 6.75, Section(s) 25299.30-25299.34
Violation Description:	Failure to submit and maintain complete and current Certification of Financial Responsibility or other mechanism of financial assurance.
Violation Notes:	Returned to compliance on 03/13/2017. Certification of financial responsibility expired on 12/31/15 and has previous owner's information. A valid certification of financial responsibility with current owner information must be submitted within 30 days of this inspection.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	10-18-2017

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Citation:	23 CCR 16 2637(e) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2637(e)
Violation Description:	Failure to submit a copy of the secondary containment test results to the CUPA within 30 days after the test.
Violation Notes:	Returned to compliance on 01/12/2018. This agency has not received a copy of secondary containment test results within 30 days of testing. Notification dated 7/17/17 sent to this agency indicated that secondary containment test was scheduled for 8/7/17. A copy of secondary containment testing report form must be submitted to this agency by 11/1/17 to avoid further enforcement action.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS

Evaluation:

Eval General Type:	Other/Unknown
Eval Date:	03-08-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I received email from company contact, Pamela Nixon, in response to inspection report with violation regarding failure to conduct annual monitoring system certification within 365 days of last test. A copy of monitoring system report for tests conducted on 2/21/17 was attached to the email. I was not on site since I had not received notification. I checked UST Notification Calendar and site history (7800 report) to determine if this agency received notification of testing. Notification was not received. I emailed Pamela back explaining that notification for testing was not received by this agency and that test must be conducted again so that it can be witnessed by this agency. I received notification to conduct test on 3/13/17.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS

Eval General Type:	Other/Unknown
Eval Date:	03-09-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Went to site to witness monitor certification as notified and conduct routine UST inspection. Testers were not on site. I called testing company, Tanknology, and was told that technician is running late. Monitor certification will be rescheduled for another day.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS

Eval General Type:	Other/Unknown
Eval Date:	03-14-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I highlighted tank information page with areas that corrections are needed and emailed it to company's CERS contact. I also included comment that Facility Information was accepted even though this conpany did not obtain their own BOE#.
Eval Division:	Orange County Environmental Health
Eval Program:	UST

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-30-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 3/28/17 were reviewed. Emergency plan was not accepted since CUPA phone # was not listed.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	04-30-2015
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector Comments: Monitoring system certification activities were performed at the facility on 3/20/15. A copy of the monitoring system certification report must be submitted to this Agency within 30 days of testing. To date, this Agency has not received a copy of the report. A copy of this report must be submitted by 5/15/15. Violation I205, regarding not conducting monitoring system certification activities cited in the inspection report dated 3/3/15, has been corrected. However, the violation listed above if for not submitting a copy of the monitoring system certification report. In addition, this Agency has requested corrections of UST documents submitted to CERS on 10/9/13, 3/4/14, 9/25/14 and 3/10/15. All corrections must be made within 30 days if this inspection report. Please be advised that this facility also has an outstanding violation, cited on 11/5/14, regarding not submitting results of Secondary Containment Testing to this Agency within 30 days of [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	05-22-2018
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I received a copy of Monitoring System Certification, Line Leak Detector Test Form and Spill Bucket Testing Report Form for activities conducted on 3/2/18. All components passed test.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	06-02-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I received email from Pamela Nixon, company headquarter, in response to letter stating that facility will not be receiving UST permit. I emailed her another copy of the 5/26/17 F04 report stating (that was both emailed and mailed to ther) that violation was corrected and facility would be receiving permit.
Eval Division:	Orange County Environmental Health
Eval Program:	UST

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	07-11-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 6/11/15, 6/12/15 and 6/30/15 were reviewed and declined with the following considerations: Diesel Exhaust Fluid: ?Yes? for ?Fire? under Federal Hazard Categories section should be deleted since this mixture is mostly water. Propane form must be revised as follows: - Chemical Name and Common Name are reversed. Liquefied Petroleum Gas is the Chemical Name. - Physical State must be changed from ?Gas? to ?Liquid.? - Fire Code Hazard Classes must be changed from ?Flammable Gas? to ?Flammable Liquefied Gas.? - Storage Pressure must be changed from ?Ambient? to ?Above Ambient.? Windshield Washer Fluid: An MSDS/SDS was not submitted as requested. Therefore, the accuracy of the information cannot be verified. Please submit SDS for this material. Hazardous Material Inventory forms for the following material, reported in previous in submittals and/or observed during onsite inspection must be submitted: - Antifreeze - Motor Oil - [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	08-07-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	SB 989 test notification
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	08-25-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	The documents submitted to CERS on 3/4/14 have been reviewed and not accepted with the following considerations: ?Monitor Panel Manufacturer?, ?Monitor Panel Model?, ?Leak Sensor Manufacturer? and ?Leak Sensor Model? information is not listed in the ?Continuous Electronic Tank Monitoring? section of the Underground Storage ? Monitoring Plan (Tank Monitoring) ?Monitor Panel Manufacturer?, ?Monitor Panel Model?, ?Leak Sensor Manufacturer? and ?Leak Sensor Model? information is not listed in the ?Continuous Monitoring off Piping Secondary Containment? section of the Underground Storage ? Monitoring Plan (Pipe Monitoring) The site map does not show the locations of the piping, dispenser, sensors, emergency shut off or the monitoring panel. Underground Storage Tank - Response Plan, a copy of Owner Statements of Designated Underground Storage Tank (UST) Operator (DO) and Certification of Financial Responsibility must also be submitted.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Eval General Type:	Other/Unknown
Eval Date:	11-05-2014
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector Comments: Please be advised that this Agency received a notification that secondary containment testing (SB989) was scheduled for 8/15/14. Test results must be submitted to this Agency within 30 days of testing. To date, a copy of the test results have not been received by this Agency. A copy of test results must be submitted to this Agency within 30 days of this inspection report report.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	11-30-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 11/25/15 indicate change of ownership. New Owner is XPO Logistics Freight, Inc. Form was submitted to add new owner to program. Business Activities form was not accepted since previous owner's (Con-way Freight, Inc.) EPA ID# in listed for new business.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	11-30-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 11/25/15 were reviewed and not accepted with the following considerations: - EPA ID# CAL000078604 listed on Business Activities form is assigned to former business owner, Con-Way Freight, Inc. This business must obtain a new EPA ID#. - Windshield Washer Fluid. Based on a copy of SDS submitted on 7/29/15, the ?Hazardous Component? for this material is Methanol. Therefore, ?Methanol? with CAS# ?67-56-1? at ?1?% by weight should be listed in Mixture Component section. - Motor Oil form must be revised as follows: - Hazardous Material Type must be changed from ?Pure? to ?Mixture? since Mixture Components are provided. - Fire Code Hazard Classes must be changed from ?Combustible Liquid, Class II? to ?Combustible Liquid, Class III-B.? - CAS# 6474X-XX-X listed for ?Various Lubricating Base Oils? in Mixture Components section is not acceptable, especially that this material is the main component at 85%. All digits of the CAS# must be [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	07-11-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Change status to receive a UST permit, per Arghavan.
Eval Division:	Orange County Environmental Health
Eval Program:	UST

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	07-15-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Updated monitoring plan documenting the replacement of Veeder Root panel and sump sensor was submitted to CERS on 6/30/15 and approved. Plan Check may be closed.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	08-28-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	On site to witness monitoring system certification test after completion of modification activities (replacing Veeder Root Panel from TLS 300-C to TLS 350). Only components monitored by the Veeder Root panel were tested. The sump sensor (205) was replaced with a 208 sensor since it was not functioning properly. The annular and sump sensors alarmed properly (visual and audible) and shut down respective turbine when submerged in water. An updated monitoring plan documenting the installation of the new Veeder Root panel and sump sensor must be submitted within 30 days of this inspection. Fail-safe, sensor out and emergency shut off were tested and passed.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	11-30-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 11/25/15 indicate change of ownership. New Owner is XPO Logistics Freight, Inc. Form was submitted to add new owner to program.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	11-30-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 11/25/15 were reviewed and not accepted with the following considerations: Board of Equalization Account Number (44036723) was assigned to former business owner, Con-Way Freight, Inc. Due to change in ownership, a new BOE# must obtained. Name of the former business is listed on the UST Certification of Financial Responsibility (CFR) form. Updated CFR form with new business name must be submitted. In addition, the former business?s ?Letter From Chief Financial Officer? has been submitted. An updated CFO letter should be submitted.
Eval Division:	Orange County Environmental Health
Eval Program:	UST

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	12-09-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Change status to receive a permit, per Arghavan.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	05-16-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Change permit status to Do Not Issue (03) per email from A. Rashidi-Fard dated 5/15/17
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	05-26-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I received a copy of Monitoring System Certification and Spill Bucket Testing Report Form for activities conducted on 3/13/17. All components passed test. Violation I205 regarding failure to submit monitoring system certification report to CUPA within 30 days of testing event, cited in the inspection report dated 5/4/17, has been corrected. Permit to operate the underground storage tank at this facility will be issued.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	05-30-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Change permit status to Issue Permit (01) per email from A. Rashidi-Fard dated 5/26/17.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	06-12-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 6/2/15 were reviewed and not accepted with the following considerations: ?Yes? must be listed for ?Spill Bucket? and ?Striker Plate/Bottom Protector? for ?Fill Component Installed? under ?Vent, Vapor Recovery (VR) And Riser/Fill Pipe Piping Construction? section on Tank Information page. The UDC is not monitored by the Veeder Root panel. Therefore, information listed for ?UDC Panel Manufacturer? and ?UDC Panel Model #? in ?Under Dispenser

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Containment (UDC) Monitoring? on the monitoring plan should be removed. ?Yes? should be listed for ?Equipment Maintenance and Calibration Records? under ?Recordkeeping? section of the monitoring plan since copies of tank system test results are maintained on site. ?Yes? should be listed for ?Designated Operator Training? under ?Training? section since copies of training records for employees trained by designated operator are maintained on site. ?Corrective Action? section on the Certification [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 08-25-2014
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Inspector Comments:

_____ Please be advised that in the inspection report dated 3/3/14, this Agency requested electronic submittal of hazardous materials inventory for hazardous materials at or above the thresholds quantities of 55 gallons/500 lbs/200 cubic feet, business emergency plan and site map. To date, the requested documents have not been submitted. The violations listed above must be complied with, in order to prevent enforcement action.

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 09-11-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Documents submitted to CERS on 7/29/15 were reviewed and declined with the following considerations: Diesel Exhaust Fluid: ?Yes? under ?Fire? under Federal Hazard Categories section must be deleted since this mixture is mostly water. Based on the provided SDS, Windshield Washer Fluid form must be revised as follows: - As requested previously, ?Windshield Washer Fluid? should also be listed as the Chemical Name. - The Hazardous Component for this material (listed on SDS) is ?Methanol? with CAS# 67-56-1 at 1% by weight. Motor Oil form must be revised as follows: - Hazardous Material Type must be changed from ?Pure? to ?Mixture? since Mixture Components are provided. - Fire Code Hazard Classes must be changed from ?Combustible Liquid, Class II? to ?Combustible Liquid, Class III.? - CAS# 6474X-XX-X listed for ?Various Lubricating Base Oils? in Mixture Components section is not acceptable, especially that this material is the main component at 85%. All digits [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 10-18-2017
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: This agency has not received a copy of secondary containment test

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

	results within 30 days of testing. Notification dated 7/17/17 sent to this agency indicated that secondary containment test was scheduled for 8/7/17. A copy of secondary containment testing report form must be submitted to this agency by 11/1/17.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	11-04-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Submittal dated 9/25/14 was reviewed and not accepted with the following considerations: ?Piping /Turbine Containment Sump? information in Product/Waste Piping Construction section and ?Fill Components Installed? in Vent, Vapor Recovery (VR) and Riser/Fill Pipe Piping Construction section must be completed. ?Secondary Containment System?, ?Monitor Panel Manufacturer?, ?Monitor Panel Model?, ?Leak Sensor Manufacturer? and ?Leak Sensor Model? information must be listed in the Tank Monitoring section of the UST ? Monitoring Plan. ?Monitor Panel Manufacturer?, ?Monitor Panel Model?, ?Leak Sensor Manufacturer? and ?Leak Sensor Model? information must be listed in the Piping Monitoring section of the UST ? Monitoring Plan. ?No? must listed for ?Detection of Leak into UDC Triggers Audible and Visual Alarms?, ? UDC Leak Alarm Triggers Automatic Pump Shutdown?, ?Failure/Disconnection of UDC Monitoring System Triggers Automatic Pump Shutdown? and ?Yes? must be listed [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-12-2018
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I received a copy of Secondary Containment Testing Report Form (3 year SB989) for activities conducted on 8/7/17. All components passed test. Outstanding violation I296 regarding failure to submit test results within 30 days of testing, cited on 10/18/17, has been corrected.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	02-07-2001
Violations Found:	No
Eval Type:	Industrial Storm Water Compliance Evaluation
Eval Notes:	On February 7, 2001 Regional Board Staff, Marc Brown conducted a compliance inspection at the above referenced facility. Brown met with Corky Wyrick, the facility contact. The facility is a merchandise transportation hub, which has a single storage area with multiple loading docks surrounding its perimeter. This loading docks lie in the interior of the facility's parking area. The parking area houses numerous semi-tractor trailers awaiting use. At the southeast corner of the facility, near the entrance is a diesel fueling station (UST). This area is equipped with spill kits. Further west, along the fenceline is the facility's propane storage area, where individual

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propane fuel tanks are stored for use with forklifts. Review of the SWPPP indicated the facility had weekly inspections and employee training (last conducted on 1/16/01). The SWPPP had a facility map, but no flow directions were illustrated. A site walk was conducted and revealed general housekeeping efforts were well maintained. However, further attention was needed around the facility's fenceline, which borders and drains directly into a storm channel. Debris and sediment build up was identified and noted during the walk through. Mr. Wyrick was instructed to include inspecting these areas as part of the routine inspection and maintenance program in the SWPPP.

Eval Division: Water Boards
Eval Program: INDSTW
Eval Source: SMARTS

Eval General Type: Other/Unknown
Eval Date: 02-24-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Facility Information and Hazardous Materials Inventory documents submitted to CERS on 2/22/16 were reviewed and accepted. Comment on Business Activities form stated that Con-way Freight, Inc has undergone a legal name change to XPO Logistics Freight, Inc. This is still the same company with the same Tax ID number. Emergency Plan was not updated/resubmitted. I emailed contact requesting that emergency plan be updated with CUPA phone# and resubmitted.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-01-2019
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to conduct routine hazardous waste inspection. Joe Pickford granted consent to conduct inspection. I walked through facility and inspected waste storage area in the dock and by shed in fuel dispenser area. I did not observe any hazardous waste in trash cans throughout the dock or the dumpster at the end of the loading dock. Hazardous waste drums in dock and fuel dispenser area are stored closed and labeled. Manifests were reviewed. Emergency contact information and procedures (spill cleanup) is posted throughout the facility.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-02-2018
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to witness monitoring system certification testing activities and to conduct routine UST inspection. Annular and turbine sump sensors alarmed properly (visual and audible) and shut down turbine when submerged in water. Fill sump is not monitored since spill bucket is direct bury. UDC has Bravo box has float and chain mechanism. Water was poured in the UDC and the float and chain functioned properly. Fail-safe, sensor out and emergency shut off were tested and passed. Line leak detectors was tested and passed. Site has flappers for

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

overfill prevention. Spill buckets were tested visually without any changes in water level. Valid permit, designated operator documentation, monthly inspection reports, response to alarms, response plan, employee training records, monitoring plan, tank page, certification of financial responsibility (expires 4/1/18), copies of monitoring system certification and secondary containment (last test conducted on 8/7/17) reports are [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-03-2014
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to conduct hazardous materials chemical inventory and business emergency plan inspection. I walked through the facility and inspected hazardous materials storage areas. Facility has hazardous materials (diesel, diesel exhaust fluid, new oils, propane tanks) that meet required disclosure quantities. Business Activities form and Owner/Operator Identification forms are available on CERS. Please be advised that the following documents must be also be electronically submitted within 30 days of this inspection: - Hazardous Material Chemical Inventory forms - Facility Site Map - Business Emergency Plan
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-03-2014
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to conduct routine hazardous waste inspection. John Heilman granted consent to conduct inspection. Waste is generated when packages/boxes are broken during shipping. I walked through the facility, perimeter and inspected waste storage areas. Debris contaminated with diesel (1), toxic solid (1) and waste aerosols (1) containers are stored closed. The diesel debris drum has a federal label without waste characteristics. I discussed the requirement to include waste characteristics with Mr. Heilman. The toxic solid and aerosol containers were labeled during the inspection. Manifests were reviewed. Emergency number is posted throughout the faciltiy.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-06-2014
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: A copy of updated/completed monitoring plan was obtained from the facility.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Eval Date:	03-13-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted Facility Information submitted to CERS on 3/7/17, even though this business owner had DTSC change owner information from former owner information (Conway Freight) to their rather obtaining a new EPA ID#. Included comment regarding EPA ID#s are owner and/or site specific and a new number should have been obtained.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-20-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspected facility with Kevin Jansen, who provided consent to perform an inspection and take pictures as necessary. Hazardous waste container(s) is/are marked: ?HAZARDOUS WASTE?, name and address of business, contents, physical state, hazardous property and initial accumulation date. Reviewed hazardous waste disposal receipts/manifests for prior three years. Verified a copy of the uniform hazardous waste manifest is mailed to the state within 30 days of hazardous waste disposal. Verified all universal wastes (fluorescent lamps, high intensity discharge lamps, batteries, etc.) are managed appropriately. copy to: pickford.joseph@con-way.com
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	04-26-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 4/18/16 were reviewed and not accepted since change in ownership was verified during onsite inspection conducted by this agency on 3/2/16. EPA ID# CAL000078604 listed on Business Activities form is assigned to former business owner, Con-Way Freight, Inc. and a new EPA ID# has not been obtained.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	05-11-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector Comments: I received a copy of Monitoring System Certification, Line Leak Detector Test Form and Spill Bucket Testing Report Form for activities conducted on 3/2/16. All components passed test. Violation I205 regarding failure to submit monitoring system certification report within 30 days of testing cited in the inspection report dated 5/6/16, has been corrected. Please be advised that this facility has an outstanding violation regarding failure to submit and maintain a current certification of financial responsibility (CFR), cited during routine inspection conducted on 3/2/16. A copy of current

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	CFR was not available on site. In addition, the copy of CFR submitted to CERS on 4/18/16 was not accepted since a copy of the insurance policy was not included.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	05-26-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Sent email to Susan B. notifying her that violation has been corrected and UST permit may be issued.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	06-26-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector Comments: I reviewed the following documents received on 6/19/15: - Copy of Secondary Containment Testing Report Form (3 year SB989) for activities conducted on 8/15/14. All components passed test. Violation I296, regarding secondary containment test results not being submitted within 30 days of testing cited in this agency's inspection report dated 11/5/14, has been corrected. - Copy of Monitoring System Certification, Line Leak Detector Test and Spill Bucket Testing Report Form for activities conducted on 3/18/15. All components passed test. Violation I205, regarding monitoring system certification test results not being submitted within 30 days of testing cited in this agency's inspection report dated 4/30/15, has been corrected.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-24-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Comments on Business Activities form submitted to CERS stated that Con-way Freight, Inc has undergone a legal name change to XPO Logistics Freight, Inc. This is still the same company with the same Tax ID number. The EPA ID number will be updated to reflect the name change, but it will not be a new number.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-02-2016
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to witness monitoring system certification testing activities and to conduct routine UST inspection. The annular and turbine sump sensors alarmed properly (visual and audible) and

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

shut down turbine when submerged in water. Fill sump is not monitored since spill bucket is direct bury. UDC has Bravo box has float and chain mechanism. Water was poured in the UDC and the float and chain functioned properly. Fail-safe, sensor out and emergency shut off were tested and passed. Line leak detectors was tested and passed. Site has flappers for overfill prevention. Spill bucket is direct bury. It will be tested at a later date since technician did not have equipment to test it. Valid permit, designated operator documentation, monthly inspection reports, response plan, employee training records, monitoring plan, tank page, certification of financial responsibility (expired on 12/31/15 and has previous owner's information), copies of [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-03-2015
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Inspector Comments: Please be advised that this Agency has reviewed the file for this facility. The last monitoring system certification and spill bucket testing for this facility was conducted on 3/3/14. Monitoring system certification and spill bucket tests must be conducted annually. To date, this Agency has not received a notification for scheduled testing or a copy of monitoring system certification report that the test was conducted. Monitoring system certification and spill bucket test must be scheduled and conducted within 30 days of this inspection report. Notify this Agency 48 hours in advance of testing.

Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-03-2017
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Please be advised that this Agency has reviewed the file for this facility. The last monitoring system certification testing for this facility was conducted on 3/2/16. Monitoring system certification test must be conducted annually. To date, this Agency has not received a notification for scheduled testing or a copy of the monitoring system certification report documenting that the test was conducted. The monitoring system certification test must be scheduled and conducted within 30 days of this inspection report to avoid any enforcement action.

Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-04-2014
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: I reviewed UST submittal in CERS and did not approve it with the following considerations: The following sections in the Underground

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Storage - Tank Information are either not listed correctly or not included: - Overfill protection section under ?Tank Construction? is not complete. Site has ?Fill Tube Shut-Off valve? - The Piping System type is not correct and the Secondary Containment Type is not listed The following sections in the Underground Storage ? Monitoring Plan are either not listed correctly or not included: - The Monitor Panel Manufacturer, panel model, sensor manufacturer and model information are not listed under ?Tank Monitoring Section.? - The Monitor Panel Manufacturer, panel model, sensor manufacturer and model information are not listed under ?Piping Monitoring Section.? - Line Leak Detector information is not listed under ?Piping Monitoring Section.? - Periodic System Testing is not included - Recordkeeping information not included - Training [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-09-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Monitor cert notification for 3-10-17
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-13-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to witness monitoring system certification testing activities and to conduct routine UST inspection. Annular and turbine sump sensors alarmed properly (visual and audible) and shut down turbine when submerged in water. Fill sump is not monitored since spill bucket is direct bury. UDC has Bravo box has float and chain mechanism. Water was poured in the UDC and the float and chain functioned properly. Fail-safe and sensor out were tested and passed. Line leak detectors was tested and passed. Site has flappers for overfill prevention. Spill bucket was tested using instrument and passed two consecutive 15 minute tests. Valid permit, designated operator documentation, monthly inspection reports, response to alarms, response plan, employee training records, monitoring plan, tank page, certification of financial responsibility (coverage from 4/1/16 to 3/31/17 with XPO Logistics listed on insurance policy), copies of monitoring system and [Truncated]
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-14-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed documents submitted to CERS on 3/7/17. Accepted Facility Information page after checking BOE website and saw that the profile has been updated with current owner information. Tank Infomation was not accepted and the following need to be addressed: - Vent/Vapor

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

	Recovery (VR) and Riser/Fill Piping Construction section must be completed. - ?Yes? must be checked for ?Isolation? under Corrosion Protection section.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-15-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Received email from company headquarters contact stating that new BOE# was not obtained since they did not have to obtain a new Federal Tax ID#. I emailed her back stating that I was not aware the Federal Tax ID# makes a difference in not having to obtaining State BOE# and that it appears that two corporations merged or one took over the other business or a parent company took over a subsidiary and that is considered ownership change. I notified her that BOE# matter will not be pursued since my comments are in CERS.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-15-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted revised tank information page submitted to CERS on 3/15/17.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-20-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspected UST facility with Kevin Jansen. Double walled tanks with pressurized piping and leak detector. Sump sensor appeared to be at the low point and the Bravo Box float was dry. Site has flappers for overfill prevention. Valid permit, designated operator documentation, monthly inspection reports, response plan, employee training records, certification of financial responsibility, copies of monitoring system certification and secondary containment reports are available for review. Copies of electronically submitted monitoring plan and tank page were not available on site. Results of secondary containment test (SB989) for activities conducted on 8/15/14, still have not been received by this agency. copy to: pickford.joseph@con-way.com
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	04-13-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 3/10/15 (three submitals) were reviewed

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

and declined with the following considerations: ?Days on Site? for all reported material should be changed from ?352? to ?365? days unless material is taken off site for 13 days. Heavy Vacuum Gas Oil: Federal Hazard Categories is not listed and must added. Windshield Washer Fluid form must be revised as follows: - Chemical Name (Windshield Washer Fluid) should be listed. - This material is reported as ?pure? but a CAS# is not listed. If it has CAS# then is should be listed. If it is a ?mixture?, then the solution?s ?Hazardous Component Name, CAS# and % by Weight? must be listed in ?Mixture Component? section. - Fire Code Hazard Classes must be listed Transmission Fluid is must be removed since the volume stored on site is below reportable quantity of 55 gallons. Diesel Exhaust Fluid form must be revised as follows: - Chemical Name (Diesel Exhaust Fluid) should be listed - This [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 04-30-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Documents submitted to CERS on 4/15/15 were reviewed and not accepted with the following considerations: Diesel Exhaust Fluid form must be revised as follows: - Fire Code Hazard Classes must be changed from ?Combustible Liquid, Class II? to ?Toxic.? - ?Yes? should be deleted for Federal Hazard Categories since the mixture is mostly water. Windshield Washer Fluid form must be revised as follows: - ?Windshield Washer Fluid? should be listed as the Chemical Name. - This material is reported as ?pure? and CAS# for antifreeze is listed. Generally this material is a ?mixture? and does not have a CAS#. If it is a ?pure? material, then the correct CAS# should be listed. If it is a mixture, then ?Hazardous Component Name, CAS# and % by Weight? for at least one component must be listed in ?Mixture Component? section. - Fire Code Hazard Classes for this type material is usually ?Toxic?, not ?Combustible Liquid, Class II? as reported. MSDS should be reviewed and correct [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 05-06-2016
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Inspector Comments: This agency has not received a copy of monitoring system certification report for tests conducted on 3/2/16. Please be advised that test results must be submitted to this agency within 30 days of testing. A copy of test results must be submitted to this agency by 5/20/16.

Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 05-22-2015
Violations Found: No

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Eval Type:	Other, not routine, done by local agency
Eval Notes:	Change UST status to not get a permit, per Arghavan.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	06-12-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 6/2/15 were reviewed and declined with the following considerations: Diesel Exhaust Fluid form must be revised as follows: -Chemical Name and Common Name are reversed. Common Name is Diesel Exhaust Fluid. - CAS# listed in Chemical Identification & Physical Properties section must be removed since this a mixture. - Fire Code Hazard Classes must be changed from ?Combustible Liquid, Class II? to ?Toxic.? - ?Yes? should be deleted for Federal Hazard Categories since this mixture is mostly water. - DOT Hazard Class is not correct since the mixture is mostly water. Two forms have been submitted for Ethylene Glycol/Windshield Washer Fluid. Only one form is required for each material. One must be deleted. Windshield Washer Fluid form must be revised as follows: - Please provide a SDS for this material to verify constituents. - The Common Name must be changed to ?Windshield Washer Fluid? and if the mixture contains ethylene glycol, [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	07-11-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector Comments: Documents submitted to CERS on 6/30/15 were reviewed and accepted. Violation I582 regarding not submitting accurate UST documents electronically cited in this agency's inspection report dated 4/30/15, has been corrected. UST Permit to Operate will be issued for this facility.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	08-21-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Received a copy of partial monitoring system certification report documenting installation of a mechanical drop tube overfill prevention valve on 8/8/17.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	09-11-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Eval Notes:	I received a copy of Monitoring System Certification report for test conducted on 8/28/14 after completion of modification activities, replacing Veeder Root panel and sump sensor. All components monitored by the panel passed test. As stated in the inspection report dated 8/28/14, an updated monitoring plan documenting the installation of the Veeder Root panel and sump sensor must be submitted by 9/25/14.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	11-30-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 11/25/15 indicate change of ownership. New Owner is XPO Logistics Freight, Inc. Form was submitted to add new owner to program.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-28-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and purged file.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-03-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Spill Bucket testing notification
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-03-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Submittal status of Facility Information submitted to CERS on 2/22/16 was changed from "Accepted" to "Not Accepted" since information that by submitter that there was a change in DBA is not correct. Change in ownership was verified during onsite inspection conducted on 3/2/16. EPA ID# CAL000078604 listed on Business Activities form is assigned to former business owner, Con-Way Freight, Inc. This business must obtain a new EPA ID#.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-05-2014
Violations Found:	No

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Eval Type:	Other, not routine, done by local agency
Eval Notes:	Went to site on follow up inspection to correct outstanding violations, TR02, regarding UST Facility page and tank page not being available on site and TR07, regarding monitoring plan not being available on site, during routine inspection conducted on 3/3/14. All forms are available on site. Violations TR02 and TR07 have been corrected.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-11-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Monitoring Certification notification
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-13-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Joseph Pickford granted consent to conduct inspection. Waste is generated when packages/boxes are broken during shipping. EPA ID# CAL000078604, assigned to previous business, Conway Freight, is being used to haul off hazardous waste rather than obtaining a new EPA ID# after this company took over this business. Owner information has been changed/updated with the state (DTSC). Please be advised EPA ID#s are owner and/or site specific and a new number should have been obtained. I walked through facility and inspected waste storage area in the dock. I did not observe any hazardous waste in trash cans throughout the dock or the dumpster at the end of the dock. There is no hazardous waste stored on site currently. Manifests were reviewed. Emergency contact information and procedures (spill cleanup) is posted throughout the facility.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-13-2017
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct hazardous materials chemical inventory and business emergency plan inspection. Joseph Pickford granted consent to conduct inspection. I walked through the facility and inspected hazardous material storage areas. There has been no changes in types and/or volumes of the hazardous material stored on site since last inspection or previous reporting period, except for facility stores only one drum of Windshield Washer Fluid. Propane tank is in a locked enclosure. Propane cylinders are on forklifts, in cage and/or on rack. All 55 gallons storing material are in a shed next to fuel island. Safety meeting that include hazardous materials management are held annually. Training records are available for review on site. Emergency contact

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

	information and procedures (spill cleanup) is posted throughout the facility. Annual Hazardous Materials Business Plan (HMBP) have not been submitted. Please be advised that HMBP documents must be submitted [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-14-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed documents submitted to CERS on 3/7/17. Submittal was not accepted since ?Yes? was not checked for ?Isolation? under Corrosion Protection section on Tank Information page. Submittal included the following documents: - This business is using BOE# assigned to previous owner (Conway Freight) with profile updated with their information. - Certification of Financial Responsibility with coverage from 4/1/16 to 3/31/17 with XPO Logistics listed on insurance policy. Violation - Updated DO statement.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-23-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	report writing
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-27-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I received a copy of Monitoring System Certification, Leak Detector Testing and Spill Bucket Testing Report Form for activities conducted on 3/3/14. All components passed.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	04-07-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and reviewed revised documents submitted to CERS on 3/30/17. Violation I463 regarding failure to annually review and electronically certify HMBP is complete, accurate and up-to-date, cited during inspection conducted on 3/13/17, has been corrected.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Eval Date:	04-13-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents are identical to 9/25/14 submittal that was not accepted. UST - Tank Information Page: - ?Secondary Containment? and ?Piping /Turbine Containment Sump? information in Product/Waste Piping Construction section is not complete. -Fill Components Installed? in Vent, Vapor Recovery (VR) and Riser/Fill Pipe Piping Construction section must be completed. UST ? Monitoring Plan: -?Secondary Containment System?, ?Monitor Panel Manufacturer?, ?Monitor Panel Model?, ?Leak Sensor Manufacturer? and ?Leak Sensor Model? information must be listed in ?Tank Monitoring is Performed Using the Following Method(s)? section. -?Piping Secondary Containment?, ?Panel Manufacturer?, ?Panel Model #?, ?Leak Sensor Manufacturer? and ?Leak Sensor Model? information must be listed in ?Piping Monitoring is Performed Using the Following Method(s) section. At a minimum, ?Yes? must be listed under ?UDC Monitoring Stops Flow of Product at Dispenser? in the Under Dispenser Containment [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	04-26-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 4/18/16 were reviewed and not accepted with the following considerations: - Change in ownership was verified during onsite inspection conducted by this agency on 3/2/16. Board of Equalization Account Number (44036723) was assigned to former business owner, Con-Way Freight, Inc. Due to change in ownership, a new BOE# must obtained. - A copy of certification of financial responsibility with coverage period from 4/1/16 to 3/31/16 was submitted but a copy of the tank?s insurance policy was not submitted.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	05-04-2017
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Please be advised that this agency has not received a copy of monitoring system certification report for tests conducted on 3/13/17. Test results must be submitted to this agency within 30 days of testing. A copy of monitoring system certification report must be submitted to this agency by 5/18/17.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-26-2012
Violations Found:	Yes
Eval Type:	Industrial Storm Water Compliance Evaluation
Eval Notes:	Weather: sunny and cool. On entry, explained to front office staff that I was there to conduct a storm water inspection. Staff person

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

went to back office, returned, and instructed me to go out back. I asked to see the SWPPP. Staff appeared confused and brought me to the manager, John Heilman, who then told me that I could not go out back unless their safety staff, Don Anderson, was present. He explained that Mr. Anderson was "domiciled" in Fontana and I would need to make an appointment. Mr. Heilman stated that this was their policy and acknowledged that he was responsible for implementing the SWPPP. He declined to allow me to review the SWPPP unless Mr. Anderson was present and again explained that this was their policy.

Eval Division: Water Boards
Eval Program: INDSTW
Eval Source: SMARTS

Eval General Type: Other/Unknown
Eval Date: 02-16-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Monitor cert notification
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 02-26-2014
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Monitor cert notification
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-02-2016
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector Comments: On site to conduct routine hazardous waste inspection. Kevin Jansen granted consent to conduct inspection. Due to change in ownership (verified during inspection), a new EPA ID# must be obtained for this facility. Waste is generated when packages/boxes are broken during shipping. I walked through the facility, perimeter and inspected waste storage areas. Waste paint drum is stored closed and labeled. Manifests were reviewed. Emergency number is posted throughout the facility.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-02-2018
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: I walked through facility and inspected waste storage area in the dock and by shed in fuel dispenser area. I did not observe any hazardous waste in trash cans throughout the dock or the dumpster at the end of the dock. Hazardous waste drums in dock and fuel dispenser area are stored closed and labeled. Manifests were reviewed. Emergency contact information and procedures (spill cleanup) is posted throughout the

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

facility.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-03-2014
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: On site to witness monitoring system certification testing activities and to conduct routine UST inspection. The sump sensor alarmed properly (visual and audible) and shut down turbine when submerged in water. The annular sensor alarmed properly (visual and audible) and shut down turbine when submerged in water UDC has Bravo box with float and chain mechanism. Water was poured in the UDC and the float and chain functioned properly. Fail-safe, sensor out and emergency shut off were tested and passed. Line leak detectors was not witnessed by this Agency since the test port could not be removed. The technician was going to continue to try to remove the test port to test the line leak detector. Site has flappers for overfill prevention. Spill bucket is direct bury and was tested with an Incon. The spill bucket passed two consecutive 15 minute tests. Valid permit, designated operator documentation, monthly inspection reports, response plan, employee [Truncated]
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-04-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Monitor cert notification
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Enforcement Action:
Site ID: 107675
Site Name: XPO Logistics Freight, Inc.-UIV
Site Address: 20697 PRISM PL
Site City: LAKE FOREST
Site Zip: 92630
Enf Action Date: 07-15-2005
Enf Action Type: Industrial Storm Water Enforcement
Enf Action Description: Industrial Storm Water Enforcement
Enf Action Notes: Failure to submit 04-05 Annual Report by 7/1/05.
Enf Action Division: Water Boards
Enf Action Program: INDSTW
Enf Action Source: SMARTS

Site ID: 107675
Site Name: XPO Logistics Freight, Inc.-UIV
Site Address: 20697 PRISM PL
Site City: LAKE FOREST
Site Zip: 92630
Enf Action Date: 08-10-2005

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Enf Action Type:	Industrial Storm Water Enforcement
Enf Action Description:	Industrial Storm Water Enforcement
Enf Action Notes:	A clerical error at the Regional Board office resulted in an incorrect Notice of Non-Compliance being issued.
Enf Action Division:	Water Boards
Enf Action Program:	INDSTW
Enf Action Source:	SMARTS

Coordinates:

Site ID:	107675
Facility Name:	XPO Logistics Freight, Inc.-UIV
Env Int Type Code:	HWG
Program ID:	10449481
Coord Name:	Not reported
Ref Point Type Desc:	Center of a facility or station.
Latitude:	33.661290
Longitude:	-117.675870

Affiliation:

Affiliation Type Desc:	Environmental Contact
Entity Name:	JEFF SEXTEN
Entity Title:	Not reported
Affiliation Address:	2211 Old Earhart Road
Affiliation City:	Ann Arbor
Affiliation State:	MI
Affiliation Country:	Not reported
Affiliation Zip:	48105
Affiliation Phone:	Not reported

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	2211 Old Earhart Road, Suite 100
Affiliation City:	Ann Arbor
Affiliation State:	MI
Affiliation Country:	Not reported
Affiliation Zip:	48105
Affiliation Phone:	Not reported

Affiliation Type Desc:	Operator
Entity Name:	XPO Logistics Freight, Inc.-UIV
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(949) 581-9030

Affiliation Type Desc:	UST Tank Owner
Entity Name:	XPO Logistics Freight, Inc.
Entity Title:	Not reported
Affiliation Address:	2211 Old Earhart Road, Suite 100
Affiliation City:	Ann Arbor
Affiliation State:	MI
Affiliation Country:	United States

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Affiliation Zip:	48105
Affiliation Phone:	(734) 757-1657
Affiliation Type Desc:	CUPA District
Entity Name:	Orange County Env Health
Entity Title:	Not reported
Affiliation Address:	1241 East Dyer RoadSuite 120
Affiliation City:	Santa Ana
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92705-5611
Affiliation Phone:	(714) 433-6000
Affiliation Type Desc:	Identification Signer
Entity Name:	Jeff Sexten
Entity Title:	Manager of Environmental Compliance
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Parent Corporation
Entity Name:	XPO Logistics Inc.
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	UST Permit Applicant
Entity Name:	Amanda Galbavi
Entity Title:	Environmental Compliance Analyst
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(734) 757-1234
Affiliation Type Desc:	Owner/Operator
Entity Name:	XPO Logistics Freight Inc
Entity Title:	Operator
Affiliation Address:	2211 Old Earhart RdSTE 100
Affiliation City:	Ann Arbor
Affiliation State:	MI
Affiliation Country:	Not reported
Affiliation Zip:	48105
Affiliation Phone:	Not reported
Affiliation Type Desc:	UST Property Owner Name
Entity Name:	XPO Logistics Freight, Inc.
Entity Title:	Not reported
Affiliation Address:	2211 Old Earhart Road, Suite 100

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Affiliation City:	Ann Arbor
Affiliation State:	MI
Affiliation Country:	United States
Affiliation Zip:	48105
Affiliation Phone:	(734) 757-1657
Affiliation Type Desc:	UST Tank Operator
Entity Name:	XPO Logistics Freight, Inc.-UIV
Entity Title:	Not reported
Affiliation Address:	20697 Prism Place
Affiliation City:	Lake Forest
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92630
Affiliation Phone:	(734) 757-1657
Affiliation Type Desc:	Document Preparer
Entity Name:	Amanda Galbavi
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	XPO Logistics Freight, Inc.
Entity Title:	Not reported
Affiliation Address:	2211 Old Earhart road, Suite 100
Affiliation City:	Ann Arbor
Affiliation State:	MI
Affiliation Country:	United States
Affiliation Zip:	48105
Affiliation Phone:	(734) 757-1657
Affiliation Type Desc:	Property Owner
Entity Name:	XPO Logistics Freight, Inc.
Entity Title:	Not reported
Affiliation Address:	2211 Old Earhart Road, Suite 100
Affiliation City:	Ann Arbor
Affiliation State:	MI
Affiliation Country:	United States
Affiliation Zip:	48105
Affiliation Phone:	(734) 757-1657

CERS TANKS:

Facility Name:	XPO LOGISTICS FREIGHT, INC.-UIV
Site ID:	107675
CERS ID:	10449481
CERS Description:	Underground Storage Tank

Violations:

Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	03-03-2014

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Citation:	HSC 6.7 25286(a) - California Health and Safety Code, Chapter 6.7, Section(s) 25286(a)
Violation Description:	Failure to prepare, maintain, and submit accurate CUPA UST Operating Permit Application for Facility information and/or Tank information.
Violation Notes:	Returned to compliance on 03/05/2014. A copy of the monitoring plan is not available on site. Please submit a copy of the monitoring plan to this Agency within 30 days of this inspection.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	08-25-2014
Citation:	HSC 6.95 25508(d) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(d)
Violation Description:	Failure to complete and/or electronically submit a business plan when storing/handling a hazardous material at or above reportable quantities.
Violation Notes:	Returned to compliance on 04/13/2015. Please be advised that in the inspection report dated 3/3/14, this Agency requested electronic submittal of hazardous business emergency plan. To date, this information has not been submitted. Emergency plan must be submitted within 30 days of this inspection.
Violation Division:	Orange County Environmental Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	08-25-2014
Citation:	HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description:	Failure to complete and electronically submit a site map with all required content.
Violation Notes:	Returned to compliance on 04/13/2015. Please be advised that in the inspection report dated 3/3/14, this Agency requested electronic submittal of site map. To date, the site map has not been submitted. The site map must be submitted within 30 days of this inspection.
Violation Division:	Orange County Environmental Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	04-30-2015
Citation:	23 CCR 16 2638 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2638
Violation Description:	Failure to test leak detection equipment as required every 12 months (VPH, sensor, LLD, ATG, etc.) and/or submit monitoring system certification to the CUPA within 30 days of completion of the test
Violation Notes:	Returned to compliance on 06/26/2015. Monitoring system certification activities were performed at the facility on 3/20/15. A copy of the monitoring system certification report must be submitted to this Agency within 30 days of testing. To date, this Agency has not received a copy of the report. A copy of this report must be submitted by 5/15/15.

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	03-03-2015
Citation:	HSC 6.7 25284.2 - California Health and Safety Code, Chapter 6.7, Section(s) 25284.2
Violation Description:	Failure to test the spill bucket annually.
Violation Notes:	Returned to compliance on 04/30/2015. The last spill bucket test conducted at this facility was on 3/3/14. Spill bucket must be tested annually. Spill bucket test must be scheduled and conducted within 30 days of this inspection report. Notify this Agency 48 hours in advance of testing.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	11-05-2014
Citation:	23 CCR 16 2637(e) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2637(e)
Violation Description:	Failure to submit a copy of the secondary containment test results to the CUPA within 30 days after the test.
Violation Notes:	Returned to compliance on 06/26/2015. Results of secondary containment test (SB989) for activities conducted on 8/15/14, have not been received by this Agency within 30 days of testing. A copy of the secondary containment testing report form must be submitted to this Agency within 30 days of this inspection report.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	03-13-2017
Citation:	HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Description:	Failure to annually review and electronically certify that the business plan is complete and accurate on or before the annual due date.
Violation Notes:	Returned to compliance on 04/07/2017. Annual Hazardous Materials Business Plan (HMBP) have not been submitted. Please be advised that HMBP documents must be submitted annually by March 1st. HMBP documents must be submitted within 30 days of this inspection.
Violation Division:	Orange County Environmental Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	03-03-2015
Citation:	23 CCR 16 2638 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2638
Violation Description:	Failure to test leak detection equipment as required every 12 months

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

	(VPH, sensor, LLD, ATG, etc.) and/or submit monitoring system certification to the CUPA within 30 days of completion of the test
Violation Notes:	Returned to compliance on 04/30/2015. The last monitoring system certification test conducted at this facility was on 3/3/14. Monitoring system certification must be conducted annually. Monitoring system certification must be scheduled and conducted within 30 days of this inspection report. Notify this Agency 48 hours in advance of testing.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	07-01-2005
Citation:	2014-0057-DWQ - Industrial General Permit
Violation Description:	SW - Late Report
Violation Notes:	Failure to submit 04-05 Annual Report by 7/1/05.
Violation Division:	Water Boards
Violation Program:	INDSTW
Violation Source:	SMARTS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	05-06-2016
Citation:	23 CCR 16 2638 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2638
Violation Description:	Failure to test leak detection equipment as required every 12 months (VPH, sensor, LLD, ATG, etc.) and/or submit monitoring system certification to the CUPA within 30 days of completion of the test
Violation Notes:	Returned to compliance on 05/11/2016. This agency has not received a copy of of monitoring system certification report for tests conducted on 3/2/16. Please be advised that test results must be submitted to this agency within 30 days of testing. A copy of test results must be submitted to this agency by 5/20/16. Failure to submit test results may result in further enforcement action.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	04-30-2015
Citation:	HSC 6.7 25286(a) - California Health and Safety Code, Chapter 6.7, Section(s) 25286(a)
Violation Description:	Failure to submit an complete and accurate application for a permit to operate an underground storage tank, or for renewal of the permit.
Violation Notes:	Returned to compliance on 07/11/2015. UST documents submitted to CERS on 10/9/13, 3/4/14, 9/25/14 and 3/10/15 have not been accepted due to inaccurate information. All requested corrections must be made within 30 days of this inspection report.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV

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Violation Date:	03-03-2014
Citation:	HSC 6.7 25286(a) - California Health and Safety Code, Chapter 6.7, Section(s) 25286(a)
Violation Description:	Failure to prepare, maintain, and submit accurate CUPA UST Operating Permit Application for Facility information and/or Tank information.
Violation Notes:	Returned to compliance on 03/05/2014. UST Facility and tank pages are not available on site. Please submit copies of these forms to this Agency within 30 days of this inspection.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	05-04-2017
Citation:	23 CCR 16 2715(i) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(i)
Violation Description:	Failure to have a properly qualified service technician test leak detection equipment as required every 12 months (vapor, pressure, hydrostatic (VPH) system, sensors, line-leak detectors (LLD), automatic tank gauge (ATG), etc.).
Violation Notes:	Returned to compliance on 05/26/2017. Please be advised that this agency has not received a copy of monitoring system certification report for tests conducted on 3/13/17. Test results must be submitted to this agency within 30 days of testing. A copy of monitoring system certification report must be submitted to this agency by 5/18/17 to avoid enforcement action.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	01-26-2012
Citation:	2014-0057-DWQ - Industrial General Permit
Violation Description:	SW - Denied Access
Violation Notes:	The on-site manager would not allow inspection or review of SWPPP without presence of safety staff. Safety staff is located in Fontana.
Violation Division:	Water Boards
Violation Program:	INDSTW
Violation Source:	SMARTS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	08-25-2014
Citation:	HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description:	Failure to complete and electronically submit hazardous material inventory information for all reportable hazardous materials on site at or above reportable quantities.
Violation Notes:	Returned to compliance on 04/13/2015. Please be advised that in the inspection report dated 3/3/14, this Agency requested electronic submittal of hazardous materials inventory forms for hazardous materials at or above the thresholds quantities of 55 gallons/500 lbs/200 cubic feet. To date, this information has not been submitted. The requested forms must be submitted within 30 days of this inspection.

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Violation Division:	Orange County Environmental Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	03-03-2017
Citation:	23 CCR 16 2715(i) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(i)
Violation Description:	Failure to have a properly qualified service technician test leak detection equipment as required every 12 months (vapor, pressure, hydrostatic (VPH) system, sensors, line-leak detectors (LLD), automatic tank gauge (ATG), etc.).
Violation Notes:	Returned to compliance on 03/13/2017. Please be advised that this Agency has reviewed the file for this facility. The last monitoring system certification testing for this facility was conducted on 3/2/16. Monitoring system certification test must be conducted annually. To date, this Agency has not received a notification for scheduled testing or a copy of the monitoring system certification report documenting that the test was conducted. The monitoring system certification test must be scheduled and conducted within 30 days of this inspection report to avoid any enforcement action.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	03-02-2016
Citation:	HSC 6.75 25299.30-25299.34 - California Health and Safety Code, Chapter 6.75, Section(s) 25299.30-25299.34
Violation Description:	Failure to submit and maintain complete and current Certification of Financial Responsibility or other mechanism of financial assurance.
Violation Notes:	Returned to compliance on 03/13/2017. Certification of financial responsibility expired on 12/31/15 and has previous owner's information. A valid certification of financial responsibility with current owner information must be submitted within 30 days of this inspection.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	10-18-2017
Citation:	23 CCR 16 2637(e) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2637(e)
Violation Description:	Failure to submit a copy of the secondary containment test results to the CUPA within 30 days after the test.
Violation Notes:	Returned to compliance on 01/12/2018. This agency has not received a copy of secondary containment test results within 30 days of testing. Notification dated 7/17/17 sent to this agency indicated that secondary containment test was scheduled for 8/7/17. A copy of secondary containment testing report form must be submitted to this agency by 11/1/17 to avoid further enforcement action.
Violation Division:	Orange County Environmental Health
Violation Program:	UST

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Violation Source: CERS

Evaluation:

Eval General Type: Other/Unknown
Eval Date: 03-08-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: I received email from company contact, Pamela Nixon, in response to inspection report with violation regarding failure to conduct annual monitoring system certification within 365 days of last test. A copy of monitoring system report for tests conducted on 2/21/17 was attached to the email. I was not on site since I had not received notification. I checked UST Notification Calendar and site history (7800 report) to determine if this agency received notification of testing. Notification was not received. I emailed Pamela back explaining that notification for testing was not received by this agency and that test must be conducted again so that it can be witnessed by this agency. I received notification to conduct test on 3/13/17.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-09-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Went to site to witness monitor certification as notified and conduct routine UST inspection. Testers were not on site. I called testing company, Tanknology, and was told that technician is running late. Monitor certification will be rescheduled for another day.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-14-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: I highlighted tank information page with areas that corrections are needed and emailed it to company's CERS contact. I also included comment that Facility Information was accepted even though this conpany did not obtain their own BOE#.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-30-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Documents submitted to CERS on 3/28/17 were reviewed. Emergency plan was not accepted since CUPA phone # was not listed.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Eval General Type:	Other/Unknown
Eval Date:	04-30-2015
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector Comments: Monitoring system certification activities were performed at the facility on 3/20/15. A copy of the monitoring system certification report must be submitted to this Agency within 30 days of testing. To date, this Agency has not received a copy of the report. A copy of this report must be submitted by 5/15/15. Violation I205, regarding not conducting monitoring system certification activities cited in the inspection report dated 3/3/15, has been corrected. However, the violation listed above if for not submitting a copy of the monitoring system certification report. In addition, this Agency has requested corrections of UST documents submitted to CERS on 10/9/13, 3/4/14, 9/25/14 and 3/10/15. All corrections must be made within 30 days if this inspection report. Please be advised that this facility also has an outstanding violation, cited on 11/5/14, regarding not submitting results of Secondary Containment Testing to this Agency within 30 days of [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS

Eval General Type:	Other/Unknown
Eval Date:	05-22-2018
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I received a copy of Monitoring System Certification, Line Leak Detector Test Form and Spill Bucket Testing Report Form for activities conducted on 3/2/18. All components passed test.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS

Eval General Type:	Other/Unknown
Eval Date:	06-02-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I received email from Pamela Nixon, company headquarter, in response to letter stating that facility will not be receiving UST permit. I emailed her another copy of the 5/26/17 F04 report stating (that was both emailed and mailed to ther) that violation was corrected and facility would be receiving permit.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS

Eval General Type:	Other/Unknown
Eval Date:	07-11-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 6/11/15, 6/12/15 and 6/30/15 were reviewed and declined with the following considerations: Diesel Exhaust Fluid: ?Yes? for ?Fire? under Federal Hazard Categories section should be deleted since this mixture is mostly water. Propane form must be revised as follows: - Chemical Name and Common Name are reversed. Liquefied Petroleum Gas is the Chemical Name. - Physical

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State must be changed from ?Gas? to ?Liquid.? - Fire Code Hazard Classes must be changed from ?Flammable Gas? to ?Flammable Liquefied Gas.? - Storage Pressure must be changed from ?Ambient? to ?Above Ambient.? Windshield Washer Fluid: An MSDS/SDS was not submitted as requested. Therefore, the accuracy of the information cannot be verified. Please submit SDS for this material. Hazardous Material Inventory forms for the following material, reported in previous in submittals and/or observed during onsite inspection must be submitted: - Antifreeze - Motor Oil - [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 08-07-2014
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: SB 989 test notification
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 08-25-2014
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: The documents submitted to CERS on 3/4/14 have been reviewed and not accepted with the following considerations: ?Monitor Panel Manufacturer?, ?Monitor Panel Model?, ?Leak Sensor Manufacturer? and ?Leak Sensor Model? information is not listed in the ?Continuous Electronic Tank Monitoring? section of the Underground Storage ? Monitoring Plan (Tank Monitoring) ?Monitor Panel Manufacturer?, ?Monitor Panel Model?, ?Leak Sensor Manufacturer? and ?Leak Sensor Model? information is not listed in the ?Continuous Monitoring off Piping Secondary Containment? section of the Underground Storage ? Monitoring Plan (Pipe Monitoring) The site map does not show the locations of the piping, dispenser, sensors, emergency shut off or the monitoring panel. Underground Storage Tank - Response Plan, a copy of Owner Statements of Designated Underground Storage Tank (UST) Operator (DO) and Certification of Financial Responsibility must also be submitted.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 11-05-2014
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Inspector Comments: Please be advised that this Agency received a notification that secondary containment testing (SB989) was scheduled for 8/15/14. Test results must be submitted to this Agency within 30 days of testing. To date, a copy of the test results have not been received by this Agency. A copy of test results must be submitted to this Agency within 30 days of this inspection report report.
Eval Division: Orange County Environmental Health
Eval Program: UST

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Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	11-30-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 11/25/15 indicate change of ownership. New Owner is XPO Logistics Freight, Inc. Form was submitted to add new owner to program. Business Activities form was not accepted since previous owner's (Con-way Freight, Inc.) EPA ID# in listed for new business.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	11-30-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 11/25/15 were reviewed and not accepted with the following considerations: - EPA ID# CAL000078604 listed on Business Activities form is assigned to former business owner, Con-Way Freight, Inc. This business must obtain a new EPA ID#. - Windshield Washer Fluid. Based on a copy of SDS submitted on 7/29/15, the ?Hazardous Component? for this material is Methanol. Therefore, ?Methanol? with CAS# ?67-56-1? at ?1?% by weight should be listed in Mixture Component section. - Motor Oil form must be revised as follows: - Hazardous Material Type must be changed from ?Pure? to ?Mixture? since Mixture Components are provided. - Fire Code Hazard Classes must be changed from ?Combustible Liquid, Class II? to ?Combustible Liquid, Class III-B.? - CAS# 6474X-XX-X listed for ?Various Lubricating Base Oils? in Mixture Components section is not acceptable, especially that this material is the main component at 85%. All digits of the CAS# must be [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	07-11-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Change status to receive a UST permit, per Arghavan.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	07-15-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Updated monitoring plan documenting the replacement of Veeder Root panel and sump sensor was submitted to CERS on 6/30/15 and approved. Plan Check may be closed.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS

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Eval General Type:	Other/Unknown
Eval Date:	08-28-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	On site to witness monitoring system certification test after completion of modification activities (replacing Veeder Root Panel from TLS 300-C to TLS 350). Only components monitored by the Veeder Root panel were tested. The sump sensor (205) was replaced with a 208 sensor since it was not functioning properly. The annular and sump sensors alarmed properly (visual and audible) and shut down respective turbine when submerged in water. An updated monitoring plan documenting the installation of the new Veeder Root panel and sump sensor must be submitted within 30 days of this inspection. Fail-safe, sensor out and emergency shut off were tested and passed.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS

Eval General Type:	Other/Unknown
Eval Date:	11-30-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 11/25/15 indicate change of ownership. New Owner is XPO Logistics Freight, Inc. Form was submitted to add new owner to program.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS

Eval General Type:	Other/Unknown
Eval Date:	11-30-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 11/25/15 were reviewed and not accepted with the following considerations: Board of Equalization Account Number (44036723) was assigned to former business owner, Con-Way Freight, Inc. Due to change in ownership, a new BOE# must obtained. Name of the former business is listed on the UST Certification of Financial Responsibility (CFR) form. Updated CFR form with new business name must be submitted. In addition, the former business?s ?Letter From Chief Financial Officer? has been submitted. An updated CFO letter should be submitted.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS

Eval General Type:	Other/Unknown
Eval Date:	12-09-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Change status to receive a permit, per Arghavan.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS

Eval General Type:	Other/Unknown
Eval Date:	05-16-2017

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Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Change permit status to Do Not Issue (03) per email from A. Rashidi-Fard dated 5/15/17
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	05-26-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I received a copy of Monitoring System Certification and Spill Bucket Testing Report Form for activities conducted on 3/13/17. All components passed test. Violation I205 regarding failure to submit monitoring system certification report to CUPA within 30 days of testing event, cited in the inspection report dated 5/4/17, has been corrected. Permit to operate the underground storage tank at this facility will be issued.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	05-30-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Change permit status to Issue Permit (01) per email from A. Rashidi-Fard dated 5/26/17.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	06-12-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 6/2/15 were reviewed and not accepted with the following considerations: ?Yes? must be listed for ?Spill Bucket? and ?Striker Plate/Bottom Protector? for ?Fill Component Installed? under ?Vent, Vapor Recovery (VR) And Riser/Fill Pipe Piping Construction? section on Tank Information page. The UDC is not monitored by the Veeder Root panel. Therefore, information listed for ?UDC Panel Manufacturer? and ?UDC Panel Model #? in ?Under Dispenser Containment (UDC) Monitoring? on the monitoring plan should be removed. ?Yes? should be listed for ?Equipment Maintenance and Calibration Records? under ?Recordkeeping? section of the monitoring plan since copies of tank system test results are maintained on site. ?Yes? should be listed for ?Designated Operator Training? under ?Training? section since copies of training records for employees trained by designated operator are maintained on site. ?Corrective Action? section on the Certification [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown

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Eval Date: 08-25-2014
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Inspector Comments:

_____ Please be advised that in the inspection report dated 3/3/14, this Agency requested electronic submittal of hazardous materials inventory for hazardous materials at or above the thresholds quantities of 55 gallons/500 lbs/200 cubic feet, business emergency plan and site map. To date, the requested documents have not been submitted. The violations listed above must be complied with, in order to prevent enforcement action.

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 09-11-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Documents submitted to CERS on 7/29/15 were reviewed and declined with the following considerations: Diesel Exhaust Fluid: ?Yes? under ?Fire? under Federal Hazard Categories section must be deleted since this mixture is mostly water. Based on the provided SDS, Windshield Washer Fluid form must be revised as follows: - As requested previously, ?Windshield Washer Fluid? should also be listed as the Chemical Name. - The Hazardous Component for this material (listed on SDS) is ?Methanol? with CAS# 67-56-1 at 1% by weight. Motor Oil form must be revised as follows: - Hazardous Material Type must be changed from ?Pure? to ?Mixture? since Mixture Components are provided. - Fire Code Hazard Classes must be changed from ?Combustible Liquid, Class II? to ?Combustible Liquid, Class III.? - CAS# 6474X-XX-X listed for ?Various Lubricating Base Oils? in Mixture Components section is not acceptable, especially that this material is the main component at 85%. All digits [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 10-18-2017
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: This agency has not received a copy of secondary containment test results within 30 days of testing. Notification dated 7/17/17 sent to this agency indicated that secondary containment test was scheduled for 8/7/17. A copy of secondary containment testing report form must be submitted to this agency by 11/1/17.

Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 11-04-2014
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Submittal dated 9/25/14 was reviewed and not accepted with the

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following considerations: ?Piping /Turbine Containment Sump? information in Product/Waste Piping Construction section and ?Fill Components Installed? in Vent, Vapor Recovery (VR) and Riser/Fill Pipe Piping Construction section must be completed. ?Secondary Containment System?, ?Monitor Panel Manufacturer?, ?Monitor Panel Model?, ?Leak Sensor Manufacturer? and ?Leak Sensor Model? information must be listed in the Tank Monitoring section of the UST ? Monitoring Plan. ?Monitor Panel Manufacturer?, ?Monitor Panel Model?, ?Leak Sensor Manufacturer? and ?Leak Sensor Model? information must be listed in the Piping Monitoring section of the UST ? Monitoring Plan. ?No? must listed for ?Detection of Leak into UDC Triggers Audible and Visual Alarms?, ? UDC Leak Alarm Triggers Automatic Pump Shutdown?, ?Failure/Disconnection of UDC Monitoring System Triggers Automatic Pump Shutdown? and ?Yes? must be listed [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 01-12-2018
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: I received a copy of Secondary Containment Testing Report Form (3 year SB989) for activities conducted on 8/7/17. All components passed test. Outstanding violation I296 regarding failure to submit test results within 30 days of testing, cited on 10/18/17, has been corrected.

Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 02-07-2001
Violations Found: No
Eval Type: Industrial Storm Water Compliance Evaluation
Eval Notes: On February 7, 2001 Regional Board Staff, Marc Brown conducted a compliance inspection at the above referenced facility. Brown met with Corky Wyrick, the facility contact. The facility is a merchandise transportation hub, which has a single storage area with multiple loading docks surrounding its perimeter. This loading docks lie in the interior of the facility's parking area. The parking area houses numerous semi-tractor trailers awaiting use. At the southeast corner of the facility, near the entrance is a diesel fueling station (UST). This area is equipped with spill kits. Further west, along the fenceline is the facility's propane storage area, where individual propane fuel tanks are stored for use with forklifts. Review of the SWPPP indicated the facility had weekly inspections and employee training (last conducted on 1/16/01). The SWPPP had a facility map, but no flow directions were illustrated. A site walk was conducted and revealed general housekeeping efforts were well maintained. However, further attention was needed around the facility's fenceline, which borders and drains directly into a storm channel. Debris and sediment build up was identified and noted during the walk through. Mr. Wyrick was instructed to include inspecting these areas as part of the routine inspection and maintenance program in the SWPPP.

Eval Division: Water Boards
Eval Program: INDSTW
Eval Source: SMARTS

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Eval General Type:	Other/Unknown
Eval Date:	02-24-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Facility Information and Hazardous Materials Inventory documents submitted to CERS on 2/22/16 were reviewed and accepted. Comment on Business Activities form stated that Con-way Freight, Inc has undergone a legal name change to XPO Logistics Freight, Inc. This is still the same company with the same Tax ID number. Emergency Plan was not updated/resubmitted. I emailed contact requesting that emergency plan be updated with CUPA phone# and resubmitted.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-01-2019
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Joe Pickford granted consent to conduct inspection. I walked through facility and inspected waste storage area in the dock and by shed in fuel dispenser area. I did not observe any hazardous waste in trash cans throughout the dock or the dumpster at the end of the loading dock. Hazardous waste drums in dock and fuel dispenser area are stored closed and labeled. Manifests were reviewed. Emergency contact information and procedures (spill cleanup) is posted throughout the facility.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-02-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to witness monitoring system certification testing activities and to conduct routine UST inspection. Annular and turbine sump sensors alarmed properly (visual and audible) and shut down turbine when submerged in water. Fill sump is not monitored since spill bucket is direct bury. UDC has Bravo box has float and chain mechanism. Water was poured in the UDC and the float and chain functioned properly. Fail-safe, sensor out and emergency shut off were tested and passed. Line leak detectors was tested and passed. Site has flappers for overfill prevention. Spill buckets were tested visually without any changes in water level. Valid permit, designated operator documentation, monthly inspection reports, response to alarms, response plan, employee training records, monitoring plan, tank page, certification of financial responsibility (expires 4/1/18), copies of monitoring system certification and secondary containment (last test conducted on 8/7/17) reports are [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-03-2014
Violations Found:	No

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct hazardous materials chemical inventory and business emergency plan inspection. I walked through the facility and inspected hazardous materials storage areas. Facility has hazardous materials (diesel, diesel exhaust fluid, new oils, propane tanks) that meet required disclosure quantities. Business Activities form and Owner/Operator Identification forms are available on CERS. Please be advised that the following documents must be also be electronically submitted within 30 days of this inspection: - Hazardous Material Chemical Inventory forms - Facility Site Map - Business Emergency Plan
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-03-2014
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. John Heilman granted consent to conduct inspection. Waste is generated when packages/boxes are broken during shipping. I walked through the facility, perimeter and inspected waste storage areas. Debris contaminated with diesel (1), toxic solid (1) and waste aerosols (1) containers are stored closed. The diesel debris drum has a federal label without waste characteristics. I discussed the requirement to include waste characteristics with Mr. Heilman. The toxic solid and aerosol containers were labeled during the inspection. Manifests were reviewed. Emergency number is posted throughout the faciltiy.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-06-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	A copy of updated/completed monitoring plan was obtained from the facility.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-13-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted Facility Information submitted to CERS on 3/7/17, even though this business owner had DTSC change owner information from former owner information (Conway Freight) to their rather obtaining a new EPA ID#. Included comment regarding EPA ID#s are owner and/or site specific and a new number should have been obtained.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Eval Date:	03-20-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspected facility with Kevin Jansen, who provided consent to perform an inspection and take pictures as necessary. Hazardous waste container(s) is/are marked: ?HAZARDOUS WASTE?, name and address of business, contents, physical state, hazardous property and initial accumulation date. Reviewed hazardous waste disposal receipts/manifests for prior three years. Verified a copy of the uniform hazardous waste manifest is mailed to the state within 30 days of hazardous waste disposal. Verified all universal wastes (fluorescent lamps, high intensity discharge lamps, batteries, etc.) are managed appropriately. copy to: pickford.joseph@con-way.com
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	04-26-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 4/18/16 were reviewed and not accepted since change in ownership was verified during onsite inspection conducted by this agency on 3/2/16. EPA ID# CAL000078604 listed on Business Activities form is assigned to former business owner, Con-Way Freight, Inc. and a new EPA ID# has not been obtained.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	05-11-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector Comments: I received a copy of Monitoring System Certification, Line Leak Detector Test Form and Spill Bucket Testing Report Form for activities conducted on 3/2/16. All components passed test. Violation I205 regarding failure to submit monitoring system certification report within 30 days of testing cited in the inspection report dated 5/6/16, has been corrected. Please be advised that this facility has an outstanding violation regarding failure to submit and maintain a current certification of financial responsibility (CFR), cited during routine inspection conducted on 3/2/16. A copy of current CFR was not available on site. In addition, the copy of CFR submitted to CERS on 4/18/16 was not accepted since a copy of the insurance policy was not included.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	05-26-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Sent email to Susan B. notifying her that violation has been corrected and UST permit may be issued.
Eval Division:	Orange County Environmental Health

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	06-26-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector Comments: I reviewed the following documents received on 6/19/15: - Copy of Secondary Containment Testing Report Form (3 year SB989) for activities conducted on 8/15/14. All components passed test. Violation I296, regarding secondary containment test results not being submitted within 30 days of testing cited in this agency's inspection report dated 11/5/14, has been corrected. - Copy of Monitoring System Certification, Line Leak Detector Test and Spill Bucket Testing Report Form for activities conducted on 3/18/15. All components passed test. Violation I205, regarding monitoring system certification test results not being submitted within 30 days of testing cited in this agency's inspection report dated 4/30/15, has been corrected.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-24-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Comments on Business Activities form submitted to CERS stated that Con-way Freight, Inc has undergone a legal name change to XPO Logistics Freight, Inc. This is still the same company with the same Tax ID number. The EPA ID number will be updated to reflect the name change, but it will not be a new number.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-02-2016
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to witness monitoring system certification testing activities and to conduct routine UST inspection. The annular and turbine sump sensors alarmed properly (visual and audible) and shut down turbine when submerged in water. Fill sump is not monitored since spill bucket is direct bury. UDC has Bravo box has float and chain mechanism. Water was poured in the UDC and the float and chain functioned properly. Fail-safe, sensor out and emergency shut off were tested and passed. Line leak detectors was tested and passed. Site has flappers for overfill prevention. Spill bucket is direct bury. It will be tested at a later date since technician did not have equipment to test it. Valid permit, designated operator documentation, monthly inspection reports, response plan, employee training records, monitoring plan, tank page, certification of financial responsibility (expired on 12/31/15 and has previous owner's information), copies of [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	UST

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-03-2015
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector Comments: Please be advised that this Agency has reviewed the file for this facility. The last monitoring system certification and spill bucket testing for this facility was conducted on 3/3/14. Monitoring system certification and spill bucket tests must be conducted annually. To date, this Agency has not received a notification for scheduled testing or a copy of monitoring system certification report that the test was conducted. Monitoring system certification and spill bucket test must be scheduled and conducted within 30 days of this inspection report. Notify this Agency 48 hours in advance of testing.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-03-2017
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Please be advised that this Agency has reviewed the file for this facility. The last monitoring system certification testing for this facility was conducted on 3/2/16. Monitoring system certification test must be conducted annually. To date, this Agency has not received a notification for scheduled testing or a copy of the monitoring system certification report documenting that the test was conducted. The monitoring system certification test must be scheduled and conducted within 30 days of this inspection report to avoid any enforcement action.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-04-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I reviewed UST submittal in CERS and did not approve it with the following considerations: The following sections in the Underground Storage - Tank Information are either not listed correctly or not included: - Overfill protection section under ?Tank Construction? is not complete. Site has ?Fill Tube Shut-Off valve? - The Piping System type is not correct and the Secondary Containment Type is not listed The following sections in the Underground Storage ? Monitoring Plan are either not listed correctly or not included: - The Monitor Panel Manufacturer, panel model, sensor manufacturer and model information are not listed under ?Tank Monitoring Section.? - The Monitor Panel Manufacturer, panel model, sensor manufacturer and model information are not listed under ?Piping Monitoring Section.? - Line Leak Detector information is not listed under ?Piping Monitoring Section.? - Periodic System Testing is not included - Recordkeeping information not included - Training [Truncated]
Eval Division:	Orange County Environmental Health

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-09-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Monitor cert notification for 3-10-17
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-13-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to witness monitoring system certification testing activities and to conduct routine UST inspection. Annular and turbine sump sensors alarmed properly (visual and audible) and shut down turbine when submerged in water. Fill sump is not monitored since spill bucket is direct bury. UDC has Bravo box has float and chain mechanism. Water was poured in the UDC and the float and chain functioned properly. Fail-safe and sensor out were tested and passed. Line leak detectors was tested and passed. Site has flappers for overfill prevention. Spill bucket was tested using instrument and passed two consecutive 15 minute tests. Valid permit, designated operator documentation, monthly inspection reports, response to alarms, response plan, employee training records, monitoring plan, tank page, certification of financial responsibility (coverage from 4/1/16 to 3/31/17 with XPO Logistics listed on insurance policy), copies of monitoring system and [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-14-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed documents submitted to CERS on 3/7/17. Accepted Facility Information page after checking BOE website and saw that the profile has been updated with current owner information. Tank Infomation was not accepted and the following need to be addressed: - Vent/Vapor Recovery (VR) and Riser/Fill Piping Construction section must be completed. - ?Yes? must be checked for ?Isolation? under Corrosion Protection section.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-15-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Received email from company headquarters contact stating that new BOE# was not obtained since they did not have to obtain a new Federal Tax ID#. I emailed her back stating that I was not aware the Federal Tax

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

ID# makes a difference in not having to obtaining State BOE# and that it appears that two corporations merged or one took over the other business or a parent company took over a subsidiary and that is considered ownership change. I notified her that BOE# matter will not be pursued since my comments are in CERS.

Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-15-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed and accepted revised tank information page submitted to CERS on 3/15/17.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-20-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspected UST facility with Kevin Jansen. Double walled tanks with pressurized piping and leak detector. Sump sensor appeared to be at the low point and the Bravo Box float was dry. Site has flappers for overfill prevention. Valid permit, designated operator documentation, monthly inspection reports, response plan, employee training records, certification of financial responsibility, copies of monitoring system certification and secondary containment reports are available for review. Copies of electronically submitted monitoring plan and tank page were not available on site. Results of secondary containment test (SB989) for activities conducted on 8/15/14, still have not been received by this agency. copy to: pickford.joseph@con-way.com
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 04-13-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Documents submitted to CERS on 3/10/15 (three submitals) were reviewed and declined with the following considerations: ?Days on Site? for all reported material should be changed from ?352? to ?365? days unless material is taken off site for 13 days. Heavy Vacuum Gas Oil: Federal Hazard Categories is not listed and must added. Windshield Washer Fluid form must be revised as follows: - Chemical Name (Windshield Washer Fluid) should be listed. - This material is reported as ?pure? but a CAS# is not listed. If it has CAS# then is should be listed. If it is a ?mixture?, then the solution?s ?Hazardous Component Name, CAS# and % by Weight? must be listed in ?Mixture Component? section. - Fire Code Hazard Classes must be listed Transmission Fluid is must be removed since the volume stored on site is below reportable quantity of 55 gallons. Diesel Exhaust Fluid form must be revised as follows: - Chemical Name (Diesel Exhaust Fluid) should be listed - This [Truncated]

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	04-30-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 4/15/15 were reviewed and not accepted with the following considerations: Diesel Exhaust Fluid form must be revised as follows: - Fire Code Hazard Classes must be changed from ?Combustible Liquid, Class II? to ?Toxic.? - ?Yes? should be deleted for Federal Hazard Categories since the mixture is mostly water. Windshield Washer Fluid form must be revised as follows: - ?Windshield Washer Fluid? should be listed as the Chemical Name. - This material is reported as ?pure? and CAS# for antifreeze is listed. Generally this material is a ?mixture? and does not have a CAS#. If it is a ?pure? material, then the correct CAS# should be listed. If it is a mixture, then ?Hazardous Component Name, CAS# and % by Weight? for at least one component must be listed in ?Mixture Component? section. - Fire Code Hazard Classes for this type material is usually ?Toxic?, not ?Combustible Liquid, Class II? as reported. MSDS should be reviewed and correct [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	05-06-2016
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector Comments: This agency has not received a copy of monitoring system certification report for tests conducted on 3/2/16. Please be advised that test results must be submitted to this agency within 30 days of testing. A copy of test results must be submitted to this agency by 5/20/16.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	05-22-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Change UST status to not get a permit, per Arghavan.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	06-12-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 6/2/15 were reviewed and declined with the following considerations: Diesel Exhaust Fluid form must be revised as follows: -Chemical Name and Common Name are reversed. Common Name is Diesel Exhaust Fluid. - CAS# listed in Chemical

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Identification & Physical Properties section must be removed since this a mixture. - Fire Code Hazard Classes must be changed from ?Combustible Liquid, Class II? to ?Toxic.? - ?Yes? should be deleted for Federal Hazard Categories since this mixture is mostly water. - DOT Hazard Class is not correct since the mixture is mostly water. Two forms have been submitted for Ethylene Glycol/Windshield Washer Fluid. Only one form is required for each material. One must be deleted. Windshield Washer Fluid form must be revised as follows: - Please provide a SDS for this material to verify constituents. - The Common Name must be changed to ?Windshield Washer Fluid? and if the mixture contains ethylene glycol, [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 07-11-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Inspector Comments: Documents submitted to CERS on 6/30/15 were reviewed and accepted. Violation I582 regarding not submitting accurate UST documents electronically cited in this agency's inspection report dated 4/30/15, has been corrected. UST Permit to Operate will be issued for this facility.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 08-21-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Received a copy of partial monitoring system certification report documenting installation of a mechanical drop tube overfill prevention valve on 8/8/17.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 09-11-2014
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: I received a copy of Monitoring System Certification report for test conducted on 8/28/14 after completion of modification activities, replacing Veeder Root panel and sump sensor. All components monitored by the panel passed test. As stated in the inspection report dated 8/28/14, an updated monitoring plan documenting the installation of the Veeder Root panel and sump sensor must be submitted by 9/25/14.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 11-30-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Eval Notes:	Documents submitted to CERS on 11/25/15 indicate change of ownership. New Owner is XPO Logistics Freight, Inc. Form was submitted to add new owner to program.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-28-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and purged file.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-03-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Spill Bucket testing notification
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-03-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Submittal status of Facility Information submitted to CERS on 2/22/16 was changed from "Accepted" to "Not Accepted" since information that by submitter that there was a change in DBA is not correct. Change in ownership was verified during onsite inspection conducted on 3/2/16. EPA ID# CAL000078604 listed on Business Activities form is assigned to former business owner, Con-Way Freight, Inc. This business must obtain a new EPA ID#.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-05-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Went to site on follow up inspection to correct outstanding violations, TR02, regarding UST Facility page and tank page not being available on site and TR07, regarding monitoring plan not being available on site, during routine inspection conducted on 3/3/14. All forms are available on site. Violations TR02 and TR07 have been corrected.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-11-2015
Violations Found:	No

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Eval Type:	Other, not routine, done by local agency
Eval Notes:	Monitoring Certification notification
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-13-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Joseph Pickford granted consent to conduct inspection. Waste is generated when packages/boxes are broken during shipping. EPA ID# CAL000078604, assigned to previous business, Conway Freight, is being used to haul off hazardous waste rather than obtaining a new EPA ID# after this company took over this business. Owner information has been changed/updated with the state (DTSC). Please be advised EPA ID#s are owner and/or site specific and a new number should have been obtained. I walked through facility and inspected waste storage area in the dock. I did not observe any hazardous waste in trash cans throughout the dock or the dumpster at the end of the dock. There is no hazardous waste stored on site currently. Manifests were reviewed. Emergency contact information and procedures (spill cleanup) is posted throughout the facility.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-13-2017
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct hazardous materials chemical inventory and business emergency plan inspection. Joseph Pickford granted consent to conduct inspection. I walked through the facility and inspected hazardous material storage areas. There has been no changes in types and/or volumes of the hazardous material stored on site since last inspection or previous reporting period, except for facility stores only one drum of Windshield Washer Fluid. Propane tank is in a locked enclosure. Propane cylinders are on forklifts, in cage and/or on rack. All 55 gallons storing material are in a shed next to fuel island. Safety meeting that include hazardous materials management are held annually. Training records are available for review on site. Emergency contact information and procedures (spill cleanup) is posted throughout the facility. Annual Hazardous Materials Business Plan (HMBP) have not been submitted. Please be advised that HMBP documents must be submitted [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-14-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed documents submitted to CERS on 3/7/17. Submittal was not accepted since ?Yes? was not checked for ?Isolation? under Corrosion

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Protection section on Tank Information page. Submittal included the following documents: - This business is using BOE# assigned to previous owner (Conway Freight) with profile updated with their information. - Certification of Financial Responsibility with coverage from 4/1/16 to 3/31/17 with XPO Logistics listed on insurance policy. Violation - Updated DO statement.

Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-23-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: report writing
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-27-2014
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: I received a copy of Monitoring System Certification, Leak Detector Testing and Spill Bucket Testing Report Form for activities conducted on 3/3/14. All components passed.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 04-07-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed and reviewed revised documents submitted to CERS on 3/30/17. Violation I463 regarding failure to annually review and electronically certify HMBP is complete, accurate and up-to-date, cited during inspection conducted on 3/13/17, has been corrected.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 04-13-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Documents are identical to 9/25/14 submittal that was not accepted. UST - Tank Information Page: - ?Secondary Containment? and ?Piping /Turbine Containment Sump? information in Product/Waste Piping Construction section is not complete. -Fill Components Installed? in Vent, Vapor Recovery (VR) and Riser/Fill Pipe Piping Construction section must be completed. UST ? Monitoring Plan: -?Secondary Containment System?, ?Monitor Panel Manufacturer?, ?Monitor Panel Model?, ?Leak Sensor Manufacturer? and ?Leak Sensor Model? information must be listed in ?Tank Monitoring is Performed Using the Following Method(s)? section. -?Piping Secondary Containment?, ?Panel Manufacturer?, ?Panel Model #?, ?Leak Sensor Manufacturer? and ?Leak

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

	Sensor Model? information must be listed in ?Piping Monitoring is Performed Using the Following Method(s) section. At a minimum, ?Yes? must be listed under ?UDC Monitoring Stops Flow of Product at Dispenser? in the Under Dispenser Containment [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	04-26-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 4/18/16 were reviewed and not accepted with the following considerations: - Change in ownership was verified during onsite inspection conducted by this agency on 3/2/16. Board of Equalization Account Number (44036723) was assigned to former business owner, Con-Way Freight, Inc. Due to change in ownership, a new BOE# must obtained. - A copy of certification of financial responsibility with coverage period from 4/1/16 to 3/31/16 was submitted but a copy of the tank?s insurance policy was not submitted.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	05-04-2017
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Please be advised that this agency has not received a copy of monitoring system certification report for tests conducted on 3/13/17. Test results must be submitted to this agency within 30 days of testing. A copy of monitoring system certification report must be submitted to this agency by 5/18/17.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-26-2012
Violations Found:	Yes
Eval Type:	Industrial Storm Water Compliance Evaluation
Eval Notes:	Weather: sunny and cool. On entry, explained to front office staff that I was there to conduct a storm water inspection. Staff person went to back office, returned, and instructed me to go out back. I asked to see the SWPPP. Staff appeared confused and brought me to the manager, John Heilman, who then told me that I could not go out back unless their safety staff, Don Anderson, was present. He explained that Mr. Anderson was "domiciled" in Fontana and I would need to make an appointment. Mr. Heilman stated that this was their policy and acknowledged that he was responsible for implementing the SWPPP. He declined to allow me to review the SWPPP unless Mr. Anderson was present and again explained that this was their policy.
Eval Division:	Water Boards
Eval Program:	INDSTW
Eval Source:	SMARTS
Eval General Type:	Other/Unknown

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Eval Date:	02-16-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Monitor cert notification
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-26-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Monitor cert notification
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-02-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct routine hazardous waste inspection. Kevin Jansen granted consent to conduct inspection. Due to change in ownership (verified during inspection), a new EPA ID# must be obtained for this facility. Waste is generated when packages/boxes are broken during shipping. I walked through the facility, perimeter and inspected waste storage areas. Waste paint drum is stored closed and labeled. Manifests were reviewed. Emergency number is posted throughout the facility.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-02-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	I walked through facility and inspected waste storage area in the dock and by shed in fuel dispenser area. I did not observe any hazardous waste in trash cans throughout the dock or the dumpster at the end of the dock. Hazardous waste drums in dock and fuel dispenser area are stored closed and labeled. Manifests were reviewed. Emergency contact information and procedures (spill cleanup) is posted throughout the facility.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-03-2014
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	On site to witness monitoring system certification testing activities and to conduct routine UST inspection. The sump sensor alarmed properly (visual and audible) and shut down turbine when submerged in water. The annular sensor alarmed properly (visual and audible) and shut down turbine when submerged in water UDC has Bravo box with float

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

and chain mechanism. Water was poured in the UDC and the float and chain functioned properly. Fail-safe, sensor out and emergency shut off were tested and passed. Line leak detectors was not witnessed by this Agency since the test port could not be removed. The technician was going to continue to try to remove the test port to test the line leak detector. Site has flappers for overfill prevention. Spill bucket is direct bury and was tested with an Incon. The spill bucket passed two consecutive 15 minute tests. Valid permit, designated operator documentation, monthly inspection reports, response plan, employee [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-04-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Monitor cert notification
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Enforcement Action:
Site ID: 107675
Site Name: XPO Logistics Freight, Inc.-UIV
Site Address: 20697 PRISM PL
Site City: LAKE FOREST
Site Zip: 92630
Enf Action Date: 07-15-2005
Enf Action Type: Industrial Storm Water Enforcement
Enf Action Description: Industrial Storm Water Enforcement
Enf Action Notes: Failure to submit 04-05 Annual Report by 7/1/05.
Enf Action Division: Water Boards
Enf Action Program: INDSTW
Enf Action Source: SMARTS

Site ID: 107675
Site Name: XPO Logistics Freight, Inc.-UIV
Site Address: 20697 PRISM PL
Site City: LAKE FOREST
Site Zip: 92630
Enf Action Date: 08-10-2005
Enf Action Type: Industrial Storm Water Enforcement
Enf Action Description: Industrial Storm Water Enforcement
Enf Action Notes: A clerical error at the Regional Board office resulted in an incorrect Notice of Non-Compliance being issued.
Enf Action Division: Water Boards
Enf Action Program: INDSTW
Enf Action Source: SMARTS

Coordinates:
Site ID: 107675
Facility Name: XPO Logistics Freight, Inc.-UIV
Env Int Type Code: HWG
Program ID: 10449481

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 33.661290
Longitude: -117.675870

Affiliation:
Affiliation Type Desc: Environmental Contact
Entity Name: JEFF SEXTEN
Entity Title: Not reported
Affiliation Address: 2211 Old Earhart Road
Affiliation City: Ann Arbor
Affiliation State: MI
Affiliation Country: Not reported
Affiliation Zip: 48105
Affiliation Phone: Not reported

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 2211 Old Earhart Road, Suite 100
Affiliation City: Ann Arbor
Affiliation State: MI
Affiliation Country: Not reported
Affiliation Zip: 48105
Affiliation Phone: Not reported

Affiliation Type Desc: Operator
Entity Name: XPO Logistics Freight, Inc.-UIV
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (949) 581-9030

Affiliation Type Desc: UST Tank Owner
Entity Name: XPO Logistics Freight, Inc.
Entity Title: Not reported
Affiliation Address: 2211 Old Earhart Road, Suite 100
Affiliation City: Ann Arbor
Affiliation State: MI
Affiliation Country: United States
Affiliation Zip: 48105
Affiliation Phone: (734) 757-1657

Affiliation Type Desc: CUPA District
Entity Name: Orange County Env Health
Entity Title: Not reported
Affiliation Address: 1241 East Dyer RoadSuite 120
Affiliation City: Santa Ana
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92705-5611
Affiliation Phone: (714) 433-6000

Affiliation Type Desc: Identification Signer

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Entity Name:	Jeff Sexten
Entity Title:	Manager of Environmental Compliance
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Parent Corporation
Entity Name:	XPO Logistics Inc.
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	UST Permit Applicant
Entity Name:	Amanda Galbavi
Entity Title:	Environmental Compliance Analyst
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(734) 757-1234
Affiliation Type Desc:	Owner/Operator
Entity Name:	XPO Logistics Freight Inc
Entity Title:	Operator
Affiliation Address:	2211 Old Earhart RdSTE 100
Affiliation City:	Ann Arbor
Affiliation State:	MI
Affiliation Country:	Not reported
Affiliation Zip:	48105
Affiliation Phone:	Not reported
Affiliation Type Desc:	UST Property Owner Name
Entity Name:	XPO Logistics Freight, Inc.
Entity Title:	Not reported
Affiliation Address:	2211 Old Earhart Road, Suite 100
Affiliation City:	Ann Arbor
Affiliation State:	MI
Affiliation Country:	United States
Affiliation Zip:	48105
Affiliation Phone:	(734) 757-1657
Affiliation Type Desc:	UST Tank Operator
Entity Name:	XPO Logistics Freight, Inc.-UIV
Entity Title:	Not reported
Affiliation Address:	20697 Prism Place
Affiliation City:	Lake Forest
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92630

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Affiliation Phone:	(734) 757-1657
Affiliation Type Desc:	Document Preparer
Entity Name:	Amanda Galbavi
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	XPO Logistics Freight, Inc.
Entity Title:	Not reported
Affiliation Address:	2211 Old Earhart road, Suite 100
Affiliation City:	Ann Arbor
Affiliation State:	MI
Affiliation Country:	United States
Affiliation Zip:	48105
Affiliation Phone:	(734) 757-1657
Affiliation Type Desc:	Property Owner
Entity Name:	XPO Logistics Freight, Inc.
Entity Title:	Not reported
Affiliation Address:	2211 Old Earhart Road, Suite 100
Affiliation City:	Ann Arbor
Affiliation State:	MI
Affiliation Country:	United States
Affiliation Zip:	48105
Affiliation Phone:	(734) 757-1657

HAZNET:

Site Name:	XPO LOGISTICS FREIGHT INC. - UIV
Year:	2017
GEPAID:	CAL000078604
Contact:	JEFF SEXTEN
Telephone:	7347571657
Mailing Name:	Not reported
Mailing Address:	2211 OLD EARHART RD STE 100
Mailing City,St,Zip:	ANN ARBOR, MI 481050000
Gen County:	Orange
TSD EPA ID:	CAD008364432
TSD County:	Los Angeles
Tons:	0.0355
CA Waste Code:	352-Other organic solids
Method:	H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County:	Orange
Site Name:	XPO LOGISTICS FREIGHT INC. - UIV
Year:	2017
GEPAID:	CAL000078604
Contact:	JEFF SEXTEN
Telephone:	7347571657
Mailing Name:	Not reported

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Mailing Address:	2211 OLD EARHART RD STE 100
Mailing City,St,Zip:	ANN ARBOR, MI 481050000
Gen County:	Orange
TSD EPA ID:	CAD008364432
TSD County:	Los Angeles
Tons:	0.378
CA Waste Code:	331-Off-specification, aged or surplus organics
Method:	H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County:	Orange

Site Name:	XPO LOGISTICS FREIGHT INC. - UIV
Year:	2017
GEPAID:	CAL000078604
Contact:	JEFF SEXTEN
Telephone:	7347571657
Mailing Name:	Not reported
Mailing Address:	2211 OLD EARHART RD STE 100
Mailing City,St,Zip:	ANN ARBOR, MI 481050000
Gen County:	Orange
TSD EPA ID:	CAD008364432
TSD County:	Los Angeles
Tons:	0.0405
CA Waste Code:	221-Waste oil and mixed oil
Method:	H061-Fuel Blending Prior To Energy Recovery At Another Site
Facility County:	Orange

Site Name:	XPO LOGISTICS FREIGHT INC. - UIV
Year:	2017
GEPAID:	CAL000078604
Contact:	JEFF SEXTEN
Telephone:	7347571657
Mailing Name:	Not reported
Mailing Address:	2211 OLD EARHART RD STE 100
Mailing City,St,Zip:	ANN ARBOR, MI 481050000
Gen County:	Orange
TSD EPA ID:	CAD008364432
TSD County:	Los Angeles
Tons:	0.0405
CA Waste Code:	281-Adhesives
Method:	H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County:	Orange

Site Name:	XPO LOGISTICS FREIGHT INC. - UIV
Year:	2017
GEPAID:	CAL000078604
Contact:	JEFF SEXTEN
Telephone:	7347571657
Mailing Name:	Not reported
Mailing Address:	2211 OLD EARHART RD STE 100
Mailing City,St,Zip:	ANN ARBOR, MI 481050000
Gen County:	Orange
TSD EPA ID:	CAD028409019
TSD County:	Los Angeles
Tons:	1.251
CA Waste Code:	223-Unspecified oil-containing waste

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Method: H135-Discharge To Sewer/Potw Or Npdes(With Prior Storage--With Or Without Treatment)
Facility County: Orange

Click this hyperlink while viewing on your computer to access
95 additional CA_HAZNET: record(s) in the EDR Site Report.

CERS TANKS:
Site ID: 107675
CERS ID: 215411
Site Name: XPO LOGISTICS FREIGHT, INC.-UIV
CERS Description: Industrial Facility Storm Water

Violations:
Site ID: 107675
Site Name: XPO Logistics Freight, Inc.-UIV
Violation Date: 03-03-2014
Citation: HSC 6.7 25286(a) - California Health and Safety Code, Chapter 6.7, Section(s) 25286(a)
Violation Description: Failure to prepare, maintain, and submit accurate CUPA UST Operating Permit Application for Facility information and/or Tank information.
Violation Notes: Returned to compliance on 03/05/2014. A copy of the monitoring plan is not available on site. Please submit a copy of the monitoring plan to this Agency within 30 days of this inspection.
Violation Division: Orange County Environmental Health
Violation Program: UST
Violation Source: CERS

Site ID: 107675
Site Name: XPO Logistics Freight, Inc.-UIV
Violation Date: 08-25-2014
Citation: HSC 6.95 25508(d) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(d)
Violation Description: Failure to complete and/or electronically submit a business plan when storing/handling a hazardous material at or above reportable quantities.
Violation Notes: Returned to compliance on 04/13/2015. Please be advised that in the inspection report dated 3/3/14, this Agency requested electronic submittal of hazardous business emergency plan. To date, this information has not been submitted. Emergency plan must be submitted within 30 days of this inspection.
Violation Division: Orange County Environmental Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 107675
Site Name: XPO Logistics Freight, Inc.-UIV
Violation Date: 08-25-2014
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description: Failure to complete and electronically submit a site map with all required content.
Violation Notes: Returned to compliance on 04/13/2015. Please be advised that in the inspection report dated 3/3/14, this Agency requested electronic submittal of site map. To date, the site map has not been submitted. The site map must be submitted within 30 days of this inspection.
Violation Division: Orange County Environmental Health

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	04-30-2015
Citation:	23 CCR 16 2638 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2638
Violation Description:	Failure to test leak detection equipment as required every 12 months (VPH, sensor, LLD, ATG, etc.) and/or submit monitoring system certification to the CUPA within 30 days of completion of the test
Violation Notes:	Returned to compliance on 06/26/2015. Monitoring system certification activities were performed at the facility on 3/20/15. A copy of the monitoring system certification report must be submitted to this Agency within 30 days of testing. To date, this Agency has not received a copy of the report. A copy of this report must be submitted by 5/15/15.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	03-03-2015
Citation:	HSC 6.7 25284.2 - California Health and Safety Code, Chapter 6.7, Section(s) 25284.2
Violation Description:	Failure to test the spill bucket annually.
Violation Notes:	Returned to compliance on 04/30/2015. The last spill bucket test conducted at this facility was on 3/3/14. Spill bucket must be tested annually. Spill bucket test must be scheduled and conducted within 30 days of this inspection report. Notify this Agency 48 hours in advance of testing.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	11-05-2014
Citation:	23 CCR 16 2637(e) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2637(e)
Violation Description:	Failure to submit a copy of the secondary containment test results to the CUPA within 30 days after the test.
Violation Notes:	Returned to compliance on 06/26/2015. Results of secondary containment test (SB989) for activities conducted on 8/15/14, have not been received by this Agency within 30 days of testing. A copy of the secondary containment testing report form must be submitted to this Agency within 30 days of this inspection report.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	03-13-2017
Citation:	HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Violation Description:	Failure to annually review and electronically certify that the business plan is complete and accurate on or before the annual due date.
Violation Notes:	Returned to compliance on 04/07/2017. Annual Hazardous Materials Business Plan (HMBP) have not been submitted. Please be advised that HMBP documents must be submitted annually by March 1st. HMBP documents must be submitted within 30 days of this inspection.
Violation Division:	Orange County Environmental Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	03-03-2015
Citation:	23 CCR 16 2638 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2638
Violation Description:	Failure to test leak detection equipment as required every 12 months (VPH, sensor, LLD, ATG, etc.) and/or submit monitoring system certification to the CUPA within 30 days of completion of the test
Violation Notes:	Returned to compliance on 04/30/2015. The last monitoring system certification test conducted at this facility was on 3/3/14. Monitoring system certification must be conducted annually. Monitoring system certification must be scheduled and conducted within 30 days of this inspection report. Notify this Agency 48 hours in advance of testing.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	07-01-2005
Citation:	2014-0057-DWQ - Industrial General Permit
Violation Description:	SW - Late Report
Violation Notes:	Failure to submit 04-05 Annual Report by 7/1/05.
Violation Division:	Water Boards
Violation Program:	INDSTW
Violation Source:	SMARTS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	05-06-2016
Citation:	23 CCR 16 2638 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2638
Violation Description:	Failure to test leak detection equipment as required every 12 months (VPH, sensor, LLD, ATG, etc.) and/or submit monitoring system certification to the CUPA within 30 days of completion of the test
Violation Notes:	Returned to compliance on 05/11/2016. This agency has not received a copy of of monitoring system certification report for tests conducted on 3/2/16. Please be advised that test results must be submitted to this agency within 30 days of testing. A copy of test results must be submitted to this agency by 5/20/16. Failure to submit test results may result in further enforcement action.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	04-30-2015
Citation:	HSC 6.7 25286(a) - California Health and Safety Code, Chapter 6.7, Section(s) 25286(a)
Violation Description:	Failure to submit an complete and accurate application for a permit to operate an underground storage tank, or for renewal of the permit.
Violation Notes:	Returned to compliance on 07/11/2015. UST documents submitted to CERS on 10/9/13, 3/4/14, 9/25/14 and 3/10/15 have not been accepted due to inaccurate information. All requested corrections must be made within 30 days of this inspection report.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS

Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	03-03-2014
Citation:	HSC 6.7 25286(a) - California Health and Safety Code, Chapter 6.7, Section(s) 25286(a)
Violation Description:	Failure to prepare, maintain, and submit accurate CUPA UST Operating Permit Application for Facility information and/or Tank information.
Violation Notes:	Returned to compliance on 03/05/2014. UST Facility and tank pages are not available on site. Please submit copies of these forms to this Agency within 30 days of this inspection.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS

Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	05-04-2017
Citation:	23 CCR 16 2715(i) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(i)
Violation Description:	Failure to have a properly qualified service technician test leak detection equipment as required every 12 months (vapor, pressure, hydrostatic (VPH) system, sensors, line-leak detectors (LLD), automatic tank gauge (ATG), etc.).
Violation Notes:	Returned to compliance on 05/26/2017. Please be advised that this agency has not received a copy of monitoring system certification report for tests conducted on 3/13/17. Test results must be submitted to this agency within 30 days of testing. A copy of monitoring system certification report must be submitted to this agency by 5/18/17 to avoid enforcement action.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS

Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	01-26-2012
Citation:	2014-0057-DWQ - Industrial General Permit
Violation Description:	SW - Denied Access
Violation Notes:	The on-site manager would not allow inspection or review of SWPPP without presence of safety staff. Safety staff is located in Fontana.
Violation Division:	Water Boards
Violation Program:	INDSTW

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Violation Source:	SMARTS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	08-25-2014
Citation:	HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description:	Failure to complete and electronically submit hazardous material inventory information for all reportable hazardous materials on site at or above reportable quantities.
Violation Notes:	Returned to compliance on 04/13/2015. Please be advised that in the inspection report dated 3/3/14, this Agency requested electronic submittal of hazardous materials inventory forms for hazardous materials at or above the thresholds quantities of 55 gallons/500 lbs/200 cubic feet. To date, this information has not been submitted. The requested forms must be submitted within 30 days of this inspection.
Violation Division:	Orange County Environmental Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	03-03-2017
Citation:	23 CCR 16 2715(i) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(i)
Violation Description:	Failure to have a properly qualified service technician test leak detection equipment as required every 12 months (vapor, pressure, hydrostatic (VPH) system, sensors, line-leak detectors (LLD), automatic tank gauge (ATG), etc.).
Violation Notes:	Returned to compliance on 03/13/2017. Please be advised that this Agency has reviewed the file for this facility. The last monitoring system certification testing for this facility was conducted on 3/2/16. Monitoring system certification test must be conducted annually. To date, this Agency has not received a notification for scheduled testing or a copy of the monitoring system certification report documenting that the test was conducted. The monitoring system certification test must be scheduled and conducted within 30 days of this inspection report to avoid any enforcement action.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	03-02-2016
Citation:	HSC 6.75 25299.30-25299.34 - California Health and Safety Code, Chapter 6.75, Section(s) 25299.30-25299.34
Violation Description:	Failure to submit and maintain complete and current Certification of Financial Responsibility or other mechanism of financial assurance.
Violation Notes:	Returned to compliance on 03/13/2017. Certification of financial responsibility expired on 12/31/15 and has previous owner's information. A valid certification of financial responsibility with current owner information must be submitted within 30 days of this inspection.
Violation Division:	Orange County Environmental Health
Violation Program:	UST

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Violation Source: CERS

Site ID: 107675
Site Name: XPO Logistics Freight, Inc.-UIV
Violation Date: 10-18-2017
Citation: 23 CCR 16 2637(e) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2637(e)
Violation Description: Failure to submit a copy of the secondary containment test results to the CUPA within 30 days after the test.
Violation Notes: Returned to compliance on 01/12/2018. This agency has not received a copy of secondary containment test results within 30 days of testing. Notification dated 7/17/17 sent to this agency indicated that secondary containment test was scheduled for 8/7/17. A copy of secondary containment testing report form must be submitted to this agency by 11/1/17 to avoid further enforcement action.
Violation Division: Orange County Environmental Health
Violation Program: UST
Violation Source: CERS

Evaluation:
Eval General Type: Other/Unknown
Eval Date: 03-08-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: I received email from company contact, Pamela Nixon, in response to inspection report with violation regarding failure to conduct annual monitoring system certification within 365 days of last test. A copy of monitoring system report for tests conducted on 2/21/17 was attached to the email. I was not on site since I had not received notification. I checked UST Notification Calendar and site history (7800 report) to determine if this agency received notification of testing. Notification was not received. I emailed Pamela back explaining that notification for testing was not received by this agency and that test must be conducted again so that it can be witnessed by this agency. I received notification to conduct test on 3/13/17.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-09-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Went to site to witness monitor certification as notified and conduct routine UST inspection. Testers were not on site. I called testing company, Tanknology, and was told that technician is running late. Monitor certification will be rescheduled for another day.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-14-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: I highlighted tank information page with areas that corrections are

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

needed and emailed it to company's CERS contact. I also included comment that Facility Information was accepted even though this conpany did not obtain their own BOE#.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-30-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Documents submitted to CERS on 3/28/17 were reviewed. Emergency plan was not accepted since CUPA phone # was not listed.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 04-30-2015
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Inspector Comments: Monitoring system certification activities were performed at the facility on 3/20/15. A copy of the monitoring system certification report must be submitted to this Agency within 30 days of testing. To date, this Agency has not received a copy of the report. A copy of this report must be submitted by 5/15/15. Violation I205, regarding not conducting monitoring system certification activities cited in the inspection report dated 3/3/15, has been corrected. However, the violation listed above if for not submitting a copy of the monitoring system certification report. In addition, this Agency has requested corrections of UST documents submitted to CERS on 10/9/13, 3/4/14, 9/25/14 and 3/10/15. All corrections must be made within 30 days if this inspection report. Please be advised that this facility also has an outstanding violation, cited on 11/5/14, regarding not submitting results of Secondary Containment Testing to this Agency within 30 days of [Truncated]
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 05-22-2018
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: I received a copy of Monitoring System Certification, Line Leak Detector Test Form and Spill Bucket Testing Report Form for activities conducted on 3/2/18. All components passed test.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 06-02-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: I received email from Pamela Nixon, company headquarter, in response to letter stating that facility will not be receiving UST permit. I

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

	emailed her another copy of the 5/26/17 F04 report stating (that was both emailed and mailed to ther) that violation was corrected and facility would be receiving permit.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	07-11-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 6/11/15, 6/12/15 and 6/30/15 were reviewed and declined with the following considerations: Diesel Exhaust Fluid: ?Yes? for ?Fire? under Federal Hazard Categories section should be deleted since this mixture is mostly water. Propane form must be revised as follows: - Chemical Name and Common Name are reversed. Liquefied Petroleum Gas is the Chemical Name. - Physical State must be changed from ?Gas? to ?Liquid.? - Fire Code Hazard Classes must be changed from ?Flammable Gas? to ?Flammable Liquefied Gas.? - Storage Pressure must be changed from ?Ambient? to ?Above Ambient.? Windshield Washer Fluid: An MSDS/SDS was not submitted as requested. Therefore, the accuracy of the information cannot be verified. Please submit SDS for this material. Hazardous Material Inventory forms for the following material, reported in previous in submittals and/or observed during onsite inspection must be submitted: - Antifreeze - Motor Oil - [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	08-07-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	SB 989 test notification
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	08-25-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	The documents submitted to CERS on 3/4/14 have been reviewed and not accepted with the following considerations: ?Monitor Panel Manufacturer?, ?Monitor Panel Model?, ?Leak Sensor Manufacturer? and ?Leak Sensor Model? information is not listed in the ?Continuous Electronic Tank Monitoring? section of the Underground Storage ? Monitoring Plan (Tank Monitoring) ?Monitor Panel Manufacturer?, ?Monitor Panel Model?, ?Leak Sensor Manufacturer? and ?Leak Sensor Model? information is not listed in the ?Continuous Monitoring off Piping Secondary Containment? section of the Underground Storage ? Monitoring Plan (Pipe Monitoring) The site map does not show the locations of the piping, dispenser, sensors, emergency shut off or the monitoring panel. Underground Storage Tank - Response Plan, a copy of Owner Statements of Designated Underground Storage Tank (UST) Operator (DO) and Certification of Financial Responsibility must also be

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

	submitted.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	11-05-2014
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector Comments: Please be advised that this Agency received a notification that secondary containment testing (SB989) was scheduled for 8/15/14. Test results must be submitted to this Agency within 30 days of testing. To date, a copy of the test results have not been received by this Agency. A copy of test results must be submitted to this Agency within 30 days of this inspection report report.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	11-30-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 11/25/15 indicate change of ownership. New Owner is XPO Logistics Freight, Inc. Form was submitted to add new owner to program. Business Activities form was not accepted since previous owner's (Con-way Freight, Inc.) EPA ID# in listed for new business.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	11-30-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 11/25/15 were reviewed and not accepted with the following considerations: - EPA ID# CAL000078604 listed on Business Activities form is assigned to former business owner, Con-Way Freight, Inc. This business must obtain a new EPA ID#. - Windshield Washer Fluid. Based on a copy of SDS submitted on 7/29/15, the ?Hazardous Component? for this material is Methanol. Therefore, ?Methanol? with CAS# ?67-56-1? at ?1?% by weight should be listed in Mixture Component section. - Motor Oil form must be revised as follows: - Hazardous Material Type must be changed from ?Pure? to ?Mixture? since Mixture Components are provided. - Fire Code Hazard Classes must be changed from ?Combustible Liquid, Class II? to ?Combustible Liquid, Class III-B.? - CAS# 6474X-XX-X listed for ?Various Lubricating Base Oils? in Mixture Components section is not acceptable, especially that this material is the main component at 85%. All digits of the CAS# must be [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	07-11-2015

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Change status to receive a UST permit, per Arghavan.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	07-15-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Updated monitoring plan documenting the replacement of Veeder Root panel and sump sensor was submitted to CERS on 6/30/15 and approved. Plan Check may be closed.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	08-28-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	On site to witness monitoring system certification test after completion of modification activities (replacing Veeder Root Panel from TLS 300-C to TLS 350). Only components monitored by the Veeder Root panel were tested. The sump sensor (205) was replaced with a 208 sensor since it was not functioning properly. The annular and sump sensors alarmed properly (visual and audible) and shut down respective turbine when submerged in water. An updated monitoring plan documenting the installation of the new Veeder Root panel and sump sensor must be submitted within 30 days of this inspection. Fail-safe, sensor out and emergency shut off were tested and passed.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	11-30-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 11/25/15 indicate change of ownership. New Owner is XPO Logistics Freight, Inc. Form was submitted to add new owner to program.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	11-30-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 11/25/15 were reviewed and not accepted with the following considerations: Board of Equalization Account Number (44036723) was assigned to former business owner, Con-Way Freight, Inc. Due to change in ownership, a new BOE# must obtained. Name of the former business is listed on the UST Certification of Financial Responsibility (CFR) form. Updated CFR form with new

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

	business name must be submitted. In addition, the former business?s ?Letter From Chief Financial Officer? has been submitted. An updated CFO letter should be submitted.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	12-09-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Change status to receive a permit, per Arghavan.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	05-16-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Change permit status to Do Not Issue (03) per email from A. Rashidi-Fard dated 5/15/17
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	05-26-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I received a copy of Monitoring System Certification and Spill Bucket Testing Report Form for activities conducted on 3/13/17. All components passed test. Violation I205 regarding failure to submit monitoring system certification report to CUPA within 30 days of testing event, cited in the inspection report dated 5/4/17, has been corrected. Permit to operate the underground storage tank at this facility will be issued.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	05-30-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Change permit status to Issue Permit (01) per email from A. Rashidi-Fard dated 5/26/17.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	06-12-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 6/2/15 were reviewed and not accepted with the following considerations: ?Yes? must be listed for ?Spill

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Bucket? and ?Striker Plate/Bottom Protector? for ?Fill Component Installed? under ?Vent, Vapor Recovery (VR) And Riser/Fill Pipe Piping Construction? section on Tank Information page. The UDC is not monitored by the Veeder Root panel. Therefore, information listed for ?UDC Panel Manufacturer? and ?UDC Panel Model #? in ?Under Dispenser Containment (UDC) Monitoring? on the monitoring plan should be removed. ?Yes? should be listed for ?Equipment Maintenance and Calibration Records? under ?Recordkeeping? section of the monitoring plan since copies of tank system test results are maintained on site. ?Yes? should be listed for ?Designated Operator Training? under ?Training? section since copies of training records for employees trained by designated operator are maintained on site. ?Corrective Action? section on the Certification [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 08-25-2014
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Inspector Comments:

_____ Please be advised that in the inspection report dated 3/3/14, this Agency requested electronic submittal of hazardous materials inventory for hazardous materials at or above the thresholds quantities of 55 gallons/500 lbs/200 cubic feet, business emergency plan and site map. To date, the requested documents have not been submitted. The violations listed above must be complied with, in order to prevent enforcement action.

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 09-11-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Documents submitted to CERS on 7/29/15 were reviewed and declined with the following considerations: Diesel Exhaust Fluid: ?Yes? under ?Fire? under Federal Hazard Categories section must be deleted since this mixture is mostly water. Based on the provided SDS, Windshield Washer Fluid form must be revised as follows: - As requested previously, ?Windshield Washer Fluid? should also be listed as the Chemical Name. - The Hazardous Component for this material (listed on SDS) is ?Methanol? with CAS# 67-56-1 at 1% by weight. Motor Oil form must be revised as follows: - Hazardous Material Type must be changed from ?Pure? to ?Mixture? since Mixture Components are provided. - Fire Code Hazard Classes must be changed from ?Combustible Liquid, Class II? to ?Combustible Liquid, Class III.? - CAS# 6474X-XX-X listed for ?Various Lubricating Base Oils? in Mixture Components section is not acceptable, especially that this material is the main component at 85%. All digits [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

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Eval General Type:	Other/Unknown
Eval Date:	10-18-2017
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	This agency has not received a copy of secondary containment test results within 30 days of testing. Notification dated 7/17/17 sent to this agency indicated that secondary containment test was scheduled for 8/7/17. A copy of secondary containment testing report form must be submitted to this agency by 11/1/17.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	11-04-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Submittal dated 9/25/14 was reviewed and not accepted with the following considerations: ?Piping /Turbine Containment Sump? information in Product/Waste Piping Construction section and ?Fill Components Installed? in Vent, Vapor Recovery (VR) and Riser/Fill Pipe Piping Construction section must be completed. ?Secondary Containment System?, ?Monitor Panel Manufacturer?, ?Monitor Panel Model?, ?Leak Sensor Manufacturer? and ?Leak Sensor Model? information must be listed in the Tank Monitoring section of the UST ? Monitoring Plan. ?Monitor Panel Manufacturer?, ?Monitor Panel Model?, ?Leak Sensor Manufacturer? and ?Leak Sensor Model? information must be listed in the Piping Monitoring section of the UST ? Monitoring Plan. ?No? must listed for ?Detection of Leak into UDC Triggers Audible and Visual Alarms?, ? UDC Leak Alarm Triggers Automatic Pump Shutdown?, ?Failure/Disconnection of UDC Monitoring System Triggers Automatic Pump Shutdown? and ?Yes? must be listed [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-12-2018
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I received a copy of Secondary Containment Testing Report Form (3 year SB989) for activities conducted on 8/7/17. All components passed test. Outstanding violation I296 regarding failure to submit test results within 30 days of testing, cited on 10/18/17, has been corrected.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	02-07-2001
Violations Found:	No
Eval Type:	Industrial Storm Water Compliance Evaluation
Eval Notes:	On February 7, 2001 Regional Board Staff, Marc Brown conducted a compliance inspection at the above referenced facility. Brown met with Corky Wyrick, the facility contact. The facility is a merchandise transportation hub, which has a single storage area with multiple loading docks surrounding its perimeter. This loading docks lie in the

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interior of the facility's parking area. The parking area houses numerous semi-tractor trailers awaiting use. At the southeast corner of the facility, near the entrance is a diesel fueling station (UST). This area is equipped with spill kits. Further west, along the fenceline is the facility's propane storage area, where individual propane fuel tanks are stored for use with forklifts. Review of the SWPPP indicated the facility had weekly inspections and employee training (last conducted on 1/16/01). The SWPPP had a facility map, but no flow directions were illustrated. A site walk was conducted and revealed general housekeeping efforts were well maintained. However, further attention was needed around the facility's fenceline, which borders and drains directly into a storm channel. Debris and sediment build up was identified and noted during the walk through. Mr. Wyrick was instructed to include inspecting these areas as part of the routine inspection and maintenance program in the SWPPP.

Eval Division: Water Boards
Eval Program: INDSTW
Eval Source: SMARTS

Eval General Type: Other/Unknown
Eval Date: 02-24-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Facility Information and Hazardous Materials Inventory documents submitted to CERS on 2/22/16 were reviewed and accepted. Comment on Business Activities form stated that Con-way Freight, Inc has undergone a legal name change to XPO Logistics Freight, Inc. This is still the same company with the same Tax ID number. Emergency Plan was not updated/resubmitted. I emailed contact requesting that emergency plan be updated with CUPA phone# and resubmitted.

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-01-2019
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to conduct routine hazardous waste inspection. Joe Pickford granted consent to conduct inspection. I walked through facility and inspected waste storage area in the dock and by shed in fuel dispenser area. I did not observe any hazardous waste in trash cans throughout the dock or the dumpster at the end of the loading dock. Hazardous waste drums in dock and fuel dispenser area are stored closed and labeled. Manifests were reviewed. Emergency contact information and procedures (spill cleanup) is posted throughout the facility.

Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-02-2018
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to witness monitoring system certification testing activities and to conduct routine UST inspection. Annular and turbine sump sensors alarmed properly (visual and audible) and shut down turbine

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

when submerged in water. Fill sump is not monitored since spill bucket is direct bury. UDC has Bravo box has float and chain mechanism. Water was poured in the UDC and the float and chain functioned properly. Fail-safe, sensor out and emergency shut off were tested and passed. Line leak detectors was tested and passed. Site has flappers for overfill prevention. Spill buckets were tested visually without any changes in water level. Valid permit, designated operator documentation, monthly inspection reports, response to alarms, response plan, employee training records, monitoring plan, tank page, certification of financial responsibility (expires 4/1/18), copies of monitoring system certification and secondary containment (last test conducted on 8/7/17) reports are [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-03-2014
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to conduct hazardous materials chemical inventory and business emergency plan inspection. I walked through the facility and inspected hazardous materials storage areas. Facility has hazardous materials (diesel, diesel exhaust fluid, new oils, propane tanks) that meet required disclosure quantities. Business Activities form and Owner/Operator Identification forms are available on CERS. Please be advised that the following documents must be also be electronically submitted within 30 days of this inspection: - Hazardous Material Chemical Inventory forms - Facility Site Map - Business Emergency Plan

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-03-2014
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to conduct routine hazardous waste inspection. John Heilman granted consent to conduct inspection. Waste is generated when packages/boxes are broken during shipping. I walked through the facility, perimeter and inspected waste storage areas. Debris contaminated with diesel (1), toxic solid (1) and waste aerosols (1) containers are stored closed. The diesel debris drum has a federal label without waste characteristics. I discussed the requirement to include waste characteristics with Mr. Heilman. The toxic solid and aerosol containers were labeled during the inspection. Manifests were reviewed. Emergency number is posted throughout the faciltiy.

Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-06-2014
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: A copy of updated/completed monitoring plan was obtained from the facility.

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Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-13-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted Facility Information submitted to CERS on 3/7/17, even though this business owner had DTSC change owner information from former owner information (Conway Freight) to their rather obtaining a new EPA ID#. Included comment regarding EPA ID#s are owner and/or site specific and a new number should have been obtained.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-20-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspected facility with Kevin Jansen, who provided consent to perform an inspection and take pictures as necessary. Hazardous waste container(s) is/are marked: ?HAZARDOUS WASTE?, name and address of business, contents, physical state, hazardous property and initial accumulation date. Reviewed hazardous waste disposal receipts/manifests for prior three years. Verified a copy of the uniform hazardous waste manifest is mailed to the state within 30 days of hazardous waste disposal. Verified all universal wastes (fluorescent lamps, high intensity discharge lamps, batteries, etc.) are managed appropriately. copy to: pickford.joseph@con-way.com
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	04-26-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 4/18/16 were reviewed and not accepted since change in ownership was verified during onsite inspection conducted by this agency on 3/2/16. EPA ID# CAL000078604 listed on Business Activities form is assigned to former business owner, Con-Way Freight, Inc. and a new EPA ID# has not been obtained.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	05-11-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector Comments: I received a copy of Monitoring System Certification, Line Leak Detector Test Form and Spill Bucket Testing Report Form for activities conducted on 3/2/16. All components passed test. Violation I205 regarding failure to submit monitoring system

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

certification report within 30 days of testing cited in the inspection report dated 5/6/16, has been corrected. Please be advised that this facility has an outstanding violation regarding failure to submit and maintain a current certification of financial responsibility (CFR), cited during routine inspection conducted on 3/2/16. A copy of current CFR was not available on site. In addition, the copy of CFR submitted to CERS on 4/18/16 was not accepted since a copy of the insurance policy was not included.

Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 05-26-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Sent email to Susan B. notifying her that violation has been corrected and UST permit may be issued.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 06-26-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Inspector Comments: I reviewed the following documents received on 6/19/15: - Copy of Secondary Containment Testing Report Form (3 year SB989) for activities conducted on 8/15/14. All components passed test. Violation I296, regarding secondary containment test results not being submitted within 30 days of testing cited in this agency's inspection report dated 11/5/14, has been corrected. - Copy of Monitoring System Certification, Line Leak Detector Test and Spill Bucket Testing Report Form for activities conducted on 3/18/15. All components passed test. Violation I205, regarding monitoring system certification test results not being submitted within 30 days of testing cited in this agency's inspection report dated 4/30/15, has been corrected.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 02-24-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Comments on Business Activities form submitted to CERS stated that Con-way Freight, Inc has undergone a legal name change to XPO Logistics Freight, Inc. This is still the same company with the same Tax ID number. The EPA ID number will be updated to reflect the name change, but it will not be a new number.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-02-2016

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to witness monitoring system certification testing activities and to conduct routine UST inspection. The annular and turbine sump sensors alarmed properly (visual and audible) and shut down turbine when submerged in water. Fill sump is not monitored since spill bucket is direct bury. UDC has Bravo box has float and chain mechanism. Water was poured in the UDC and the float and chain functioned properly. Fail-safe, sensor out and emergency shut off were tested and passed. Line leak detectors was tested and passed. Site has flappers for overfill prevention. Spill bucket is direct bury. It will be tested at a later date since technician did not have equipment to test it. Valid permit, designated operator documentation, monthly inspection reports, response plan, employee training records, monitoring plan, tank page, certification of financial responsibility (expired on 12/31/15 and has previous owner's information), copies of [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-03-2015
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector Comments: Please be advised that this Agency has reviewed the file for this facility. The last monitoring system certification and spill bucket testing for this facility was conducted on 3/3/14. Monitoring system certification and spill bucket tests must be conducted annually. To date, this Agency has not received a notification for scheduled testing or a copy of monitoring system certification report that the test was conducted. Monitoring system certification and spill bucket test must be scheduled and conducted within 30 days of this inspection report. Notify this Agency 48 hours in advance of testing.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-03-2017
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Please be advised that this Agency has reviewed the file for this facility. The last monitoring system certification testing for this facility was conducted on 3/2/16. Monitoring system certification test must be conducted annually. To date, this Agency has not received a notification for scheduled testing or a copy of the monitoring system certification report documenting that the test was conducted. The monitoring system certification test must be scheduled and conducted within 30 days of this inspection report to avoid any enforcement action.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Eval Date:	03-04-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I reviewed UST submittal in CERS and did not approve it with the following considerations: The following sections in the Underground Storage - Tank Information are either not listed correctly or not included: - Overfill protection section under ?Tank Construction? is not complete. Site has ?Fill Tube Shut-Off valve? - The Piping System type is not correct and the Secondary Containment Type is not listed The following sections in the Underground Storage ? Monitoring Plan are either not listed correctly or not included: - The Monitor Panel Manufacturer, panel model, sensor manufacturer and model information are not listed under ?Tank Monitoring Section.? - The Monitor Panel Manufacturer, panel model, sensor manufacturer and model information are not listed under ?Piping Monitoring Section.? - Line Leak Detector information is not listed under ?Piping Monitoring Section.? - Periodic System Testing is not included - Recordkeeping information not included - Training [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS

Eval General Type:	Other/Unknown
Eval Date:	03-09-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Monitor cert notification for 3-10-17
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-13-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to witness monitoring system certification testing activities and to conduct routine UST inspection. Annular and turbine sump sensors alarmed properly (visual and audible) and shut down turbine when submerged in water. Fill sump is not monitored since spill bucket is direct bury. UDC has Bravo box has float and chain mechanism. Water was poured in the UDC and the float and chain functioned properly. Fail-safe and sensor out were tested and passed. Line leak detectors was tested and passed. Site has flappers for overfill prevention. Spill bucket was tested using instrument and passed two consecutive 15 minute tests. Valid permit, designated operator documentation, monthly inspection reports, response to alarms, response plan, employee training records, monitoring plan, tank page, certification of financial responsibility (coverage from 4/1/16 to 3/31/17 with XPO Logistics listed on insurance policy), copies of monitoring system and [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS

Eval General Type:	Other/Unknown
Eval Date:	03-14-2017
Violations Found:	No

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed documents submitted to CERS on 3/7/17. Accepted Facility Information page after checking BOE website and saw that the profile has been updated with current owner information. Tank Infomation was not accepted and the following need to be addressed: - Vent/Vapor Recovery (VR) and Riser/Fill Piping Construction section must be completed. - ?Yes? must be checked for ?Isolation? under Corrosion Protection section.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-15-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Received email from company headquarters contact stating that new BOE# was not obtained since they did not have to obtain a new Federal Tax ID#. I emailed her back stating that I was not aware the Federal Tax ID# makes a difference in not having to obtaining State BOE# and that it appears that two corporations merged or one took over the other business or a parent company took over a subsidiary and that is considered ownership change. I notified her that BOE# matter will not be pursued since my comments are in CERS.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-15-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted revised tank information page submitted to CERS on 3/15/17.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-20-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspected UST facility with Kevin Jansen. Double walled tanks with pressurized piping and leak detector. Sump sensor appeared to be at the low point and the Bravo Box float was dry. Site has flappers for overfill prevention. Valid permit, designated operator documentation, monthly inspection reports, response plan, employee training records, certification of financial responsibility, copies of monitoring system certification and secondary containment reports are available for review. Copies of electronically submitted monitoring plan and tank page were not available on site. Results of secondary containment test (SB989) for activities conducted on 8/15/14, still have not been received by this agency. copy to: pickford.joseph@con-way.com
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Eval General Type:	Other/Unknown
Eval Date:	04-13-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 3/10/15 (three submitals) were reviewed and declined with the following considerations: ?Days on Site? for all reported material should be changed from ?352? to ?365? days unless material is taken off site for 13 days. Heavy Vacuum Gas Oil: Federal Hazard Categories is not listed and must added. Windshield Washer Fluid form must be revised as follows: - Chemical Name (Windshield Washer Fluid) should be listed. - This material is reported as ?pure? but a CAS# is not listed. If it has CAS# then is should be listed. If it is a ?mixture?, then the solution?s ?Hazardous Component Name, CAS# and % by Weight? must be listed in ?Mixture Component? section. - Fire Code Hazard Classes must be listed Transmission Fluid is must be removed since the volume stored on site is below reportable quantity of 55 gallons. Diesel Exhaust Fluid form must be revised as follows: - Chemical Name (Diesel Exhaust Fluid) should be listed - This [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Other/Unknown
Eval Date:	04-30-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 4/15/15 were reviewed and not accepted with the following considerations: Diesel Exhaust Fluid form must be revised as follows: - Fire Code Hazard Classes must be changed from ?Combustible Liquid, Class II? to ?Toxic.? - ?Yes? should be deleted for Federal Hazard Categories since the mixture is mostly water. Windshield Washer Fluid form must be revised as follows: - ?Windshield Washer Fluid? should be listed as the Chemical Name. - This material is reported as ?pure? and CAS# for antifreeze is listed. Generally this material is a ?mixture? and does not have a CAS#. If it is a ?pure? material, then the correct CAS# should be listed. If it is a mixture, then ?Hazardous Component Name, CAS# and % by Weight? for at least one component must be listed in ?Mixture Component? section. - Fire Code Hazard Classes for this type material is usually ?Toxic?, not ?Combustible Liquid, Class II? as reported. MSDS should be reviewed and correct [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Other/Unknown
Eval Date:	05-06-2016
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector Comments: This agency has not received a copy of monitoring system certification report for tests conducted on 3/2/16. Please be advised that test results must be submitted to this agency within 30 days of testing. A copy of test results must be submitted to this agency by 5/20/16.
Eval Division:	Orange County Environmental Health
Eval Program:	UST

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	05-22-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Change UST status to not get a permit, per Arghavan.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	06-12-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 6/2/15 were reviewed and declined with the following considerations: Diesel Exhaust Fluid form must be revised as follows: -Chemical Name and Common Name are reversed. Common Name is Diesel Exhaust Fluid. - CAS# listed in Chemical Identification & Physical Properties section must be removed since this a mixture. - Fire Code Hazard Classes must be changed from ?Combustible Liquid, Class II? to ?Toxic.? - ?Yes? should be deleted for Federal Hazard Categories since this mixture is mostly water. - DOT Hazard Class is not correct since the mixture is mostly water. Two forms have been submitted for Ethylene Glycol/Windshield Washer Fluid. Only one form is required for each material. One must be deleted. Windshield Washer Fluid form must be revised as follows: - Please provide a SDS for this material to verify constituents. - The Common Name must be changed to ?Windshield Washer Fluid? and if the mixture contains ethylene glycol, [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	07-11-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector Comments: Documents submitted to CERS on 6/30/15 were reviewed and accepted. Violation I582 regarding not submitting accurate UST documents electronically cited in this agency's inspection report dated 4/30/15, has been corrected. UST Permit to Operate will be issued for this facility.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	08-21-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Received a copy of partial monitoring system certification report documenting installation of a mechanical drop tube overfill prevention valve on 8/8/17.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Eval General Type:	Other/Unknown
Eval Date:	09-11-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I received a copy of Monitoring System Certification report for test conducted on 8/28/14 after completion of modification activities, replacing Veeder Root panel and sump sensor. All components monitored by the panel passed test. As stated in the inspection report dated 8/28/14, an updated monitoring plan documenting the installation of the Veeder Root panel and sump sensor must be submitted by 9/25/14.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	11-30-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 11/25/15 indicate change of ownership. New Owner is XPO Logistics Freight, Inc. Form was submitted to add new owner to program.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-28-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and purged file.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-03-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Spill Bucket testing notification
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-03-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Submittal status of Facility Information submitted to CERS on 2/22/16 was changed from "Accepted" to "Not Accepted" since information that by submitter that there was a change in DBA is not correct. Change in ownership was verified during onsite inspection conducted on 3/2/16. EPA ID# CAL000078604 listed on Business Activities form is assigned to former business owner, Con-Way Freight, Inc. This business must obtain a new EPA ID#.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Eval General Type:	Other/Unknown
Eval Date:	03-05-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Went to site on follow up inspection to correct outstanding violations, TR02, regarding UST Facility page and tank page not being available on site and TR07, regarding monitoring plan not being available on site, during routine inspection conducted on 3/3/14. All forms are available on site. Violations TR02 and TR07 have been corrected.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-11-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Monitoring Certification notification
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-13-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Joseph Pickford granted consent to conduct inspection. Waste is generated when packages/boxes are broken during shipping. EPA ID# CAL000078604, assigned to previous business, Conway Freight, is being used to haul off hazardous waste rather than obtaining a new EPA ID# after this company took over this business. Owner information has been changed/updated with the state (DTSC). Please be advised EPA ID#s are owner and/or site specific and a new number should have been obtained. I walked through facility and inspected waste storage area in the dock. I did not observe any hazardous waste in trash cans throughout the dock or the dumpster at the end of the dock. There is no hazardous waste stored on site currently. Manifests were reviewed. Emergency contact information and procedures (spill cleanup) is posted throughout the facility.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-13-2017
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct hazardous materials chemical inventory and business emergency plan inspection. Joseph Pickford granted consent to conduct inspection. I walked through the facility and inspected hazardous material storage areas. There has been no changes in types and/or volumes of the hazardous material stored on site since last inspection or previous reporting period, except for facility stores only one drum of Windshield Washer Fluid. Propane tank is in a locked enclosure. Propane cylinders are on forklifts, in cage and/or on rack. All 55

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

gallons storing material are in a shed next to fuel island. Safety meeting that include hazardous materials management are held annually. Training records are available for review on site. Emergency contact information and procedures (spill cleanup) is posted throughout the facility. Annual Hazardous Materials Business Plan (HMBP) have not been submitted. Please be advised that HMBP documents must be submitted [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-14-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed documents submitted to CERS on 3/7/17. Submittal was not accepted since ?Yes? was not checked for ?Isolation? under Corrosion Protection section on Tank Information page. Submittal included the following documents: - This business is using BOE# assigned to previous owner (Conway Freight) with profile updated with their information. - Certification of Financial Responsibility with coverage from 4/1/16 to 3/31/17 with XPO Logistics listed on insurance policy. Violation - Updated DO statement.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-23-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: report writing
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-27-2014
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: I received a copy of Monitoring System Certification, Leak Detector Testing and Spill Bucket Testing Report Form for activities conducted on 3/3/14. All components passed.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 04-07-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed and reviewed revised documents submitted to CERS on 3/30/17. Violation I463 regarding failure to annually review and electronically certify HMBP is complete, accurate and up-to-date, cited during inspection conducted on 3/13/17, has been corrected.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	04-13-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents are identical to 9/25/14 submittal that was not accepted. UST - Tank Information Page: - ?Secondary Containment? and ?Piping /Turbine Containment Sump? information in Product/Waste Piping Construction section is not complete. -Fill Components Installed? in Vent, Vapor Recovery (VR) and Riser/Fill Pipe Piping Construction section must be completed. UST ? Monitoring Plan: -?Secondary Containment System?, ?Monitor Panel Manufacturer?, ?Monitor Panel Model?, ?Leak Sensor Manufacturer? and ?Leak Sensor Model? information must be listed in ?Tank Monitoring is Performed Using the Following Method(s)? section. -?Piping Secondary Containment?, ?Panel Manufacturer?, ?Panel Model #?, ?Leak Sensor Manufacturer? and ?Leak Sensor Model? information must be listed in ?Piping Monitoring is Performed Using the Following Method(s) section. At a minimum, ?Yes? must be listed under ?UDC Monitoring Stops Flow of Product at Dispenser? in the Under Dispenser Containment [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	04-26-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 4/18/16 were reviewed and not accepted with the following considerations: - Change in ownership was verified during onsite inspection conducted by this agency on 3/2/16. Board of Equalization Account Number (44036723) was assigned to former business owner, Con-Way Freight, Inc. Due to change in ownership, a new BOE# must obtained. - A copy of certification of financial responsibility with coverage period from 4/1/16 to 3/31/16 was submitted but a copy of the tank?s insurance policy was not submitted.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	05-04-2017
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Please be advised that this agency has not received a copy of monitoring system certification report for tests conducted on 3/13/17. Test results must be submitted to this agency within 30 days of testing. A copy of monitoring system certification report must be submitted to this agency by 5/18/17.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-26-2012
Violations Found:	Yes

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Eval Type:	Industrial Storm Water Compliance Evaluation
Eval Notes:	Weather: sunny and cool. On entry, explained to front office staff that I was there to conduct a storm water inspection. Staff person went to back office, returned, and instructed me to go out back. I asked to see the SWPPP. Staff appeared confused and brought me to the manager, John Heilman, who then told me that I could not go out back unless their safety staff, Don Anderson, was present. He explained that Mr. Anderson was "domiciled" in Fontana and I would need to make an appointment. Mr. Heilman stated that this was their policy and acknowledged that he was responsible for implementing the SWPPP. He declined to allow me to review the SWPPP unless Mr. Anderson was present and again explained that this was their policy.
Eval Division:	Water Boards
Eval Program:	INDSTW
Eval Source:	SMARTS
Eval General Type:	Other/Unknown
Eval Date:	02-16-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Monitor cert notification
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-26-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Monitor cert notification
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-02-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct routine hazardous waste inspection. Kevin Jansen granted consent to conduct inspection. Due to change in ownership (verified during inspection), a new EPA ID# must be obtained for this facility. Waste is generated when packages/boxes are broken during shipping. I walked through the facility, perimeter and inspected waste storage areas. Waste paint drum is stored closed and labeled. Manifests were reviewed. Emergency number is posted throughout the facility.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-02-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	I walked through facility and inspected waste storage area in the dock and by shed in fuel dispenser area. I did not observe any hazardous waste in trash cans throughout the dock or the dumpster at the end of

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

the dock. Hazardous waste drums in dock and fuel dispenser area are stored closed and labeled. Manifests were reviewed. Emergency contact information and procedures (spill cleanup) is posted throughout the facility.

Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-03-2014
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: On site to witness monitoring system certification testing activities and to conduct routine UST inspection. The sump sensor alarmed properly (visual and audible) and shut down turbine when submerged in water. The annular sensor alarmed properly (visual and audible) and shut down turbine when submerged in water UDC has Bravo box with float and chain mechanism. Water was poured in the UDC and the float and chain functioned properly. Fail-safe, sensor out and emergency shut off were tested and passed. Line leak detectors was not witnessed by this Agency since the test port could not be removed. The technician was going to continue to try to remove the test port to test the line leak detector. Site has flappers for overfill prevention. Spill bucket is direct bury and was tested with an Incon. The spill bucket passed two consecutive 15 minute tests. Valid permit, designated operator documentation, monthly inspection reports, response plan, employee [Truncated]
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-04-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Monitor cert notification
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Enforcement Action:
Site ID: 107675
Site Name: XPO Logistics Freight, Inc.-UIV
Site Address: 20697 PRISM PL
Site City: LAKE FOREST
Site Zip: 92630
Enf Action Date: 07-15-2005
Enf Action Type: Industrial Storm Water Enforcement
Enf Action Description: Industrial Storm Water Enforcement
Enf Action Notes: Failure to submit 04-05 Annual Report by 7/1/05.
Enf Action Division: Water Boards
Enf Action Program: INDSTW
Enf Action Source: SMARTS

Site ID: 107675
Site Name: XPO Logistics Freight, Inc.-UIV
Site Address: 20697 PRISM PL

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Site City:	LAKE FOREST
Site Zip:	92630
Enf Action Date:	08-10-2005
Enf Action Type:	Industrial Storm Water Enforcement
Enf Action Description:	Industrial Storm Water Enforcement
Enf Action Notes:	A clerical error at the Regional Board office resulted in an incorrect Notice of Non-Compliance being issued.
Enf Action Division:	Water Boards
Enf Action Program:	INDSTW
Enf Action Source:	SMARTS

Coordinates:

Site ID:	107675
Facility Name:	XPO Logistics Freight, Inc.-UIV
Env Int Type Code:	HWG
Program ID:	10449481
Coord Name:	Not reported
Ref Point Type Desc:	Center of a facility or station.
Latitude:	33.661290
Longitude:	-117.675870

Affiliation:

Affiliation Type Desc:	Environmental Contact
Entity Name:	JEFF SEXTEN
Entity Title:	Not reported
Affiliation Address:	2211 Old Earhart Road
Affiliation City:	Ann Arbor
Affiliation State:	MI
Affiliation Country:	Not reported
Affiliation Zip:	48105
Affiliation Phone:	Not reported

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	2211 Old Earhart Road, Suite 100
Affiliation City:	Ann Arbor
Affiliation State:	MI
Affiliation Country:	Not reported
Affiliation Zip:	48105
Affiliation Phone:	Not reported

Affiliation Type Desc:	Operator
Entity Name:	XPO Logistics Freight, Inc.-UIV
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(949) 581-9030

Affiliation Type Desc:	UST Tank Owner
Entity Name:	XPO Logistics Freight, Inc.
Entity Title:	Not reported
Affiliation Address:	2211 Old Earhart Road, Suite 100

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Affiliation City:	Ann Arbor
Affiliation State:	MI
Affiliation Country:	United States
Affiliation Zip:	48105
Affiliation Phone:	(734) 757-1657
Affiliation Type Desc:	CUPA District
Entity Name:	Orange County Env Health
Entity Title:	Not reported
Affiliation Address:	1241 East Dyer RoadSuite 120
Affiliation City:	Santa Ana
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92705-5611
Affiliation Phone:	(714) 433-6000
Affiliation Type Desc:	Identification Signer
Entity Name:	Jeff Sexten
Entity Title:	Manager of Environmental Compliance
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Parent Corporation
Entity Name:	XPO Logistics Inc.
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	UST Permit Applicant
Entity Name:	Amanda Galbavi
Entity Title:	Environmental Compliance Analyst
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(734) 757-1234
Affiliation Type Desc:	Owner/Operator
Entity Name:	XPO Logistics Freight Inc
Entity Title:	Operator
Affiliation Address:	2211 Old Earhart RdSTE 100
Affiliation City:	Ann Arbor
Affiliation State:	MI
Affiliation Country:	Not reported
Affiliation Zip:	48105
Affiliation Phone:	Not reported
Affiliation Type Desc:	UST Property Owner Name

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Entity Name: XPO Logistics Freight, Inc.
Entity Title: Not reported
Affiliation Address: 2211 Old Earhart Road, Suite 100
Affiliation City: Ann Arbor
Affiliation State: MI
Affiliation Country: United States
Affiliation Zip: 48105
Affiliation Phone: (734) 757-1657

Affiliation Type Desc: UST Tank Operator
Entity Name: XPO Logistics Freight, Inc.-UIV
Entity Title: Not reported
Affiliation Address: 20697 Prism Place
Affiliation City: Lake Forest
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 92630
Affiliation Phone: (734) 757-1657

Affiliation Type Desc: Document Preparer
Entity Name: Amanda Galbavi
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner
Entity Name: XPO Logistics Freight, Inc.
Entity Title: Not reported
Affiliation Address: 2211 Old Earhart road, Suite 100
Affiliation City: Ann Arbor
Affiliation State: MI
Affiliation Country: United States
Affiliation Zip: 48105
Affiliation Phone: (734) 757-1657

Affiliation Type Desc: Property Owner
Entity Name: XPO Logistics Freight, Inc.
Entity Title: Not reported
Affiliation Address: 2211 Old Earhart Road, Suite 100
Affiliation City: Ann Arbor
Affiliation State: MI
Affiliation Country: United States
Affiliation Zip: 48105
Affiliation Phone: (734) 757-1657

Site ID: 107675
CERS ID: 10449481
Site Name: XPO LOGISTICS FREIGHT, INC.-UIV
CERS Description: Chemical Storage Facilities

Violations:
Site ID: 107675
Site Name: XPO Logistics Freight, Inc.-UIV

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Violation Date:	03-03-2014
Citation:	HSC 6.7 25286(a) - California Health and Safety Code, Chapter 6.7, Section(s) 25286(a)
Violation Description:	Failure to prepare, maintain, and submit accurate CUPA UST Operating Permit Application for Facility information and/or Tank information.
Violation Notes:	Returned to compliance on 03/05/2014. A copy of the monitoring plan is not available on site. Please submit a copy of the monitoring plan to this Agency within 30 days of this inspection.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	08-25-2014
Citation:	HSC 6.95 25508(d) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(d)
Violation Description:	Failure to complete and/or electronically submit a business plan when storing/handling a hazardous material at or above reportable quantities.
Violation Notes:	Returned to compliance on 04/13/2015. Please be advised that in the inspection report dated 3/3/14, this Agency requested electronic submittal of hazardous business emergency plan. To date, this information has not been submitted. Emergency plan must be submitted within 30 days of this inspection.
Violation Division:	Orange County Environmental Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	08-25-2014
Citation:	HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description:	Failure to complete and electronically submit a site map with all required content.
Violation Notes:	Returned to compliance on 04/13/2015. Please be advised that in the inspection report dated 3/3/14, this Agency requested electronic submittal of site map. To date, the site map has not been submitted. The site map must be submitted within 30 days of this inspection.
Violation Division:	Orange County Environmental Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	04-30-2015
Citation:	23 CCR 16 2638 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2638
Violation Description:	Failure to test leak detection equipment as required every 12 months (VPH, sensor, LLD, ATG, etc.) and/or submit monitoring system certification to the CUPA within 30 days of completion of the test
Violation Notes:	Returned to compliance on 06/26/2015. Monitoring system certification activities were performed at the facility on 3/20/15. A copy of the monitoring system certification report must be submitted to this Agency within 30 days of testing. To date, this Agency has not received a copy of the report. A copy of this report must be submitted

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

	by 5/15/15.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	03-03-2015
Citation:	HSC 6.7 25284.2 - California Health and Safety Code, Chapter 6.7, Section(s) 25284.2
Violation Description:	Failure to test the spill bucket annually.
Violation Notes:	Returned to compliance on 04/30/2015. The last spill bucket test conducted at this facility was on 3/3/14. Spill bucket must be tested annually. Spill bucket test must be scheduled and conducted within 30 days of this inspection report. Notify this Agency 48 hours in advance of testing.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	11-05-2014
Citation:	23 CCR 16 2637(e) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2637(e)
Violation Description:	Failure to submit a copy of the secondary containment test results to the CUPA within 30 days after the test.
Violation Notes:	Returned to compliance on 06/26/2015. Results of secondary containment test (SB989) for activities conducted on 8/15/14, have not been received by this Agency within 30 days of testing. A copy of the secondary containment testing report form must be submitted to this Agency within 30 days of this inspection report.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	03-13-2017
Citation:	HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Description:	Failure to annually review and electronically certify that the business plan is complete and accurate on or before the annual due date.
Violation Notes:	Returned to compliance on 04/07/2017. Annual Hazardous Materials Business Plan (HMBP) have not been submitted. Please be advised that HMBP documents must be submitted annually by March 1st. HMBP documents must be submitted within 30 days of this inspection.
Violation Division:	Orange County Environmental Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	03-03-2015
Citation:	23 CCR 16 2638 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2638

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Violation Description:	Failure to test leak detection equipment as required every 12 months (VPH, sensor, LLD, ATG, etc.) and/or submit monitoring system certification to the CUPA within 30 days of completion of the test
Violation Notes:	Returned to compliance on 04/30/2015. The last monitoring system certification test conducted at this facility was on 3/3/14. Monitoring system certification must be conducted annually. Monitoring system certification must be scheduled and conducted within 30 days of this inspection report. Notify this Agency 48 hours in advance of testing.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	07-01-2005
Citation:	2014-0057-DWQ - Industrial General Permit
Violation Description:	SW - Late Report
Violation Notes:	Failure to submit 04-05 Annual Report by 7/1/05.
Violation Division:	Water Boards
Violation Program:	INDSTW
Violation Source:	SMARTS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	05-06-2016
Citation:	23 CCR 16 2638 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2638
Violation Description:	Failure to test leak detection equipment as required every 12 months (VPH, sensor, LLD, ATG, etc.) and/or submit monitoring system certification to the CUPA within 30 days of completion of the test
Violation Notes:	Returned to compliance on 05/11/2016. This agency has not received a copy of of monitoring system certification report for tests conducted on 3/2/16. Please be advised that test results must be submitted to this agency within 30 days of testing. A copy of test results must be submitted to this agency by 5/20/16. Failure to submit test results may result in further enforcement action.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	04-30-2015
Citation:	HSC 6.7 25286(a) - California Health and Safety Code, Chapter 6.7, Section(s) 25286(a)
Violation Description:	Failure to submit an complete and accurate application for a permit to operate an underground storage tank, or for renewal of the permit.
Violation Notes:	Returned to compliance on 07/11/2015. UST documents submitted to CERS on 10/9/13, 3/4/14, 9/25/14 and 3/10/15 have not been accepted due to inaccurate information. All requested corrections must be made within 30 days of this inspection report.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	107675

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	03-03-2014
Citation:	HSC 6.7 25286(a) - California Health and Safety Code, Chapter 6.7, Section(s) 25286(a)
Violation Description:	Failure to prepare, maintain, and submit accurate CUPA UST Operating Permit Application for Facility information and/or Tank information.
Violation Notes:	Returned to compliance on 03/05/2014. UST Facility and tank pages are not available on site. Please submit copies of these forms to this Agency within 30 days of this inspection.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	05-04-2017
Citation:	23 CCR 16 2715(i) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(i)
Violation Description:	Failure to have a properly qualified service technician test leak detection equipment as required every 12 months (vapor, pressure, hydrostatic (VPH) system, sensors, line-leak detectors (LLD), automatic tank gauge (ATG), etc.).
Violation Notes:	Returned to compliance on 05/26/2017. Please be advised that this agency has not received a copy of monitoring system certification report for tests conducted on 3/13/17. Test results must be submitted to this agency within 30 days of testing. A copy of monitoring system certification report must be submitted to this agency by 5/18/17 to avoid enforcement action.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	01-26-2012
Citation:	2014-0057-DWQ - Industrial General Permit
Violation Description:	SW - Denied Access
Violation Notes:	The on-site manager would not allow inspection or review of SWPPP without presence of safety staff. Safety staff is located in Fontana.
Violation Division:	Water Boards
Violation Program:	INDSTW
Violation Source:	SMARTS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	08-25-2014
Citation:	HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description:	Failure to complete and electronically submit hazardous material inventory information for all reportable hazardous materials on site at or above reportable quantities.
Violation Notes:	Returned to compliance on 04/13/2015. Please be advised that in the inspection report dated 3/3/14, this Agency requested electronic submittal of hazardous materials inventory forms for hazardous materials at or above the thresholds quantities of 55 gallons/500 lbs/200 cubic feet. To date, this information has not been submitted. The requested forms must be submitted within 30 days of this

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

	inspection.
Violation Division:	Orange County Environmental Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	03-03-2017
Citation:	23 CCR 16 2715(i) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(i)
Violation Description:	Failure to have a properly qualified service technician test leak detection equipment as required every 12 months (vapor, pressure, hydrostatic (VPH) system, sensors, line-leak detectors (LLD), automatic tank gauge (ATG), etc.).
Violation Notes:	Returned to compliance on 03/13/2017. Please be advised that this Agency has reviewed the file for this facility. The last monitoring system certification testing for this facility was conducted on 3/2/16. Monitoring system certification test must be conducted annually. To date, this Agency has not received a notification for scheduled testing or a copy of the monitoring system certification report documenting that the test was conducted. The monitoring system certification test must be scheduled and conducted within 30 days of this inspection report to avoid any enforcement action.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	03-02-2016
Citation:	HSC 6.75 25299.30-25299.34 - California Health and Safety Code, Chapter 6.75, Section(s) 25299.30-25299.34
Violation Description:	Failure to submit and maintain complete and current Certification of Financial Responsibility or other mechanism of financial assurance.
Violation Notes:	Returned to compliance on 03/13/2017. Certification of financial responsibility expired on 12/31/15 and has previous owner's information. A valid certification of financial responsibility with current owner information must be submitted within 30 days of this inspection.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	10-18-2017
Citation:	23 CCR 16 2637(e) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2637(e)
Violation Description:	Failure to submit a copy of the secondary containment test results to the CUPA within 30 days after the test.
Violation Notes:	Returned to compliance on 01/12/2018. This agency has not received a copy of secondary containment test results within 30 days of testing. Notification dated 7/17/17 sent to this agency indicated that secondary containment test was scheduled for 8/7/17. A copy of secondary containment testing report form must be submitted to this agency by 11/1/17 to avoid further enforcement action.
Violation Division:	Orange County Environmental Health

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Violation Program: UST
Violation Source: CERS

Evaluation:
Eval General Type: Other/Unknown
Eval Date: 03-08-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: I received email from company contact, Pamela Nixon, in response to inspection report with violation regarding failure to conduct annual monitoring system certification within 365 days of last test. A copy of monitoring system report for tests conducted on 2/21/17 was attached to the email. I was not on site since I had not received notification. I checked UST Notification Calendar and site history (7800 report) to determine if this agency received notification of testing. Notification was not received. I emailed Pamela back explaining that notification for testing was not received by this agency and that test must be conducted again so that it can be witnessed by this agency. I received notification to conduct test on 3/13/17.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-09-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Went to site to witness monitor certification as notified and conduct routine UST inspection. Testers were not on site. I called testing company, Tanknology, and was told that technician is running late. Monitor certification will be rescheduled for another day.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-14-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: I highlighted tank information page with areas that corrections are needed and emailed it to company's CERS contact. I also included comment that Facility Information was accepted even though this conpany did not obtain their own BOE#.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-30-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Documents submitted to CERS on 3/28/17 were reviewed. Emergency plan was not accepted since CUPA phone # was not listed.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Eval General Type:	Other/Unknown
Eval Date:	04-30-2015
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector Comments: Monitoring system certification activities were performed at the facility on 3/20/15. A copy of the monitoring system certification report must be submitted to this Agency within 30 days of testing. To date, this Agency has not received a copy of the report. A copy of this report must be submitted by 5/15/15. Violation I205, regarding not conducting monitoring system certification activities cited in the inspection report dated 3/3/15, has been corrected. However, the violation listed above if for not submitting a copy of the monitoring system certification report. In addition, this Agency has requested corrections of UST documents submitted to CERS on 10/9/13, 3/4/14, 9/25/14 and 3/10/15. All corrections must be made within 30 days if this inspection report. Please be advised that this facility also has an outstanding violation, cited on 11/5/14, regarding not submitting results of Secondary Containment Testing to this Agency within 30 days of [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS

Eval General Type:	Other/Unknown
Eval Date:	05-22-2018
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I received a copy of Monitoring System Certification, Line Leak Detector Test Form and Spill Bucket Testing Report Form for activities conducted on 3/2/18. All components passed test.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS

Eval General Type:	Other/Unknown
Eval Date:	06-02-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I received email from Pamela Nixon, company headquarter, in response to letter stating that facility will not be receiving UST permit. I emailed her another copy of the 5/26/17 F04 report stating (that was both emailed and mailed to ther) that violation was corrected and facility would be receiving permit.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS

Eval General Type:	Other/Unknown
Eval Date:	07-11-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 6/11/15, 6/12/15 and 6/30/15 were reviewed and declined with the following considerations: Diesel Exhaust Fluid: ?Yes? for ?Fire? under Federal Hazard Categories section should be deleted since this mixture is mostly water. Propane form must be revised as follows: - Chemical Name and Common Name are reversed. Liquefied Petroleum Gas is the Chemical Name. - Physical

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

State must be changed from ?Gas? to ?Liquid.? - Fire Code Hazard Classes must be changed from ?Flammable Gas? to ?Flammable Liquefied Gas.? - Storage Pressure must be changed from ?Ambient? to ?Above Ambient.? Windshield Washer Fluid: An MSDS/SDS was not submitted as requested. Therefore, the accuracy of the information cannot be verified. Please submit SDS for this material. Hazardous Material Inventory forms for the following material, reported in previous in submittals and/or observed during onsite inspection must be submitted: - Antifreeze - Motor Oil - [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 08-07-2014
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: SB 989 test notification
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 08-25-2014
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: The documents submitted to CERS on 3/4/14 have been reviewed and not accepted with the following considerations: ?Monitor Panel Manufacturer?, ?Monitor Panel Model?, ?Leak Sensor Manufacturer? and ?Leak Sensor Model? information is not listed in the ?Continuous Electronic Tank Monitoring? section of the Underground Storage ? Monitoring Plan (Tank Monitoring) ?Monitor Panel Manufacturer?, ?Monitor Panel Model?, ?Leak Sensor Manufacturer? and ?Leak Sensor Model? information is not listed in the ?Continuous Monitoring off Piping Secondary Containment? section of the Underground Storage ? Monitoring Plan (Pipe Monitoring) The site map does not show the locations of the piping, dispenser, sensors, emergency shut off or the monitoring panel. Underground Storage Tank - Response Plan, a copy of Owner Statements of Designated Underground Storage Tank (UST) Operator (DO) and Certification of Financial Responsibility must also be submitted.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 11-05-2014
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Inspector Comments: Please be advised that this Agency received a notification that secondary containment testing (SB989) was scheduled for 8/15/14. Test results must be submitted to this Agency within 30 days of testing. To date, a copy of the test results have not been received by this Agency. A copy of test results must be submitted to this Agency within 30 days of this inspection report report.
Eval Division: Orange County Environmental Health
Eval Program: UST

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	11-30-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 11/25/15 indicate change of ownership. New Owner is XPO Logistics Freight, Inc. Form was submitted to add new owner to program. Business Activities form was not accepted since previous owner's (Con-way Freight, Inc.) EPA ID# in listed for new business.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	11-30-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 11/25/15 were reviewed and not accepted with the following considerations: - EPA ID# CAL000078604 listed on Business Activities form is assigned to former business owner, Con-Way Freight, Inc. This business must obtain a new EPA ID#. - Windshield Washer Fluid. Based on a copy of SDS submitted on 7/29/15, the ?Hazardous Component? for this material is Methanol. Therefore, ?Methanol? with CAS# ?67-56-1? at ?1?% by weight should be listed in Mixture Component section. - Motor Oil form must be revised as follows: - Hazardous Material Type must be changed from ?Pure? to ?Mixture? since Mixture Components are provided. - Fire Code Hazard Classes must be changed from ?Combustible Liquid, Class II? to ?Combustible Liquid, Class III-B.? - CAS# 6474X-XX-X listed for ?Various Lubricating Base Oils? in Mixture Components section is not acceptable, especially that this material is the main component at 85%. All digits of the CAS# must be [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	07-11-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Change status to receive a UST permit, per Arghavan.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	07-15-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Updated monitoring plan documenting the replacement of Veeder Root panel and sump sensor was submitted to CERS on 6/30/15 and approved. Plan Check may be closed.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Eval General Type:	Other/Unknown
Eval Date:	08-28-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	On site to witness monitoring system certification test after completion of modification activities (replacing Veeder Root Panel from TLS 300-C to TLS 350). Only components monitored by the Veeder Root panel were tested. The sump sensor (205) was replaced with a 208 sensor since it was not functioning properly. The annular and sump sensors alarmed properly (visual and audible) and shut down respective turbine when submerged in water. An updated monitoring plan documenting the installation of the new Veeder Root panel and sump sensor must be submitted within 30 days of this inspection. Fail-safe, sensor out and emergency shut off were tested and passed.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS

Eval General Type:	Other/Unknown
Eval Date:	11-30-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 11/25/15 indicate change of ownership. New Owner is XPO Logistics Freight, Inc. Form was submitted to add new owner to program.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS

Eval General Type:	Other/Unknown
Eval Date:	11-30-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 11/25/15 were reviewed and not accepted with the following considerations: Board of Equalization Account Number (44036723) was assigned to former business owner, Con-Way Freight, Inc. Due to change in ownership, a new BOE# must obtained. Name of the former business is listed on the UST Certification of Financial Responsibility (CFR) form. Updated CFR form with new business name must be submitted. In addition, the former business?s ?Letter From Chief Financial Officer? has been submitted. An updated CFO letter should be submitted.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS

Eval General Type:	Other/Unknown
Eval Date:	12-09-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Change status to receive a permit, per Arghavan.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS

Eval General Type:	Other/Unknown
Eval Date:	05-16-2017

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Change permit status to Do Not Issue (03) per email from A. Rashidi-Fard dated 5/15/17
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	05-26-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I received a copy of Monitoring System Certification and Spill Bucket Testing Report Form for activities conducted on 3/13/17. All components passed test. Violation I205 regarding failure to submit monitoring system certification report to CUPA within 30 days of testing event, cited in the inspection report dated 5/4/17, has been corrected. Permit to operate the underground storage tank at this facility will be issued.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	05-30-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Change permit status to Issue Permit (01) per email from A. Rashidi-Fard dated 5/26/17.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	06-12-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 6/2/15 were reviewed and not accepted with the following considerations: ?Yes? must be listed for ?Spill Bucket? and ?Striker Plate/Bottom Protector? for ?Fill Component Installed? under ?Vent, Vapor Recovery (VR) And Riser/Fill Pipe Piping Construction? section on Tank Information page. The UDC is not monitored by the Veeder Root panel. Therefore, information listed for ?UDC Panel Manufacturer? and ?UDC Panel Model #? in ?Under Dispenser Containment (UDC) Monitoring? on the monitoring plan should be removed. ?Yes? should be listed for ?Equipment Maintenance and Calibration Records? under ?Recordkeeping? section of the monitoring plan since copies of tank system test results are maintained on site. ?Yes? should be listed for ?Designated Operator Training? under ?Training? section since copies of training records for employees trained by designated operator are maintained on site. ?Corrective Action? section on the Certification [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Eval Date: 08-25-2014
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Inspector Comments:

_____ Please be advised that in the inspection report dated 3/3/14, this Agency requested electronic submittal of hazardous materials inventory for hazardous materials at or above the thresholds quantities of 55 gallons/500 lbs/200 cubic feet, business emergency plan and site map. To date, the requested documents have not been submitted. The violations listed above must be complied with, in order to prevent enforcement action.

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 09-11-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Documents submitted to CERS on 7/29/15 were reviewed and declined with the following considerations: Diesel Exhaust Fluid: ?Yes? under ?Fire? under Federal Hazard Categories section must be deleted since this mixture is mostly water. Based on the provided SDS, Windshield Washer Fluid form must be revised as follows: - As requested previously, ?Windshield Washer Fluid? should also be listed as the Chemical Name. - The Hazardous Component for this material (listed on SDS) is ?Methanol? with CAS# 67-56-1 at 1% by weight. Motor Oil form must be revised as follows: - Hazardous Material Type must be changed from ?Pure? to ?Mixture? since Mixture Components are provided. - Fire Code Hazard Classes must be changed from ?Combustible Liquid, Class II? to ?Combustible Liquid, Class III.? - CAS# 6474X-XX-X listed for ?Various Lubricating Base Oils? in Mixture Components section is not acceptable, especially that this material is the main component at 85%. All digits [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 10-18-2017
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: This agency has not received a copy of secondary containment test results within 30 days of testing. Notification dated 7/17/17 sent to this agency indicated that secondary containment test was scheduled for 8/7/17. A copy of secondary containment testing report form must be submitted to this agency by 11/1/17.

Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 11-04-2014
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Submittal dated 9/25/14 was reviewed and not accepted with the

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

following considerations: ?Piping /Turbine Containment Sump? information in Product/Waste Piping Construction section and ?Fill Components Installed? in Vent, Vapor Recovery (VR) and Riser/Fill Pipe Piping Construction section must be completed. ?Secondary Containment System?, ?Monitor Panel Manufacturer?, ?Monitor Panel Model?, ?Leak Sensor Manufacturer? and ?Leak Sensor Model? information must be listed in the Tank Monitoring section of the UST ? Monitoring Plan. ?Monitor Panel Manufacturer?, ?Monitor Panel Model?, ?Leak Sensor Manufacturer? and ?Leak Sensor Model? information must be listed in the Piping Monitoring section of the UST ? Monitoring Plan. ?No? must listed for ?Detection of Leak into UDC Triggers Audible and Visual Alarms?, ? UDC Leak Alarm Triggers Automatic Pump Shutdown?, ?Failure/Disconnection of UDC Monitoring System Triggers Automatic Pump Shutdown? and ?Yes? must be listed [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 01-12-2018
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: I received a copy of Secondary Containment Testing Report Form (3 year SB989) for activities conducted on 8/7/17. All components passed test. Outstanding violation I296 regarding failure to submit test results within 30 days of testing, cited on 10/18/17, has been corrected.

Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 02-07-2001
Violations Found: No
Eval Type: Industrial Storm Water Compliance Evaluation
Eval Notes: On February 7, 2001 Regional Board Staff, Marc Brown conducted a compliance inspection at the above referenced facility. Brown met with Corky Wyrick, the facility contact. The facility is a merchandise transportation hub, which has a single storage area with multiple loading docks surrounding its perimeter. This loading docks lie in the interior of the facility's parking area. The parking area houses numerous semi-tractor trailers awaiting use. At the southeast corner of the facility, near the entrance is a diesel fueling station (UST). This area is equipped with spill kits. Further west, along the fenceline is the facility's propane storage area, where individual propane fuel tanks are stored for use with forklifts. Review of the SWPPP indicated the facility had weekly inspections and employee training (last conducted on 1/16/01). The SWPPP had a facility map, but no flow directions were illustrated. A site walk was conducted and revealed general housekeeping efforts were well maintained. However, further attention was needed around the facility's fenceline, which borders and drains directly into a storm channel. Debris and sediment build up was identified and noted during the walk through. Mr. Wyrick was instructed to include inspecting these areas as part of the routine inspection and maintenance program in the SWPPP.

Eval Division: Water Boards
Eval Program: INDSTW
Eval Source: SMARTS

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Eval General Type:	Other/Unknown
Eval Date:	02-24-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Facility Information and Hazardous Materials Inventory documents submitted to CERS on 2/22/16 were reviewed and accepted. Comment on Business Activities form stated that Con-way Freight, Inc has undergone a legal name change to XPO Logistics Freight, Inc. This is still the same company with the same Tax ID number. Emergency Plan was not updated/resubmitted. I emailed contact requesting that emergency plan be updated with CUPA phone# and resubmitted.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-01-2019
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Joe Pickford granted consent to conduct inspection. I walked through facility and inspected waste storage area in the dock and by shed in fuel dispenser area. I did not observe any hazardous waste in trash cans throughout the dock or the dumpster at the end of the loading dock. Hazardous waste drums in dock and fuel dispenser area are stored closed and labeled. Manifests were reviewed. Emergency contact information and procedures (spill cleanup) is posted throughout the facility.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-02-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to witness monitoring system certification testing activities and to conduct routine UST inspection. Annular and turbine sump sensors alarmed properly (visual and audible) and shut down turbine when submerged in water. Fill sump is not monitored since spill bucket is direct bury. UDC has Bravo box has float and chain mechanism. Water was poured in the UDC and the float and chain functioned properly. Fail-safe, sensor out and emergency shut off were tested and passed. Line leak detectors was tested and passed. Site has flappers for overfill prevention. Spill buckets were tested visually without any changes in water level. Valid permit, designated operator documentation, monthly inspection reports, response to alarms, response plan, employee training records, monitoring plan, tank page, certification of financial responsibility (expires 4/1/18), copies of monitoring system certification and secondary containment (last test conducted on 8/7/17) reports are [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-03-2014
Violations Found:	No

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct hazardous materials chemical inventory and business emergency plan inspection. I walked through the facility and inspected hazardous materials storage areas. Facility has hazardous materials (diesel, diesel exhaust fluid, new oils, propane tanks) that meet required disclosure quantities. Business Activities form and Owner/Operator Identification forms are available on CERS. Please be advised that the following documents must be also be electronically submitted within 30 days of this inspection: - Hazardous Material Chemical Inventory forms - Facility Site Map - Business Emergency Plan
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-03-2014
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. John Heilman granted consent to conduct inspection. Waste is generated when packages/boxes are broken during shipping. I walked through the facility, perimeter and inspected waste storage areas. Debris contaminated with diesel (1), toxic solid (1) and waste aerosols (1) containers are stored closed. The diesel debris drum has a federal label without waste characteristics. I discussed the requirement to include waste characteristics with Mr. Heilman. The toxic solid and aerosol containers were labeled during the inspection. Manifests were reviewed. Emergency number is posted throughout the faciltiy.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-06-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	A copy of updated/completed monitoring plan was obtained from the facility.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-13-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted Facility Information submitted to CERS on 3/7/17, even though this business owner had DTSC change owner information from former owner information (Conway Freight) to their rather obtaining a new EPA ID#. Included comment regarding EPA ID#s are owner and/or site specific and a new number should have been obtained.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Eval Date:	03-20-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspected facility with Kevin Jansen, who provided consent to perform an inspection and take pictures as necessary. Hazardous waste container(s) is/are marked: ?HAZARDOUS WASTE?, name and address of business, contents, physical state, hazardous property and initial accumulation date. Reviewed hazardous waste disposal receipts/manifests for prior three years. Verified a copy of the uniform hazardous waste manifest is mailed to the state within 30 days of hazardous waste disposal. Verified all universal wastes (fluorescent lamps, high intensity discharge lamps, batteries, etc.) are managed appropriately. copy to: pickford.joseph@con-way.com
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	04-26-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 4/18/16 were reviewed and not accepted since change in ownership was verified during onsite inspection conducted by this agency on 3/2/16. EPA ID# CAL000078604 listed on Business Activities form is assigned to former business owner, Con-Way Freight, Inc. and a new EPA ID# has not been obtained.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	05-11-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector Comments: I received a copy of Monitoring System Certification, Line Leak Detector Test Form and Spill Bucket Testing Report Form for activities conducted on 3/2/16. All components passed test. Violation I205 regarding failure to submit monitoring system certification report within 30 days of testing cited in the inspection report dated 5/6/16, has been corrected. Please be advised that this facility has an outstanding violation regarding failure to submit and maintain a current certification of financial responsibility (CFR), cited during routine inspection conducted on 3/2/16. A copy of current CFR was not available on site. In addition, the copy of CFR submitted to CERS on 4/18/16 was not accepted since a copy of the insurance policy was not included.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	05-26-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Sent email to Susan B. notifying her that violation has been corrected and UST permit may be issued.
Eval Division:	Orange County Environmental Health

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	06-26-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector Comments: I reviewed the following documents received on 6/19/15: - Copy of Secondary Containment Testing Report Form (3 year SB989) for activities conducted on 8/15/14. All components passed test. Violation I296, regarding secondary containment test results not being submitted within 30 days of testing cited in this agency's inspection report dated 11/5/14, has been corrected. - Copy of Monitoring System Certification, Line Leak Detector Test and Spill Bucket Testing Report Form for activities conducted on 3/18/15. All components passed test. Violation I205, regarding monitoring system certification test results not being submitted within 30 days of testing cited in this agency's inspection report dated 4/30/15, has been corrected.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-24-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Comments on Business Activities form submitted to CERS stated that Con-way Freight, Inc has undergone a legal name change to XPO Logistics Freight, Inc. This is still the same company with the same Tax ID number. The EPA ID number will be updated to reflect the name change, but it will not be a new number.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-02-2016
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to witness monitoring system certification testing activities and to conduct routine UST inspection. The annular and turbine sump sensors alarmed properly (visual and audible) and shut down turbine when submerged in water. Fill sump is not monitored since spill bucket is direct bury. UDC has Bravo box has float and chain mechanism. Water was poured in the UDC and the float and chain functioned properly. Fail-safe, sensor out and emergency shut off were tested and passed. Line leak detectors was tested and passed. Site has flappers for overfill prevention. Spill bucket is direct bury. It will be tested at a later date since technician did not have equipment to test it. Valid permit, designated operator documentation, monthly inspection reports, response plan, employee training records, monitoring plan, tank page, certification of financial responsibility (expired on 12/31/15 and has previous owner's information), copies of [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	UST

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-03-2015
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector Comments: Please be advised that this Agency has reviewed the file for this facility. The last monitoring system certification and spill bucket testing for this facility was conducted on 3/3/14. Monitoring system certification and spill bucket tests must be conducted annually. To date, this Agency has not received a notification for scheduled testing or a copy of monitoring system certification report that the test was conducted. Monitoring system certification and spill bucket test must be scheduled and conducted within 30 days of this inspection report. Notify this Agency 48 hours in advance of testing.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-03-2017
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Please be advised that this Agency has reviewed the file for this facility. The last monitoring system certification testing for this facility was conducted on 3/2/16. Monitoring system certification test must be conducted annually. To date, this Agency has not received a notification for scheduled testing or a copy of the monitoring system certification report documenting that the test was conducted. The monitoring system certification test must be scheduled and conducted within 30 days of this inspection report to avoid any enforcement action.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-04-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I reviewed UST submittal in CERS and did not approve it with the following considerations: The following sections in the Underground Storage - Tank Information are either not listed correctly or not included: - Overfill protection section under ?Tank Construction? is not complete. Site has ?Fill Tube Shut-Off valve? - The Piping System type is not correct and the Secondary Containment Type is not listed The following sections in the Underground Storage ? Monitoring Plan are either not listed correctly or not included: - The Monitor Panel Manufacturer, panel model, sensor manufacturer and model information are not listed under ?Tank Monitoring Section.? - The Monitor Panel Manufacturer, panel model, sensor manufacturer and model information are not listed under ?Piping Monitoring Section.? - Line Leak Detector information is not listed under ?Piping Monitoring Section.? - Periodic System Testing is not included - Recordkeeping information not included - Training [Truncated]
Eval Division:	Orange County Environmental Health

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-09-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Monitor cert notification for 3-10-17
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-13-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to witness monitoring system certification testing activities and to conduct routine UST inspection. Annular and turbine sump sensors alarmed properly (visual and audible) and shut down turbine when submerged in water. Fill sump is not monitored since spill bucket is direct bury. UDC has Bravo box has float and chain mechanism. Water was poured in the UDC and the float and chain functioned properly. Fail-safe and sensor out were tested and passed. Line leak detectors was tested and passed. Site has flappers for overfill prevention. Spill bucket was tested using instrument and passed two consecutive 15 minute tests. Valid permit, designated operator documentation, monthly inspection reports, response to alarms, response plan, employee training records, monitoring plan, tank page, certification of financial responsibility (coverage from 4/1/16 to 3/31/17 with XPO Logistics listed on insurance policy), copies of monitoring system and [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-14-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed documents submitted to CERS on 3/7/17. Accepted Facility Information page after checking BOE website and saw that the profile has been updated with current owner information. Tank Infomation was not accepted and the following need to be addressed: - Vent/Vapor Recovery (VR) and Riser/Fill Piping Construction section must be completed. - ?Yes? must be checked for ?Isolation? under Corrosion Protection section.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-15-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Received email from company headquarters contact stating that new BOE# was not obtained since they did not have to obtain a new Federal Tax ID#. I emailed her back stating that I was not aware the Federal Tax

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ID# makes a difference in not having to obtaining State BOE# and that it appears that two corporations merged or one took over the other business or a parent company took over a subsidiary and that is considered ownership change. I notified her that BOE# matter will not be pursued since my comments are in CERS.

Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-15-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed and accepted revised tank information page submitted to CERS on 3/15/17.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-20-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspected UST facility with Kevin Jansen. Double walled tanks with pressurized piping and leak detector. Sump sensor appeared to be at the low point and the Bravo Box float was dry. Site has flappers for overfill prevention. Valid permit, designated operator documentation, monthly inspection reports, response plan, employee training records, certification of financial responsibility, copies of monitoring system certification and secondary containment reports are available for review. Copies of electronically submitted monitoring plan and tank page were not available on site. Results of secondary containment test (SB989) for activities conducted on 8/15/14, still have not been received by this agency. copy to: pickford.joseph@con-way.com
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 04-13-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Documents submitted to CERS on 3/10/15 (three submitals) were reviewed and declined with the following considerations: ?Days on Site? for all reported material should be changed from ?352? to ?365? days unless material is taken off site for 13 days. Heavy Vacuum Gas Oil: Federal Hazard Categories is not listed and must added. Windshield Washer Fluid form must be revised as follows: - Chemical Name (Windshield Washer Fluid) should be listed. - This material is reported as ?pure? but a CAS# is not listed. If it has CAS# then is should be listed. If it is a ?mixture?, then the solution?s ?Hazardous Component Name, CAS# and % by Weight? must be listed in ?Mixture Component? section. - Fire Code Hazard Classes must be listed Transmission Fluid is must be removed since the volume stored on site is below reportable quantity of 55 gallons. Diesel Exhaust Fluid form must be revised as follows: - Chemical Name (Diesel Exhaust Fluid) should be listed - This [Truncated]

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	04-30-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 4/15/15 were reviewed and not accepted with the following considerations: Diesel Exhaust Fluid form must be revised as follows: - Fire Code Hazard Classes must be changed from ?Combustible Liquid, Class II? to ?Toxic.? - ?Yes? should be deleted for Federal Hazard Categories since the mixture is mostly water. Windshield Washer Fluid form must be revised as follows: - ?Windshield Washer Fluid? should be listed as the Chemical Name. - This material is reported as ?pure? and CAS# for antifreeze is listed. Generally this material is a ?mixture? and does not have a CAS#. If it is a ?pure? material, then the correct CAS# should be listed. If it is a mixture, then ?Hazardous Component Name, CAS# and % by Weight? for at least one component must be listed in ?Mixture Component? section. - Fire Code Hazard Classes for this type material is usually ?Toxic?, not ?Combustible Liquid, Class II? as reported. MSDS should be reviewed and correct [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	05-06-2016
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector Comments: This agency has not received a copy of monitoring system certification report for tests conducted on 3/2/16. Please be advised that test results must be submitted to this agency within 30 days of testing. A copy of test results must be submitted to this agency by 5/20/16.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	05-22-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Change UST status to not get a permit, per Arghavan.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	06-12-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 6/2/15 were reviewed and declined with the following considerations: Diesel Exhaust Fluid form must be revised as follows: -Chemical Name and Common Name are reversed. Common Name is Diesel Exhaust Fluid. - CAS# listed in Chemical

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Identification & Physical Properties section must be removed since this a mixture. - Fire Code Hazard Classes must be changed from ?Combustible Liquid, Class II? to ?Toxic.? - ?Yes? should be deleted for Federal Hazard Categories since this mixture is mostly water. - DOT Hazard Class is not correct since the mixture is mostly water. Two forms have been submitted for Ethylene Glycol/Windshield Washer Fluid. Only one form is required for each material. One must be deleted. Windshield Washer Fluid form must be revised as follows: - Please provide a SDS for this material to verify constituents. - The Common Name must be changed to ?Windshield Washer Fluid? and if the mixture contains ethylene glycol, [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 07-11-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Inspector Comments: Documents submitted to CERS on 6/30/15 were reviewed and accepted. Violation I582 regarding not submitting accurate UST documents electronically cited in this agency's inspection report dated 4/30/15, has been corrected. UST Permit to Operate will be issued for this facility.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 08-21-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Received a copy of partial monitoring system certification report documenting installation of a mechanical drop tube overfill prevention valve on 8/8/17.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 09-11-2014
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: I received a copy of Monitoring System Certification report for test conducted on 8/28/14 after completion of modification activities, replacing Veeder Root panel and sump sensor. All components monitored by the panel passed test. As stated in the inspection report dated 8/28/14, an updated monitoring plan documenting the installation of the Veeder Root panel and sump sensor must be submitted by 9/25/14.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 11-30-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Eval Notes:	Documents submitted to CERS on 11/25/15 indicate change of ownership. New Owner is XPO Logistics Freight, Inc. Form was submitted to add new owner to program.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-28-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and purged file.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-03-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Spill Bucket testing notification
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-03-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Submittal status of Facility Information submitted to CERS on 2/22/16 was changed from "Accepted" to "Not Accepted" since information that by submitter that there was a change in DBA is not correct. Change in ownership was verified during onsite inspection conducted on 3/2/16. EPA ID# CAL000078604 listed on Business Activities form is assigned to former business owner, Con-Way Freight, Inc. This business must obtain a new EPA ID#.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-05-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Went to site on follow up inspection to correct outstanding violations, TR02, regarding UST Facility page and tank page not being available on site and TR07, regarding monitoring plan not being available on site, during routine inspection conducted on 3/3/14. All forms are available on site. Violations TR02 and TR07 have been corrected.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-11-2015
Violations Found:	No

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Eval Type:	Other, not routine, done by local agency
Eval Notes:	Monitoring Certification notification
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-13-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Joseph Pickford granted consent to conduct inspection. Waste is generated when packages/boxes are broken during shipping. EPA ID# CAL000078604, assigned to previous business, Conway Freight, is being used to haul off hazardous waste rather than obtaining a new EPA ID# after this company took over this business. Owner information has been changed/updated with the state (DTSC). Please be advised EPA ID#s are owner and/or site specific and a new number should have been obtained. I walked through facility and inspected waste storage area in the dock. I did not observe any hazardous waste in trash cans throughout the dock or the dumpster at the end of the dock. There is no hazardous waste stored on site currently. Manifests were reviewed. Emergency contact information and procedures (spill cleanup) is posted throughout the facility.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-13-2017
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct hazardous materials chemical inventory and business emergency plan inspection. Joseph Pickford granted consent to conduct inspection. I walked through the facility and inspected hazardous material storage areas. There has been no changes in types and/or volumes of the hazardous material stored on site since last inspection or previous reporting period, except for facility stores only one drum of Windshield Washer Fluid. Propane tank is in a locked enclosure. Propane cylinders are on forklifts, in cage and/or on rack. All 55 gallons storing material are in a shed next to fuel island. Safety meeting that include hazardous materials management are held annually. Training records are available for review on site. Emergency contact information and procedures (spill cleanup) is posted throughout the facility. Annual Hazardous Materials Business Plan (HMBP) have not been submitted. Please be advised that HMBP documents must be submitted [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-14-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed documents submitted to CERS on 3/7/17. Submittal was not accepted since ?Yes? was not checked for ?Isolation? under Corrosion

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Protection section on Tank Information page. Submittal included the following documents: - This business is using BOE# assigned to previous owner (Conway Freight) with profile updated with their information. - Certification of Financial Responsibility with coverage from 4/1/16 to 3/31/17 with XPO Logistics listed on insurance policy. Violation - Updated DO statement.

Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-23-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: report writing
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-27-2014
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: I received a copy of Monitoring System Certification, Leak Detector Testing and Spill Bucket Testing Report Form for activities conducted on 3/3/14. All components passed.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 04-07-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed and reviewed revised documents submitted to CERS on 3/30/17. Violation I463 regarding failure to annually review and electronically certify HMBP is complete, accurate and up-to-date, cited during inspection conducted on 3/13/17, has been corrected.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 04-13-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Documents are identical to 9/25/14 submittal that was not accepted. UST - Tank Information Page: - ?Secondary Containment? and ?Piping /Turbine Containment Sump? information in Product/Waste Piping Construction section is not complete. -Fill Components Installed? in Vent, Vapor Recovery (VR) and Riser/Fill Pipe Piping Construction section must be completed. UST ? Monitoring Plan: -?Secondary Containment System?, ?Monitor Panel Manufacturer?, ?Monitor Panel Model?, ?Leak Sensor Manufacturer? and ?Leak Sensor Model? information must be listed in ?Tank Monitoring is Performed Using the Following Method(s)? section. -?Piping Secondary Containment?, ?Panel Manufacturer?, ?Panel Model #?, ?Leak Sensor Manufacturer? and ?Leak

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

	Sensor Model? information must be listed in ?Piping Monitoring is Performed Using the Following Method(s) section. At a minimum, ?Yes? must be listed under ?UDC Monitoring Stops Flow of Product at Dispenser? in the Under Dispenser Containment [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	04-26-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 4/18/16 were reviewed and not accepted with the following considerations: - Change in ownership was verified during onsite inspection conducted by this agency on 3/2/16. Board of Equalization Account Number (44036723) was assigned to former business owner, Con-Way Freight, Inc. Due to change in ownership, a new BOE# must obtained. - A copy of certification of financial responsibility with coverage period from 4/1/16 to 3/31/16 was submitted but a copy of the tank?s insurance policy was not submitted.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	05-04-2017
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Please be advised that this agency has not received a copy of monitoring system certification report for tests conducted on 3/13/17. Test results must be submitted to this agency within 30 days of testing. A copy of monitoring system certification report must be submitted to this agency by 5/18/17.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-26-2012
Violations Found:	Yes
Eval Type:	Industrial Storm Water Compliance Evaluation
Eval Notes:	Weather: sunny and cool. On entry, explained to front office staff that I was there to conduct a storm water inspection. Staff person went to back office, returned, and instructed me to go out back. I asked to see the SWPPP. Staff appeared confused and brought me to the manager, John Heilman, who then told me that I could not go out back unless their safety staff, Don Anderson, was present. He explained that Mr. Anderson was "domiciled" in Fontana and I would need to make an appointment. Mr. Heilman stated that this was their policy and acknowledged that he was responsible for implementing the SWPPP. He declined to allow me to review the SWPPP unless Mr. Anderson was present and again explained that this was their policy.
Eval Division:	Water Boards
Eval Program:	INDSTW
Eval Source:	SMARTS
Eval General Type:	Other/Unknown

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Eval Date:	02-16-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Monitor cert notification
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-26-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Monitor cert notification
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-02-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct routine hazardous waste inspection. Kevin Jansen granted consent to conduct inspection. Due to change in ownership (verified during inspection), a new EPA ID# must be obtained for this facility. Waste is generated when packages/boxes are broken during shipping. I walked through the facility, perimeter and inspected waste storage areas. Waste paint drum is stored closed and labeled. Manifests were reviewed. Emergency number is posted throughout the facility.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-02-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	I walked through facility and inspected waste storage area in the dock and by shed in fuel dispenser area. I did not observe any hazardous waste in trash cans throughout the dock or the dumpster at the end of the dock. Hazardous waste drums in dock and fuel dispenser area are stored closed and labeled. Manifests were reviewed. Emergency contact information and procedures (spill cleanup) is posted throughout the facility.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-03-2014
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	On site to witness monitoring system certification testing activities and to conduct routine UST inspection. The sump sensor alarmed properly (visual and audible) and shut down turbine when submerged in water. The annular sensor alarmed properly (visual and audible) and shut down turbine when submerged in water UDC has Bravo box with float

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

and chain mechanism. Water was poured in the UDC and the float and chain functioned properly. Fail-safe, sensor out and emergency shut off were tested and passed. Line leak detectors was not witnessed by this Agency since the test port could not be removed. The technician was going to continue to try to remove the test port to test the line leak detector. Site has flappers for overfill prevention. Spill bucket is direct bury and was tested with an Incon. The spill bucket passed two consecutive 15 minute tests. Valid permit, designated operator documentation, monthly inspection reports, response plan, employee [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-04-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Monitor cert notification
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Enforcement Action:
Site ID: 107675
Site Name: XPO Logistics Freight, Inc.-UIV
Site Address: 20697 PRISM PL
Site City: LAKE FOREST
Site Zip: 92630
Enf Action Date: 07-15-2005
Enf Action Type: Industrial Storm Water Enforcement
Enf Action Description: Industrial Storm Water Enforcement
Enf Action Notes: Failure to submit 04-05 Annual Report by 7/1/05.
Enf Action Division: Water Boards
Enf Action Program: INDSTW
Enf Action Source: SMARTS

Site ID: 107675
Site Name: XPO Logistics Freight, Inc.-UIV
Site Address: 20697 PRISM PL
Site City: LAKE FOREST
Site Zip: 92630
Enf Action Date: 08-10-2005
Enf Action Type: Industrial Storm Water Enforcement
Enf Action Description: Industrial Storm Water Enforcement
Enf Action Notes: A clerical error at the Regional Board office resulted in an incorrect Notice of Non-Compliance being issued.
Enf Action Division: Water Boards
Enf Action Program: INDSTW
Enf Action Source: SMARTS

Coordinates:
Site ID: 107675
Facility Name: XPO Logistics Freight, Inc.-UIV
Env Int Type Code: HWG
Program ID: 10449481

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 33.661290
Longitude: -117.675870

Affiliation:
Affiliation Type Desc: Environmental Contact
Entity Name: JEFF SEXTEN
Entity Title: Not reported
Affiliation Address: 2211 Old Earhart Road
Affiliation City: Ann Arbor
Affiliation State: MI
Affiliation Country: Not reported
Affiliation Zip: 48105
Affiliation Phone: Not reported

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 2211 Old Earhart Road, Suite 100
Affiliation City: Ann Arbor
Affiliation State: MI
Affiliation Country: Not reported
Affiliation Zip: 48105
Affiliation Phone: Not reported

Affiliation Type Desc: Operator
Entity Name: XPO Logistics Freight, Inc.-UIV
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (949) 581-9030

Affiliation Type Desc: UST Tank Owner
Entity Name: XPO Logistics Freight, Inc.
Entity Title: Not reported
Affiliation Address: 2211 Old Earhart Road, Suite 100
Affiliation City: Ann Arbor
Affiliation State: MI
Affiliation Country: United States
Affiliation Zip: 48105
Affiliation Phone: (734) 757-1657

Affiliation Type Desc: CUPA District
Entity Name: Orange County Env Health
Entity Title: Not reported
Affiliation Address: 1241 East Dyer RoadSuite 120
Affiliation City: Santa Ana
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92705-5611
Affiliation Phone: (714) 433-6000

Affiliation Type Desc: Identification Signer

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Entity Name:	Jeff Sexten
Entity Title:	Manager of Environmental Compliance
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Parent Corporation
Entity Name:	XPO Logistics Inc.
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	UST Permit Applicant
Entity Name:	Amanda Galbavi
Entity Title:	Environmental Compliance Analyst
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(734) 757-1234
Affiliation Type Desc:	Owner/Operator
Entity Name:	XPO Logistics Freight Inc
Entity Title:	Operator
Affiliation Address:	2211 Old Earhart RdSTE 100
Affiliation City:	Ann Arbor
Affiliation State:	MI
Affiliation Country:	Not reported
Affiliation Zip:	48105
Affiliation Phone:	Not reported
Affiliation Type Desc:	UST Property Owner Name
Entity Name:	XPO Logistics Freight, Inc.
Entity Title:	Not reported
Affiliation Address:	2211 Old Earhart Road, Suite 100
Affiliation City:	Ann Arbor
Affiliation State:	MI
Affiliation Country:	United States
Affiliation Zip:	48105
Affiliation Phone:	(734) 757-1657
Affiliation Type Desc:	UST Tank Operator
Entity Name:	XPO Logistics Freight, Inc.-UIV
Entity Title:	Not reported
Affiliation Address:	20697 Prism Place
Affiliation City:	Lake Forest
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92630

XPO LOGISTICS FREIGHT, INC.-UIV (Continued) **S113051905**

Affiliation Phone:	(734) 757-1657
Affiliation Type Desc:	Document Preparer
Entity Name:	Amanda Galbavi
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	XPO Logistics Freight, Inc.
Entity Title:	Not reported
Affiliation Address:	2211 Old Earhart road, Suite 100
Affiliation City:	Ann Arbor
Affiliation State:	MI
Affiliation Country:	United States
Affiliation Zip:	48105
Affiliation Phone:	(734) 757-1657
Affiliation Type Desc:	Property Owner
Entity Name:	XPO Logistics Freight, Inc.
Entity Title:	Not reported
Affiliation Address:	2211 Old Earhart Road, Suite 100
Affiliation City:	Ann Arbor
Affiliation State:	MI
Affiliation Country:	United States
Affiliation Zip:	48105
Affiliation Phone:	(734) 757-1657

B5 **AFAB PRECISION MACHINE** **CERS HAZ WASTE** **S118229749**
East **20742 LINEAR LN** **HAZNET** **N/A**
< 1/8 **LAKE FOREST, CA 92630** **CERS**
0.068 mi.
359 ft. **Site 1 of 2 in cluster B**

Relative:
Higher

Actual:
647 ft.

CERS HAZ WASTE:

Site ID:	410611
CERS ID:	10543018
CERS Description:	Hazardous Waste Generator

Violations:

Site ID:	410611
Site Name:	AFAB PRECISION MACHINE
Violation Date:	01-23-2018
Citation:	HSC 6.5 25123.3(c)25123.3(h)(1)(C) - California Health and Safety Code, Chapter 6.5 , Section(s) 25123.3(c)25123.3(h)(1)(C)
Violation Description:	Failure to send hazardous waste offsite for treatment, storage, or disposal of acute/extremely hazardous waste after the first 1-kilogram threshold amount was accumulated within a 90 day period.
Violation Notes:	Returned to compliance on 04/02/2018.
Violation Division:	Orange County Environmental Health
Violation Program:	HW
Violation Source:	CERS

AFAB PRECISION MACHINE (Continued) **S118229749**

Site ID: 410611
Site Name: AFAB PRECISION MACHINE
Violation Date: 01-23-2018
Citation: HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Description: Failure to annually review and electronically certify that the business plan is complete and accurate on or before the annual due date.
Violation Notes: Returned to compliance on 01/23/2018. Inventory forms were updated and new material were added to inventory in CERS during inspection. Annual certification documents were submitted electronically during inspection. This violation has been corrected.
Violation Division: Orange County Environmental Health
Violation Program: HMRRP
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-13-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to conduct hazardous materials chemical inventory and business emergency plan inspection. Chad Jackson granted consent to conduct inspection. I walked through the facility and inspected hazardous material storage area. There has been no changes in types of hazardous material, new and waste machine coolant, stored on site. However, volumes of the hazardous material stored on site has changed since last inspection or previous reporting period. Discussed updating volume of material stored on site in the annual HMBEP certification in CERS. Facility currently stores the following material at reportable volumes on site: - 855 gallons of new machine coolant (includes coolant stored in machines) - 275 gallons of waste machine coolant Safety meeting that include hazardous materials management are held annually. Training records are available for review. Emergency contact information is posted in the shop. Evacuation site maps are posted throughout the [Truncated]
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 07-27-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Documents submitted to E-submit on 7/20/15 were reviewed and declined with the following considerations: Hazardous Materials Inventory form must be revised as follows: - Hazardous Material Type must be changed from ?Mixture? to ?Waste.? - Multiple CAS#s listed below ?Common Name? should be removed since this material is not ?pure.? - CAS# for the hazardous ?Component 5? is missing a digit. Please correct it to CAS# is ?26530-20-1.? - ?Toxic? should be listed as the ?Fire Code Hazard Class.? - ?Federal Hazard Categories? (Chronic Health) must be reported. - The reported volume of waste material (machine coolant) being hauled off site for disposal appears too high and does not correspond with manifests reviewed during onsite inspections conducted by this agency. Volume of waste machine coolant generated annually should be reviewed and if necessary, ?Annual Waste Amount? be

AFAB PRECISION MACHINE (Continued) **S118229749**

	adjusted. A Hazardous Materials Inventory form for new machine coolant, stored in drum(s) [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	07-31-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to E-submit on 7/31/15 were reviewed and accepted.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	11-18-2013
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct new hazardous materials chemical inventory and business emergency plan inspection. I walked through the facility and inspected hazardous materials storage area. The facility has hazardous materials that meet the required disclosure quantities. Facility is in the process of uploading all required documents electronically to E-submit.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	11-18-2013
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Larry Campbell granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans. Waste machine coolant (2) drums are stored closed and labeled. Manifests were reviewed. Last pick up was on 7/5/11. The accumulation time for the waste stored on site is 7/30/13 and storage time has not been exceeded. A emergency card was filled out to be posted during the inspection.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	11-20-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Went to site to conduct routine inspection. Business owner was in a meeting and manager was not available. Inspection will be conducted at a later date.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection

AFAB PRECISION MACHINE (Continued) **S118229749**

Eval Date:	01-23-2018
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	I walked though facility, perimeter and inspected hazardous material storage area. There has been changes in types and/or volumes of the hazardous material stored on site since last inspection or previous reporting period. In addition to new and waste machine coolant previously reported, business stores the following material at disclosure threshold: - 55 gallons of Arrowlube 503 (Way Lube Oil) - 110 gallons of Mobil DTE 24 (Hydraulic Oil) Safety meeting that include hazardous materials management are held annually. Training records are available for review. Emergency contact information is posted in the shop. Evacuation site maps are posted throughout the facility. I assisted business with updating inventory forms and adding new material in CERS during inspection. Annual certification documents were submitted electronically during inspection.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	04-02-2018
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Received copy of manifest showing 600 pounds of spent machine coolant was hauled off site by Clean Harbors on 3/19/18. Violation regarding failure to dispose of hazardous waste within permissible time, cited during routine inspection conducted on 1/23/18, has been corrected.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	05-18-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted annual certification documents submitted to E-submit on 5/17/16.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	11-17-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Went to site to conduct routine inspection. Owner was in a meeting and requested that inspection be conducted at a later date.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	11-23-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct routine hazardous waste

AFAB PRECISION MACHINE (Continued) **S118229749**

inspection. Larry Campbell granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans. Waste machine coolant (2) drums are stored closed and labeled. Manifests were reviewed. A new emergency card was provided to be filled out and posted.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 11-29-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed HMBP documents in preparation for onsite inspection.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-23-2018
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: I walked through the facility, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans throughout facility. Facility began recycling and reusing spent coolant in 10/2017, by adding DI water to waste coolant, aerating mixture using aquarium pump, skimming oil (disposed as hazardous waste) and reusing coolant. Waste machine coolant (4) drums are stored closed and labeled. Manifests were reviewed. Volume of waste increased to due to one time cleaning of all machines. Emergency contact information is posted in shop.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 01-24-2018
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed and accepted annual certification documents submitted on 1/23/18 with request to add location of fire extinguishers and adjacent street names to site map and resubmit.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 06-24-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown

AFAB PRECISION MACHINE (Continued) **S118229749**

Eval Date:	09-13-2013
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Went to site to conduct hazardous waste inspection. The owner was in a meeting. Inspection will be conducted at a later date.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	10-15-2013
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Called Larry Campbell, owner, to go to site for inspection. He said that he was leaving for an appointment and requested that inspection be conducted at a later date.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	11-15-2013
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Not reported
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS

Enforcement Action:

Site ID:	410611
Site Name:	AFAB PRECISION MACHINE
Site Address:	20742 LINEAR LN
Site City:	LAKE FOREST
Site Zip:	92630
Enf Action Date:	06-24-2015
Enf Action Type:	Notice of Violation (Unified Program)
Enf Action Description:	Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:	HMD/BEP.
Enf Action Division:	Orange County Environmental Health
Enf Action Program:	UNSPEC
Enf Action Source:	CERS

Coordinates:

Site ID:	410611
Facility Name:	AFAB PRECISION MACHINE
Env Int Type Code:	HMBP
Program ID:	10543018
Coord Name:	Not reported
Ref Point Type Desc:	Center of a facility or station.
Latitude:	33.660700
Longitude:	-117.673480

Affiliation:

Affiliation Type Desc:	Document Preparer
Entity Name:	R Larry Campbell

AFAB PRECISION MACHINE (Continued) **S118229749**

Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Operator
Entity Name:	R. Larry Campbell
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(949) 457-9790
Affiliation Type Desc:	Identification Signer
Entity Name:	R Larry Campbell
Entity Title:	President
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	AMERICAN DEBURRING INC
Entity Title:	Not reported
Affiliation Address:	20742 LINEAR LN
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92630
Affiliation Phone:	(949) 457-9790
Affiliation Type Desc:	Environmental Contact
Entity Name:	R Larry Campbell
Entity Title:	Not reported
Affiliation Address:	20742 Linear Lane
Affiliation City:	Lake Forest
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92630
Affiliation Phone:	Not reported
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	20742 LINEAR LN
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92630
Affiliation Phone:	Not reported

AFAB PRECISION MACHINE (Continued) **S118229749**

Affiliation Type Desc:	CUPA District
Entity Name:	Orange County Env Health
Entity Title:	Not reported
Affiliation Address:	1241 East Dyer RoadSuite 120
Affiliation City:	Santa Ana
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92705-5611
Affiliation Phone:	(714) 433-6000

Affiliation Type Desc:	Parent Corporation
Entity Name:	AFAB PRECISION MACHINE
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

HAZNET:

Site Name:	AFAB PRECISION MACHINING
Year:	2016
GEPAID:	CAC002797843
Contact:	HERB WENDORF
Telephone:	9499160778
Mailing Name:	Not reported
Mailing Address:	20742 LINEAR LN
Mailing City,St,Zip:	LAKE FOREST, CA 926307804
Gen County:	Placer
TSD EPA ID:	CAD044429835
TSD County:	Los Angeles
Tons:	0.8
CA Waste Code:	223-Unspecified oil-containing waste
Method:	H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County:	Placer

Site Name:	AFAB PRECISION MACHINING
Year:	2015
GEPAID:	CAC002797843
Contact:	HERB WENDORF
Telephone:	9499160778
Mailing Name:	Not reported
Mailing Address:	20742 LINEAR LN
Mailing City,St,Zip:	LAKE FOREST, CA 926307804
Gen County:	Placer
TSD EPA ID:	CAD044429835
TSD County:	Los Angeles
Tons:	1.725
CA Waste Code:	223-Unspecified oil-containing waste
Method:	H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County:	Placer

Site Name:	AFAB PRECISION MACHINING

AFAB PRECISION MACHINE (Continued) **S118229749**

Year:	2014
GEPAID:	CAC002797843
Contact:	HERB WENDORF
Telephone:	9499160778
Mailing Name:	Not reported
Mailing Address:	20742 LINEAR LN
Mailing City,St,Zip:	LAKE FOREST, CA 926307804
Gen County:	Placer
TSD EPA ID:	CAD044429835
TSD County:	Los Angeles
Tons:	1
CA Waste Code:	223-Unspecified oil-containing waste
Method:	H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County:	Placer

CERS TANKS:

Site ID:	410611
CERS ID:	10543018
Site Name:	AFAB PRECISION MACHINE
CERS Description:	Chemical Storage Facilities

Violations:

Site ID:	410611
Site Name:	AFAB PRECISION MACHINE
Violation Date:	01-23-2018
Citation:	HSC 6.5 25123.3(c)25123.3(h)(1)(C) - California Health and Safety Code, Chapter 6.5 , Section(s) 25123.3(c)25123.3(h)(1)(C)
Violation Description:	Failure to send hazardous waste offsite for treatment, storage, or disposal of acute/extremely hazardous waste after the first 1-kilogram threshold amount was accumulated within a 90 day period.
Violation Notes:	Returned to compliance on 04/02/2018.
Violation Division:	Orange County Environmental Health
Violation Program:	HW
Violation Source:	CERS

Site ID:	410611
Site Name:	AFAB PRECISION MACHINE
Violation Date:	01-23-2018
Citation:	HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Description:	Failure to annually review and electronically certify that the business plan is complete and accurate on or before the annual due date.
Violation Notes:	Returned to compliance on 01/23/2018. Inventory forms were updated and new material were added to inventory in CERS during inspection. Annual certification documents were submitted electronically during inspection. This violation has been corrected.
Violation Division:	Orange County Environmental Health
Violation Program:	HMRRP
Violation Source:	CERS

Evaluation:

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-13-2017
Violations Found:	No
Eval Type:	Routine done by local agency

AFAB PRECISION MACHINE (Continued) **S118229749**

Eval Notes:	On site to conduct hazardous materials chemical inventory and business emergency plan inspection. Chad Jackson granted consent to conduct inspection. I walked through the facility and inspected hazardous material storage area. There has been no changes in types of hazardous material, new and waste machine coolant, stored on site. However, volumes of the hazardous material stored on site has changed since last inspection or previous reporting period. Discussed updating volume of material stored on site in the annual HMBEP certification in CERS. Facility currently stores the following material at reportable volumes on site: - 855 gallons of new machine coolant (includes coolant stored in machines) - 275 gallons of waste machine coolant Safety meeting that include hazardous materials management are held annually. Training records are available for review. Emergency contact information is posted in the shop. Evacuation site maps are posted throughout the [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	07-27-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to E-submit on 7/20/15 were reviewed and declined with the following considerations: Hazardous Materials Inventory form must be revised as follows: - Hazardous Material Type must be changed from ?Mixture? to ?Waste.? - Multiple CAS#s listed below ?Common Name? should be removed since this material is not ?pure.? - CAS# for the hazardous ?Component 5? is missing a digit. Please correct it to CAS# is ?26530-20-1.? - ?Toxic? should be listed as the ?Fire Code Hazard Class.? - ?Federal Hazard Categories? (Chronic Health) must be reported. - The reported volume of waste material (machine coolant) being hauled off site for disposal appears too high and does not correspond with manifests reviewed during onsite inspections conducted by this agency. Volume of waste machine coolant generated annually should be reviewed and if necessary, ?Annual Waste Amount? be adjusted. A Hazardous Materials Inventory form for new machine coolant, stored in drum(s) [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	07-31-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to E-submit on 7/31/15 were reviewed and accepted.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	11-18-2013
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct new hazardous materials chemical inventory and business emergency plan inspection. I walked through the facility and

AFAB PRECISION MACHINE (Continued) **S118229749**

	inspected hazardous materials storage area. The facility has hazardous materials that meet the required disclosure quantities. Facility is in the process of uploading all required documents electronically to E-submit.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	11-18-2013
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Larry Campbell granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans. Waste machine coolant (2) drums are stored closed and labeled. Manifests were reviewed. Last pick up was on 7/5/11. The accumulation time for the waste stored on site is 7/30/13 and storage time has not been exceeded. A emergency card was filled out to be posted during the inspection.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	11-20-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Went to site to conduct routine inspection. Business owner was in a meeting and manager was not available. Inspection will be conducted at a later date.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-23-2018
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	I walked though facility, perimeter and inspected hazardous material storage area. There has been changes in types and/or volumes of the hazardous material stored on site since last inspection or previous reporting period. In addition to new and waste machine coolant previously reported, business stores the following material at disclosure threshold: - 55 gallons of Arrowlube 503 (Way Lube Oil) - 110 gallons of Mobil DTE 24 (Hydraulic Oil) Safety meeting that include hazardous materials management are held annually. Training records are available for review. Emergency contact information is posted in the shop. Evacuation site maps are posted throughout the facility. I assisted business with updating inventory forms and adding new material in CERS during inspection. Annual certification documents were submitted electronically during inspection.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown

AFAB PRECISION MACHINE (Continued) **S118229749**

Eval Date:	04-02-2018
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Received copy of manifest showing 600 pounds of spent machine coolant was hauled off site by Clean Harbors on 3/19/18. Violation regarding failure to dispose of hazardous waste within permissible time, cited during routine inspection conducted on 1/23/18, has been corrected.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	05-18-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted annual certification documents submitted to E-submit on 5/17/16.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	11-17-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Went to site to conduct routine inspection. Owner was in a meeting and requested that inspection be conducted at a later date.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	11-23-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct routine hazardous waste inspection. Larry Campbell granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans. Waste machine coolant (2) drums are stored closed and labeled. Manifests were reviewed. A new emergency card was provided to be filled out and posted.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	11-29-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed HMBP documents in preparation for onsite inspection.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-23-2018

AFAB PRECISION MACHINE (Continued) **S118229749**

Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	I walked through the facility, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans throughout facility. Facility began recycling and reusing spent coolant in 10/2017, by adding DI water to waste coolant, aerating mixture using aquarium pump, skimming oil (disposed as hazardous waste) and reusing coolant. Waste machine coolant (4) drums are stored closed and labeled. Manifests were reviewed. Volume of waste increased to due to one time cleaning of all machines. Emergency contact information is posted in shop.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-24-2018
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted annual certification documents submitted on 1/23/18 with request to add location of fire extinguishers and adjacent street names to site map and resubmit.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	06-24-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Not reported
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	09-13-2013
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Went to site to conduct hazardous waste inspection. The owner was in a meeting. Inspection will be conducted at a later date.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	10-15-2013
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Called Larry Campbell, owner, to go to site for inspection. He said that he was leaving for an appointment and requested that inspection be conducted at a later date.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown

AFAB PRECISION MACHINE (Continued) **S118229749**

Eval Date:	11-15-2013
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Not reported
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS

Enforcement Action:

Site ID:	410611
Site Name:	AFAB PRECISION MACHINE
Site Address:	20742 LINEAR LN
Site City:	LAKE FOREST
Site Zip:	92630
Enf Action Date:	06-24-2015
Enf Action Type:	Notice of Violation (Unified Program)
Enf Action Description:	Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:	HMD/BEP.
Enf Action Division:	Orange County Environmental Health
Enf Action Program:	UNSPEC
Enf Action Source:	CERS

Coordinates:

Site ID:	410611
Facility Name:	AFAB PRECISION MACHINE
Env Int Type Code:	HMBP
Program ID:	10543018
Coord Name:	Not reported
Ref Point Type Desc:	Center of a facility or station.
Latitude:	33.660700
Longitude:	-117.673480

Affiliation:

Affiliation Type Desc:	Document Preparer
Entity Name:	R Larry Campbell
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Operator
Entity Name:	R. Larry Campbell
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(949) 457-9790

Affiliation Type Desc:	Identification Signer
Entity Name:	R Larry Campbell
Entity Title:	President

AFAB PRECISION MACHINE (Continued) **S118229749**

Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	AMERICAN DEBURRING INC
Entity Title:	Not reported
Affiliation Address:	20742 LINEAR LN
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92630
Affiliation Phone:	(949) 457-9790
Affiliation Type Desc:	Environmental Contact
Entity Name:	R Larry Campbell
Entity Title:	Not reported
Affiliation Address:	20742 Linear Lane
Affiliation City:	Lake Forest
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92630
Affiliation Phone:	Not reported
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	20742 LINEAR LN
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92630
Affiliation Phone:	Not reported
Affiliation Type Desc:	CUPA District
Entity Name:	Orange County Env Health
Entity Title:	Not reported
Affiliation Address:	1241 East Dyer RoadSuite 120
Affiliation City:	Santa Ana
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92705-5611
Affiliation Phone:	(714) 433-6000
Affiliation Type Desc:	Parent Corporation
Entity Name:	AFAB PRECISION MACHINE
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

C6
ESE
< 1/8
0.096 mi.
507 ft.

SHMAZE INDUSTRIES INC
20792 CANADA RD
LAKE FOREST, CA 92630

Site 1 of 2 in cluster C

RCRA-SQG **1012210420**
CAR000204040

Relative:
Higher

Actual:
654 ft.

RCRA-SQG:

Date form received by agency:	12/09/2009
Facility name:	SHMAZE INDUSTRIES INC
Facility address:	20792 CANADA RD LAKE FOREST, CA 92630
EPA ID:	CAR000204040
Contact:	JON G GYPSYN
Contact address:	20792 CANADA RD LAKE FOREST, CA 92630
Contact country:	US
Contact telephone:	949-583-1448
Contact email:	JGYPSYN@GYANTGROUP.COM
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	MATTE BLACK LLC
Owner/operator address:	50729 HENDERSON, NV 89016
Owner/operator country:	US
Owner/operator telephone:	Not reported
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	04/01/2009
Owner/Op end date:	Not reported

Owner/operator name:	SHMAZE INDUSTRIES INC
Owner/operator address:	Not reported Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	02/01/2000
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No

SHMAZE INDUSTRIES INC (Continued) **1012210420**

Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

. Waste code: D001
. Waste name: IGNITABLE WASTE

Violation Status: No violations found

C7 **SHMAZE CUSTOM COATINGS** **CERS HAZ WASTE** **S113746989**
ESE **20792 CANADA RD** **EMI** **N/A**
< 1/8 **LAKE FOREST, CA 92630** **CERS**
0.096 mi.
507 ft. **Site 2 of 2 in cluster C**

Relative:
Higher

Actual:
654 ft.

CERS HAZ WASTE:

Site ID:	412279
CERS ID:	10547632
CERS Description:	Hazardous Waste Generator

Evaluation:

Eval General Type:	Other/Unknown
Eval Date:	01-03-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I emailed Steve at the facility to find out if I could conduct inspection on 1/8/14.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-15-2014
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Steve Greenwood granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans. Waste paint drums are stored closed and labeled. Manifests were reviewed. Emergency card is posted in the shop.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-04-2015
Violations Found:	No
Eval Type:	Routine done by local agency

SHMAZE CUSTOM COATINGS (Continued) **S113746989**

Eval Notes:	Inspector Comments: On site to conduct routine hazardous waste inspection. Mike Shamassian granted consent to conduct inspection. I walked through the facility and inspected waste storage area. I did not observe any hazardous waste in trash cans throughout the facility. Waste acetone/paint drums are stored closed and labeled. Manifests were reviewed. Emergency card is posted.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-04-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector Comments: On site for follow up inspection to discuss documents submitted electronically and the necessary corrections. I met with Mike Shamassian. We walked through the facility and verified that the only reportable material stored on site are new acetone and waste acetone/paint. Also discussed adding the locations of water shutoff, spill kit/containers, loading area and storm drain(s) to site map.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-10-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Checked E-submit for submission since facility contact has notified that she had updated and submitted acetone forms. She has not uploaded them to E-submit, only emailed them to me. I highlighted areas that need corrections and send email back that they need to be electronically submitted.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	04-04-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct hazardous materials chemical inventory and business emergency plan inspection. Mike Shamassian granted consent to conduct inspection. I walked through the facility and inspected hazardous material storage area. There has been no changes in types of the hazardous material stored on site since last inspection or previous reporting period but the volume of waste acetone has increased from 110 to 165 gallons. Inventory form will be updated in CERS. Annual hazardous materials management is provided for the employees and training records are available on site. Emergency card is posted on a bulletin board in the shop.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection

SHMAZE CUSTOM COATINGS (Continued) **S113746989**

Eval Date:	04-04-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Mike Shamassian granted consent to conduct inspection. I walked through the facility and inspected waste storage area. I did not observe any hazardous waste in trash cans throughout the facility. Waste acetone/paint (3) drums are stored closed and labeled. Manifests were reviewed. Emergency card is posted on a bulletin board in the shop.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	04-05-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed two sets of revised documents submitted to CERS on 4/4/17 and accepted the second one with comment that Fire Code Hazard Classes must be added to inventory forms in next submissions. Also sent an email to facility contact regarding consultant not adding Fire Code Hazardous Classes as requested.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	07-17-2013
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Received copies of waste disposal invoices from Pacific Resource Recovery Services for review and to abate the outstanding violation. Also, in a phone call yesterday with Mike, he indicated that they have a Business plan and the emergency numbers are posted. Violations W029 and W038 are abated. No HW violations remaining this date.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	11-15-2013
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Shmaze Industries FA0039574 Shmaze Industries 20792 Canada Rd. Lake Forest, 92630 Enter into HMDBP 5-10 Chemicals
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-15-2014
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct new hazardous materials chemical inventory and business emergency plan inspection. I walked through the facility and inspected hazardous materials storage area. Facility has hazardous materials (waste paint and new acetone) that meet required disclosure

SHMAZE CUSTOM COATINGS (Continued) **S113746989**

quantities. Facility is required and has been notified to electronically submit the following documents within 60 days of this inspection: - Business Activities form - Owner/Operator Identification form - Hazardous Material Chemical Inventory forms - Facility Site Map - Business Emergency Plan Documents must be electronically submitted by going to www.esubmit.ocgov.com and requesting a username and password. User guides and tutorials are located on the home page to help you get started. If you are having trouble, please call (714) 433-6000 and request to speak to the portal administrator.

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-09-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Received calls and emails from Lisa Babbit at the facility. She needed assistance getting to inventory forms in E-submit. She also said that she has corrected and submitted forms. I also discussed what needs to be added to the map.

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-10-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed annual certification documents submitted on 2/19/17. Hazardous materials inventory was not accepted since 18 reported material are under disclosure quantity. Also, Fire Code Hazard Classes were not listed for Acetone and Waste Acetone.

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-04-2018
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to conduct routine hazardous waste inspection. I walked through the facility and inspected waste storage area. I did not observe any hazardous waste in trash cans throughout the facility. Waste acetone/paint (4) drums are stored closed and labeled. Manifests were reviewed. Emergency card is posted on a bulletin board in the shop by the time card machine.

Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 10-01-2014
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Documents submitted on 4/20/14 have been reviewed and declined with the following considerations: One Hazardous Materials Inventory form

SHMAZE CUSTOM COATINGS (Continued) **S113746989**

reporting 40 gallons of ?Various Paints, Reducers, and Hardners (small quantities)? has been submitted. Please be advised that chemicals/materials cannot be combined and reported on one form. If there is 55 gallons or greater of any one of the material stored on site, then a Hazardous Materials Inventory form for that material must be submitted. The ?Hazardous Waste? Hazardous Materials Inventory form is missing ?Chemical Name?, ?Common Name?, ?Annual Waste Amount? and ?Hazardous Component? information such as %WT and the CAS# for at least one of the chemicals. The following chemicals are not reportable since the volume stored on site is not equal to or greater than 55 gallons and must be removed: - 255C259 (Thinner 259) - 25J13830 - 455S0503 (Matte Clear) - 82C1890 (High Gloss Clear) - 82C13634 (Matte UC Clear) - (Low [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-09-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Documents submitted on 2/27/16 was reviewed and declined with the following considerations: One Hazardous Materials Inventory form reporting 240 gallons of ?Various Paints, Reducers, and Hardners (small quantities)? has been submitted. Please be advised that chemicals/materials cannot be combined and reported on one form. If there is 55 gallons or greater of any one of the material stored on site, then a Hazardous Materials Inventory form for that material must be submitted. The ?Hazardous Waste? Hazardous Materials Inventory form is missing ?Chemical Name?, ?Common Name?, ?Annual Waste Amount? and ?Hazardous Component? information such as %WT and the CAS# for at least one of the chemicals. The following chemicals are not reportable since the volume stored on site is not equal to or greater than 55 gallons and must be removed: - 255C259 (Thinner 259) - 25J13830 (Charcoal Metallic Paint) - 455S0503 (Matte Clear) - 82C11890 (High Gloss Clear) - 82C13634 UV [Truncated]
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-11-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Went to site to conduct inspection. Owner and environmental contact were not on site.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 04-11-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Documents submitted to E-submit on 4/10/15 were reviewed and accepted.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP

SHMAZE CUSTOM COATINGS (Continued) **S113746989**

Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-03-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct routine hazardous waste inspection. Mike Shamassian granted consent to conduct inspection. I walked through the facility and inspected waste storage area. I did not observe any hazardous waste in trash cans throughout the facility. Waste acetone/paint (3) drums are stored closed and labeled. Manifests were reviewed. A new emergency card was provided to be filled out and posted.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	06-03-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	On site to discuss the HMBP documents that were declined. Owner was not aware that the submittal was declined since facility consultant had submitted it. I explained that what needed to be corrected. I assisted on correcting the document and resubmitting it.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	09-30-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Started reviewing documents in E-submit.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	12-11-2013
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Called facility to find out if I could conduct inspection today. Steve Greenwood, general manager, requested that the inspection be conducted at a later date due audits being conducted today.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	11-21-2013
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Added site to program.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS

SHMAZE CUSTOM COATINGS (Continued) **S113746989**

Eval General Type:	Other/Unknown
Eval Date:	11-25-2013
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Went to site to conduct routine hazardous waste inspection. Environmental contact was not on site. Inspection will be conducted at a later date.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Other/Unknown
Eval Date:	01-07-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I received voicemail from Steve G., stating the that environmental contact will still be on vacation this week and requested that the inspection be scheduled for the following week. I called Steve back and an appointment was scheduled for 1/15/14.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Other/Unknown
Eval Date:	12-20-2013
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Called general manager, Steve G., to find out if inspection could be conducted this date. Receptionist stated that he was in a meeting. I left a message for him to call back. He called back and requested that inspection be conducted between 1/6/14 and 1/15/14.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS

Coordinates:

Site ID:	412279
Facility Name:	SHMAZE CUSTOM COATINGS
Env Int Type Code:	HMBP
Program ID:	10547632
Coord Name:	Not reported
Ref Point Type Desc:	Center of a facility or station.
Latitude:	33.660120
Longitude:	-117.673480

Affiliation:

Affiliation Type Desc:	Environmental Contact
Entity Name:	Mike Shamassian
Entity Title:	Not reported
Affiliation Address:	20792 Canada Rd
Affiliation City:	Lake Forest
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92630
Affiliation Phone:	Not reported

SHMAZE CUSTOM COATINGS (Continued) **S113746989**

Affiliation Type Desc:	Operator
Entity Name:	Shmaze Custom Coatings
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(949) 583-1448

Affiliation Type Desc:	Parent Corporation
Entity Name:	Shmaze Custom Coatings
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Legal Owner
Entity Name:	SHMAZE INDUSTRIES INC
Entity Title:	Not reported
Affiliation Address:	20792 CANADA RD
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92630
Affiliation Phone:	(949) 583-1448

Affiliation Type Desc:	CUPA District
Entity Name:	Orange County Env Health
Entity Title:	Not reported
Affiliation Address:	1241 East Dyer RoadSuite 120
Affiliation City:	Santa Ana
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92705-5611
Affiliation Phone:	(714) 433-6000

Affiliation Type Desc:	Identification Signer
Entity Name:	Craig Rysavy
Entity Title:	General Manager
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Document Preparer
Entity Name:	D.S.R.K. Srinvias
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported

SHMAZE CUSTOM COATINGS (Continued) **S113746989**

Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	20792 CANADA RD
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92630
Affiliation Phone:	Not reported

EMI:

Year:	2010
County Code:	30
Air Basin:	SC
Facility ID:	122519
Air District Name:	SC
SIC Code:	3479
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2.9204959210617099
Reactive Organic Gases Tons/Yr:	2.88422
Carbon Monoxide Emissions Tons/Yr:	3.5100000000000001E-3
NOX - Oxides of Nitrogen Tons/Yr:	0.01306
SOX - Oxides of Sulphur Tons/Yr:	6.0000000000000002E-5
Particulate Matter Tons/Yr:	7.5000000000000002E-4
Part. Matter 10 Micrometers and Smllr Tons/Yr:	7.5000000000000002E-4

Year:	2011
County Code:	30
Air Basin:	SC
Facility ID:	122519
Air District Name:	SC
SIC Code:	3479
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	3.5630024121
Reactive Organic Gases Tons/Yr:	3.51851
Carbon Monoxide Emissions Tons/Yr:	0.00516
NOX - Oxides of Nitrogen Tons/Yr:	0.01917
SOX - Oxides of Sulphur Tons/Yr:	8e-005
Particulate Matter Tons/Yr:	0.0011
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0.0011

Year:	2012
County Code:	30
Air Basin:	SC
Facility ID:	122519
Air District Name:	SC
SIC Code:	9999
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported

SHMAZE CUSTOM COATINGS (Continued) **S113746989**

Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	3.2684756324
Reactive Organic Gases Tons/Yr:	3.22748
Carbon Monoxide Emissions Tons/Yr:	0.00543
NOX - Oxides of Nitrogen Tons/Yr:	0.02017
SOX - Oxides of Sulphur Tons/Yr:	9e-005
Particulate Matter Tons/Yr:	0.00116
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0.00116

Year:	2013
County Code:	30
Air Basin:	SC
Facility ID:	122519
Air District Name:	SC
SIC Code:	3479
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	3.8436391637
Reactive Organic Gases Tons/Yr:	3.77509
Carbon Monoxide Emissions Tons/Yr:	0.08225
NOX - Oxides of Nitrogen Tons/Yr:	0.3055
SOX - Oxides of Sulphur Tons/Yr:	0.00141
Particulate Matter Tons/Yr:	0.01762
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0.01762

Year:	2014
County Code:	30
Air Basin:	SC
Facility ID:	122519
Air District Name:	SC
SIC Code:	3089
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	3.3631896309
Reactive Organic Gases Tons/Yr:	3.3212
Carbon Monoxide Emissions Tons/Yr:	0.00524
NOX - Oxides of Nitrogen Tons/Yr:	0.0195
SOX - Oxides of Sulphur Tons/Yr:	9e-005
Particulate Matter Tons/Yr:	0.10245
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0.0983972

Year:	2015
County Code:	30
Air Basin:	SC
Facility ID:	122519
Air District Name:	SC
SIC Code:	3089
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	3.8673632123
Reactive Organic Gases Tons/Yr:	3.82013666
Carbon Monoxide Emissions Tons/Yr:	0.00595
NOX - Oxides of Nitrogen Tons/Yr:	0.0300505
SOX - Oxides of Sulphur Tons/Yr:	0.000102

SHMAZE CUSTOM COATINGS (Continued) **S113746989**

Particulate Matter Tons/Yr:	0.1393892
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0.133864632
Year:	2016
County Code:	30
Air Basin:	SC
Facility ID:	122519
Air District Name:	SC
SIC Code:	3089
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	3.4146468995
Reactive Organic Gases Tons/Yr:	3.371483
Carbon Monoxide Emissions Tons/Yr:	0.00742
NOX - Oxides of Nitrogen Tons/Yr:	0.02
SOX - Oxides of Sulphur Tons/Yr:	0.0001271
Particulate Matter Tons/Yr:	0.097479
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0.0936434

CERS TANKS:

Site ID:	412279
CERS ID:	110058370837
Site Name:	SHMAZE CUSTOM COATINGS
CERS Description:	US EPA Air Emission Inventory System (EIS)

Evaluation:

Eval General Type:	Other/Unknown
Eval Date:	01-03-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I emailed Steve at the facility to find out if I could conduct inspection on 1/8/14.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-15-2014
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Steve Greenwood granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans. Waste paint drums are stored closed and labeled. Manifests were reviewed. Emergency card is posted in the shop.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-04-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct routine hazardous waste inspection. Mike Shamassian granted consent to conduct inspection. I

SHMAZE CUSTOM COATINGS (Continued) **S113746989**

walked through the facility and inspected waste storage area. I did not observe any hazardous waste in trash cans throughout the facility. Waste acetone/paint drums are stored closed and labeled. Manifests were reviewed. Emergency card is posted.

Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-04-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Inspector Comments: On site for follow up inspection to discuss documents submitted electronically and the necessary corrections. I met with Mike Shamassian. We walked through the facility and verified that the only reportable material stored on site are new acetone and waste acetone/paint. Also discussed adding the locations of water shutoff, spill kit/containers, loading area and storm drain(s) to site map.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-10-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Checked E-submit for submission since facility contact has notified that she had updated and submitted acetone forms. She has not uploaded them to E-submit, only emailed them to me. I highlighted areas that need corrections and send email back that they need to be electronically submitted.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-04-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to conduct hazardous materials chemical inventory and business emergency plan inspection. Mike Shamassian granted consent to conduct inspection. I walked through the facility and inspected hazardous material storage area. There has been no changes in types of the hazardous material stored on site since last inspection or previous reporting period but the volume of waste acetone has increased from 110 to 165 gallons. Inventory form will be updated in CERS. Annual hazardous materials management is provided for the employees and training records are available on site. Emergency card is posted on a bulletin board in the shop.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-04-2017
Violations Found: No

SHMAZE CUSTOM COATINGS (Continued) **S113746989**

Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Mike Shamassian granted consent to conduct inspection. I walked through the facility and inspected waste storage area. I did not observe any hazardous waste in trash cans throughout the facility. Waste acetone/paint (3) drums are stored closed and labeled. Manifests were reviewed. Emergency card is posted on a bulletin board in the shop.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	04-05-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed two sets of revised documents submitted to CERS on 4/4/17 and accepted the second one with comment that Fire Code Hazard Classes must be added to inventory forms in next submissions. Also sent an email to facility contact regarding consultant not adding Fire Code Hazardous Classes as requested.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	07-17-2013
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Received copies of waste disposal invoices from Pacific Resource Recovery Services for review and to abate the outstanding violation. Also, in a phone call yesterday with Mike, he indicated that they have a Business plan and the emergency numbers are posted. Violations W029 and W038 are abated. No HW violations remaining this date.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	11-15-2013
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Shmaze Industries FA0039574 Shmaze Industries 20792 Canada Rd. Lake Forest, 92630 Enter into HMDBP 5-10 Chemicals
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-15-2014
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct new hazardous materials chemical inventory and business emergency plan inspection. I walked through the facility and inspected hazardous materials storage area. Facility has hazardous materials (waste paint and new acetone) that meet required disclosure quantities. Facility is required and has been notified to electronically submit the following documents within 60 days of this

SHMAZE CUSTOM COATINGS (Continued) **S113746989**

	inspection: - Business Activities form - Owner/Operator Identification form - Hazardous Material Chemical Inventory forms - Facility Site Map - Business Emergency Plan Documents must be electronically submitted by going to www.esubmit.ocgov.com and requesting a username and password. User guides and tutorials are located on the home page to help you get started. If you are having trouble, please call (714) 433-6000 and request to speak to the portal administrator.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-09-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Received calls and emails from Lisa Babbit at the facility. She needed assistance getting to inventory forms in E-submit. She also said that she has corrected and submitted forms. I also discussed what needs to be added to the map.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-10-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed annual certification documents submitted on 2/19/17. Hazardous materials inventory was not accepted since 18 reported material are under disclosure quantity. Also, Fire Code Hazard Classes were not listed for Acetone and Waste Acetone.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	04-04-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. I walked through the facility and inspected waste storage area. I did not observe any hazardous waste in trash cans throughout the facility. Waste acetone/paint (4) drums are stored closed and labeled. Manifests were reviewed. Emergency card is posted on a bulletin board in the shop by the time card machine.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	10-01-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted on 4/20/14 have been reviewed and declined with the following considerations: One Hazardous Materials Inventory form reporting 40 gallons of ?Various Paints, Reducers, and Hardners (small quantities)? has been submitted. Please be advised that

SHMAZE CUSTOM COATINGS (Continued) **S113746989**

chemicals/materials cannot be combined and reported on one form. If there is 55 gallons or greater of any one of the material stored on site, then a Hazardous Materials Inventory form for that material must be submitted. The ?Hazardous Waste? Hazardous Materials Inventory form is missing ?Chemical Name?, ?Common Name?, ?Annual Waste Amount? and ?Hazardous Component? information such as %WT and the CAS# for at least one of the chemicals. The following chemicals are not reportable since the volume stored on site is not equal to or greater than 55 gallons and must be removed: - 255C259 (Thinner 259) - 25J13830 - 455S0503 (Matte Clear) - 82C1890 (High Gloss Clear) - 82C13634 (Matte UC Clear) - (Low [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-09-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Documents submitted on 2/27/16 was reviewed and declined with the following considerations: One Hazardous Materials Inventory form reporting 240 gallons of ?Various Paints, Reducers, and Hardners (small quantities)? has been submitted. Please be advised that chemicals/materials cannot be combined and reported on one form. If there is 55 gallons or greater of any one of the material stored on site, then a Hazardous Materials Inventory form for that material must be submitted. The ?Hazardous Waste? Hazardous Materials Inventory form is missing ?Chemical Name?, ?Common Name?, ?Annual Waste Amount? and ?Hazardous Component? information such as %WT and the CAS# for at least one of the chemicals. The following chemicals are not reportable since the volume stored on site is not equal to or greater than 55 gallons and must be removed: - 255C259 (Thinner 259) - 25J13830 (Charcoal Metallic Paint) - 455S0503 (Matte Clear) - 82C11890 (High Gloss Clear) - 82C13634 UV [Truncated]
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-11-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Went to site to conduct inspection. Owner and environmental contact were not on site.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 04-11-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Documents submitted to E-submit on 4/10/15 were reviewed and accepted.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

SHMAZE CUSTOM COATINGS (Continued) **S113746989**

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-03-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct routine hazardous waste inspection. Mike Shamassian granted consent to conduct inspection. I walked through the facility and inspected waste storage area. I did not observe any hazardous waste in trash cans throughout the facility. Waste acetone/paint (3) drums are stored closed and labeled. Manifests were reviewed. A new emergency card was provided to be filled out and posted.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	06-03-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	On site to discuss the HMBP documents that were declined. Owner was not aware that the submittal was declined since facility consultant had submitted it. I explained that what needed to be corrected. I assisted on correcting the document and resubmitting it.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	09-30-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Started reviewing documents in E-submit.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	12-11-2013
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Called facility to find out if I could conduct inspection today. Steve Greenwood, general manager, requested that the inspection be conducted at a later date due audits being conducted today.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	11-21-2013
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Added site to program.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown

SHMAZE CUSTOM COATINGS (Continued) **S113746989**

Eval Date:	11-25-2013
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Went to site to conduct routine hazardous waste inspection. Environmental contact was not on site. Inspection will be conducted at a later date.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-07-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I received voicemail from Steve G., stating the that environmental contact will still be on vacation this week and requested that the inspection be scheduled for the following week. I called Steve back and an appointment was scheduled for 1/15/14.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	12-20-2013
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Called general manager, Steve G., to find out if inspection could be conducted this date. Receptionist stated that he was in a meeting. I left a message for him to call back. He called back and requested that inspection be conducted between 1/6/14 and 1/15/14.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS

Coordinates:

Site ID:	412279
Facility Name:	SHMAZE CUSTOM COATINGS
Env Int Type Code:	HMBP
Program ID:	10547632
Coord Name:	Not reported
Ref Point Type Desc:	Center of a facility or station.
Latitude:	33.660120
Longitude:	-117.673480

Affiliation:

Affiliation Type Desc:	Environmental Contact
Entity Name:	Mike Shamassian
Entity Title:	Not reported
Affiliation Address:	20792 Canada Rd
Affiliation City:	Lake Forest
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92630
Affiliation Phone:	Not reported
Affiliation Type Desc:	Operator

SHMAZE CUSTOM COATINGS (Continued) **S113746989**

Entity Name:	Shmaze Custom Coatings
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(949) 583-1448
Affiliation Type Desc:	Parent Corporation
Entity Name:	Shmaze Custom Coatings
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	SHMAZE INDUSTRIES INC
Entity Title:	Not reported
Affiliation Address:	20792 CANADA RD
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92630
Affiliation Phone:	(949) 583-1448
Affiliation Type Desc:	CUPA District
Entity Name:	Orange County Env Health
Entity Title:	Not reported
Affiliation Address:	1241 East Dyer RoadSuite 120
Affiliation City:	Santa Ana
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92705-5611
Affiliation Phone:	(714) 433-6000
Affiliation Type Desc:	Identification Signer
Entity Name:	Craig Rysavy
Entity Title:	General Manager
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Document Preparer
Entity Name:	D.S.R.K. Srinvias
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported

SHMAZE CUSTOM COATINGS (Continued) **S113746989**

Affiliation Phone:	Not reported
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	20792 CANADA RD
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92630
Affiliation Phone:	Not reported
Site ID:	412279
CERS ID:	10547632
Site Name:	SHMAZE CUSTOM COATINGS
CERS Description:	Chemical Storage Facilities

Evaluation:

Eval General Type:	Other/Unknown
Eval Date:	01-03-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I emailed Steve at the facility to find out if I could conduct inspection on 1/8/14.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-15-2014
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Steve Greenwood granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans. Waste paint drums are stored closed and labeled. Manifests were reviewed. Emergency card is posted in the shop.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-04-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct routine hazardous waste inspection. Mike Shamassian granted consent to conduct inspection. I walked through the facility and inspected waste storage area. I did not observe any hazardous waste in trash cans throughout the facility. Waste acetone/paint drums are stored closed and labeled. Manifests were reviewed. Emergency card is posted.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown

SHMAZE CUSTOM COATINGS (Continued) **S113746989**

Eval Date:	03-04-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector Comments: On site for follow up inspection to discuss documents submitted electronically and the necessary corrections. I met with Mike Shamassian. We walked through the facility and verified that the only reportable material stored on site are new acetone and waste acetone/paint. Also discussed adding the locations of water shutoff, spill kit/containers, loading area and storm drain(s) to site map.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-10-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Checked E-submit for submission since facility contact has notified that she had updated and submitted acetone forms. She has not uploaded them to E-submit, only emailed them to me. I highlighted areas that need corrections and send email back that they need to be electronically submitted.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	04-04-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct hazardous materials chemical inventory and business emergency plan inspection. Mike Shamassian granted consent to conduct inspection. I walked through the facility and inspected hazardous material storage area. There has been no changes in types of the hazardous material stored on site since last inspection or previous reporting period but the volume of waste acetone has increased from 110 to 165 gallons. Inventory form will be updated in CERS. Annual hazardous materials management is provided for the employees and training records are available on site. Emergency card is posted on a bulletin board in the shop.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	04-04-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Mike Shamassian granted consent to conduct inspection. I walked through the facility and inspected waste storage area. I did not observe any hazardous waste in trash cans throughout the facility. Waste acetone/paint (3) drums are stored closed and labeled. Manifests were reviewed. Emergency card is posted on a bulletin board in the shop.
Eval Division:	Orange County Environmental Health
Eval Program:	HW

SHMAZE CUSTOM COATINGS (Continued) **S113746989**

Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	04-05-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed two sets of revised documents submitted to CERS on 4/4/17 and accepted the second one with comment that Fire Code Hazard Classes must be added to inventory forms in next submissions. Also sent an email to facility contact regarding consultant not adding Fire Code Hazardous Classes as requested.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	07-17-2013
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Received copies of waste disposal invoices from Pacific Resource Recovery Services for review and to abate the outstanding violation. Also, in a phone call yesterday with Mike, he indicated that they have a Business plan and the emergency numbers are posted. Violations W029 and W038 are abated. No HW violations remaining this date.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	11-15-2013
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Shmaze Industries FA0039574 Shmaze Industries 20792 Canada Rd. Lake Forest, 92630 Enter into HMDBP 5-10 Chemicals
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-15-2014
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct new hazardous materials chemical inventory and business emergency plan inspection. I walked through the facility and inspected hazardous materials storage area. Facility has hazardous materials (waste paint and new acetone) that meet required disclosure quantities. Facility is required and has been notified to electronically submit the following documents within 60 days of this inspection: - Business Activities form - Owner/Operator Identification form - Hazardous Material Chemical Inventory forms - Facility Site Map - Business Emergency Plan Documents must be electronically submitted by going to www.esubmit.ocgov.com and requesting a username and password. User guides and tutorials are located on the home page to help you get started. If you are having trouble, please call (714) 433-6000 and request to speak to the portal administrator.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP

SHMAZE CUSTOM COATINGS (Continued) **S113746989**

Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-09-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Received calls and emails from Lisa Babbit at the facility. She needed assistance getting to inventory forms in E-submit. She also said that she has corrected and submitted forms. I also discussed what needs to be added to the map.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-10-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed annual certification documents submitted on 2/19/17. Hazardous materials inventory was not accepted since 18 reported material are under disclosure quantity. Also, Fire Code Hazard Classes were not listed for Acetone and Waste Acetone.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	04-04-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. I walked through the facility and inspected waste storage area. I did not observe any hazardous waste in trash cans throughout the facility. Waste acetone/paint (4) drums are stored closed and labeled. Manifests were reviewed. Emergency card is posted on a bulletin board in the shop by the time card machine.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	10-01-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted on 4/20/14 have been reviewed and declined with the following considerations: One Hazardous Materials Inventory form reporting 40 gallons of ?Various Paints, Reducers, and Hardners (small quantities)? has been submitted. Please be advised that chemicals/materials cannot be combined and reported on one form. If there is 55 gallons or greater of any one of the material stored on site, then a Hazardous Materials Inventory form for that material must be submitted. The ?Hazardous Waste? Hazardous Materials Inventory form is missing ?Chemical Name?, ?Common Name?, ?Annual Waste Amount? and ?Hazardous Component? information such as %WT and the CAS# for at least one of the chemicals. The following chemicals are not reportable since the volume stored on site is not equal to or greater than 55 gallons and must be removed: - 255C259 (Thinner 259) - 25J13830 -

SHMAZE CUSTOM COATINGS (Continued) **S113746989**

455S0503 (Matte Clear) - 82C1890 (High Gloss Clear) - 82C13634 (Matte UC Clear) - (Low [Truncated]
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-09-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Documents submitted on 2/27/16 was reviewed and declined with the following considerations: One Hazardous Materials Inventory form reporting 240 gallons of ?Various Paints, Reducers, and Hardners (small quantities)? has been submitted. Please be advised that chemicals/materials cannot be combined and reported on one form. If there is 55 gallons or greater of any one of the material stored on site, then a Hazardous Materials Inventory form for that material must be submitted. The ?Hazardous Waste? Hazardous Materials Inventory form is missing ?Chemical Name?, ?Common Name?, ?Annual Waste Amount? and ?Hazardous Component? information such as %WT and the CAS# for at least one of the chemicals. The following chemicals are not reportable since the volume stored on site is not equal to or greater than 55 gallons and must be removed: - 255C259 (Thinner 259) - 25J13830 (Charcoal Metallic Paint) - 455S0503 (Matte Clear) - 82C11890 (High Gloss Clear) - 82C13634 UV [Truncated]
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-11-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Went to site to conduct inspection. Owner and environmental contact were not on site.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 04-11-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Documents submitted to E-submit on 4/10/15 were reviewed and accepted.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-03-2016
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector Comments: On site to conduct routine hazardous waste inspection. Mike Shamassian granted consent to conduct inspection. I walked through the facility and inspected waste storage area. I did not observe any hazardous waste in trash cans throughout the facility. Waste acetone/paint (3) drums are stored closed and labeled. Manifests

SHMAZE CUSTOM COATINGS (Continued) **S113746989**

	were reviewed. A new emergency card was provided to be filled out and posted.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	06-03-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	On site to discuss the HMBP documents that were declined. Owner was not aware that the submittal was declined since facility consultant had submitted it. I explained that what needed to be corrected. I assisted on correcting the document and resubmitting it.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	09-30-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Started reviewing documents in E-submit.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	12-11-2013
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Called facility to find out if I could conduct inspection today. Steve Greenwood, general manager, requested that the inspection be conducted at a later date due audits being conducted today.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	11-21-2013
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Added site to program.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	11-25-2013
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Went to site to conduct routine hazardous waste inspection. Environmental contact was not on site. Inspection will be conducted at a later date.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS

SHMAZE CUSTOM COATINGS (Continued) **S113746989**

Eval General Type:	Other/Unknown
Eval Date:	01-07-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I received voicemail from Steve G., stating the that environmental contact will still be on vacation this week and requested that the inspection be scheduled for the following week. I called Steve back and an appointment was scheduled for 1/15/14.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Other/Unknown
Eval Date:	12-20-2013
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Called general manager, Steve G., to find out if inspection could be conducted this date. Receptionist stated that he was in a meeting. I left a message for him to call back. He called back and requested that inspection be conducted between 1/6/14 and 1/15/14.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS

Coordinates:

Site ID:	412279
Facility Name:	SHMAZE CUSTOM COATINGS
Env Int Type Code:	HMBP
Program ID:	10547632
Coord Name:	Not reported
Ref Point Type Desc:	Center of a facility or station.
Latitude:	33.660120
Longitude:	-117.673480

Affiliation:

Affiliation Type Desc:	Environmental Contact
Entity Name:	Mike Shamassian
Entity Title:	Not reported
Affiliation Address:	20792 Canada Rd
Affiliation City:	Lake Forest
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92630
Affiliation Phone:	Not reported

Affiliation Type Desc:	Operator
Entity Name:	Shmaze Custom Coatings
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(949) 583-1448

Affiliation Type Desc:	Parent Corporation

SHMAZE CUSTOM COATINGS (Continued) **S113746989**

Entity Name:	Shmaze Custom Coatings
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	SHMAZE INDUSTRIES INC
Entity Title:	Not reported
Affiliation Address:	20792 CANADA RD
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92630
Affiliation Phone:	(949) 583-1448
Affiliation Type Desc:	CUPA District
Entity Name:	Orange County Env Health
Entity Title:	Not reported
Affiliation Address:	1241 East Dyer RoadSuite 120
Affiliation City:	Santa Ana
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92705-5611
Affiliation Phone:	(714) 433-6000
Affiliation Type Desc:	Identification Signer
Entity Name:	Craig Rysavy
Entity Title:	General Manager
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Document Preparer
Entity Name:	D.S.R.K. Srinvias
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	20792 CANADA RD
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92630

SHMAZE CUSTOM COATINGS (Continued) **S113746989**

Affiliation Phone: Not reported

B8 **MCLAREN UNIBODY INC** **CERS HAZ WASTE** **S109282016**
East **20781 CANADA RD** **EMI** **N/A**
< 1/8 **LAKE FOREST, CA 92630** **CERS**
0.098 mi.
515 ft. **Site 2 of 2 in cluster B**

Relative:
Higher

Actual:
654 ft.

CERS HAZ WASTE:
Site ID: 411774
CERS ID: 10542040
CERS Description: Hazardous Waste Generator

Violations:
Site ID: 411774
Site Name: MCLAREN UNIBODY INC
Violation Date: 03-02-2015
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description: Failure to complete and electronically submit hazardous material inventory information for all reportable hazardous materials on site at or above reportable quantities.
Violation Notes: Not reported
Violation Division: Orange County Environmental Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 411774
Site Name: MCLAREN UNIBODY INC
Violation Date: 08-14-2017
Citation: 22 CCR 15 66265.173 - California Code of Regulations, Title 22, Chapter 15, Section(s) 66265.173
Violation Description: Failure to meet the following container management requirements: (a) A container holding hazardous waste must always be closed during storage, except when it is necessary to add or remove waste. (b) A container holding hazardous waste must not be opened, handled, or stored in a manner which may rupture the container or cause it to leak.
Violation Notes: Returned to compliance on 08/14/2017. Waste oil (1) and waste antifreeze (1) drums are not stored closed. Please be advised that hazardous waste drums must be stored closed unless in active use. Bung holes on both drums were closed during the inspection. This violation has been corrected.
Violation Division: Orange County Environmental Health
Violation Program: HW
Violation Source: CERS

Site ID: 411774
Site Name: MCLAREN UNIBODY INC
Violation Date: 03-02-2015
Citation: HSC 6.95 25508(d) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(d)
Violation Description: Failure to complete and/or electronically submit a business plan when storing/handling a hazardous material at or above reportable quantities.
Violation Notes: Not reported
Violation Division: Orange County Environmental Health

MCLAREN UNIBODY INC (Continued) **S109282016**

Violation Program: HMRRP
Violation Source: CERS

Evaluation:
Eval General Type: Other/Unknown
Eval Date: 08-14-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed annual certification documents submitted to CERS on 8/14/17. Updated data in EC.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 08-25-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Documents submitted to E-submit on 7/30/15 were reviewed and declined with the following considerations: Acetylene form must be revised as follows: - ?Compressed Gas? must be added to ?Acetylene? in Chemical Name section. - Common Name must be changed from ?Welding Gas? to ?Acetylene.? - All checked boxes except for ?Flammable Gas? must be unchecked under ?Fire Code Hazard Classes.? - In addition to ?Fire,? the ?Pressure Release? box also be checked in ?Federal Hazard Categories? section. - ?Maximum Daily Amount? must be changed from ?5.0? to ?200? (the size of the largest container). - ?Days On Site? is reported at 30 days. ?Days On Site? should be changed to 365 days, unless this material is on site during specific days (dates should be included.) - ?Storage Pressure? must be changed from ?Ambient? to ?Above Ambient.? Documents submitted on 7/30/15 were reviewed and declined with the following considerations: Argon (Carbon Dioxide) form must be revised as [Truncated]
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 08-30-2018
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to conduct routine hazardous waste inspection. I walked through the facility, perimeter and inspected waste storage areas. I did not observe any hazardous waste in municipal trash or trash cans throughout the facility. Waste paint (1), spent waterborne cleaning solution (1), waste oil (1) and waste antifreeze (1) drums are stored closed and labeled. Manifests were reviewed. New emergency card was provided to be filled out and posted.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-04-2013
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to conduct new hazardous materials chemical inventory and

MCLAREN UNIBODY INC (Continued) **S109282016**

business emergency plan inspection. Mary Davis granted consent to conduct inspection. I walked through the facility and inspected hazardous materials storage area. The facility has hazardous materials, compressed gases, (200 cubic feet or greater) that meet the required disclosure. Facility is required and has been notified to electronically submit the following documents within 30 days of this inspection: - Business Activities form - Owner/Operator Identification form - Hazardous Material Chemical Inventory forms - Facility Site Map - Business Emergency Plan Documents must be electronically submitted by going to www.esubmit.ocgov.com and requesting a username and password. User guides and tutorials are located on the home page to help you get started. If you are having trouble, please call (714) 433-6000 and request to speak to the portal administrator.

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-22-2014
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector Comments: On site to conduct routine hazardous waste inspection. James Davis granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage areas. I did not observe any hazardous waste in trash cans throughout the facility or municipal trash. Waste paint (1), spent waterborne cleaning solution (1), waste oil (1) and waste antifreeze (1) drums are stored closed and labeled. The "accumulation start date" on the labels is the date when the last waste pick up occurred. Please be advised that in order to extend waste storage period, the "accumulation start date" may be written on the label(s) when there is 27 gallons of waste on site, then have all waste hauled off site by a registered transporter for proper disposal within 180 days of that date. Manifests were reviewed. Emergency card is posted on the wall in the shop by the door leading into the reception area.

Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 09-22-2014
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: On site for follow up inspection to verify the volume of compressed gases on site and determine whether or not the facility must electronically submit documents. There is an oxygen gas cylinder on site with the volume unknown and it may store 200 cubic feet or more of this gas. The volume of the oxygen gas stored on site must be verified. Please notify this Agency of the volume of oxygen gas stored on site within 30 days of this inspection.

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-26-2016
Violations Found: No

MCLAREN UNIBODY INC (Continued) **S109282016**

Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct routine hazardous waste inspection. Alec Okamoto granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage areas. I did not observe any hazardous waste in municipal trash or trash cans throughout the facility. Waste paint (1), spent waterborne cleaning solution (1), waste oil (1) and waste antifreeze (1) drums are stored closed and labeled. Manifests were reviewed. Emergency card is posted on the wall in the shop by the door leading into the reception area.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	09-04-2018
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted annual certifications documents submitted to CERS on 8/30/18.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	06-24-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Not reported
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	07-16-2013
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Follow up on outstanding violation. Sp
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	08-14-2017
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Mary Davis granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage areas. I did not observe any hazardous waste in municipal trash or trash cans throughout the facility. Waste paint (1) and spent waterborne cleaning solution (1) drums are stored closed and labeled. Waste oil (1) and waste antifreeze (1) drums are labeled but not stored closed. Bung holes on both drums were closed during the inspection. Please be advised that hazardous waste drums must be stored closed unless in active use. Manifests for were reviewed. Manifests dated in 2016 are not available on site. Missing manifests will be submitted to this agency within 72

MCLAREN UNIBODY INC (Continued) **S109282016**

	hours of this inspection. Emergency card is posted on the wall in the shop by the door leading into the reception area.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-02-2015
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector Comments: Orange County Environmental Health as the Certified Unified Program Agency (OC CUPA) is the administrating agency for the Hazardous Materials Disclosure and Business Emergency Plan programs (HMD/BEP) previously administered by the Orange County Fire Authority. During the months of August and December of 2013, the OC CUPA sent out letters to regulated businesses requesting them to electronically submit their HMD/BEP forms. In addition, during the onsite inspection conducted on 9/4/13 and 9/22/14, your facility was notified again to submit HMD/BEP electronically. Electronic submission of these forms is a legal requirement. Failure to submit HMD/BEP forms is in violation of the California Health & Safety Code Chapter 6.95. According to our records there is no electronic submission for this facility. Please go to www.esubmit.ocgov.com to request a username and password and submit the following HMD/BEP forms within the next 30 days: - Business [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	04-23-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	4/23/16: File Review. Routine Inspection 9-4-13. SUBMITTED 7/30/15. Declined 8/25/15. No Resubmission. VIOLATIONS OUTSTANDING.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	07-26-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct hazardous materials chemical inventory and business emergency plan inspection. Alec Okamoto granted consent to conduct inspection. I walked through the facility, perimeter and inspected hazardous material storage area. Reported material, Argon/Carbon Dioxide and Acetylene gases, as reported were verified. Cylinders are chained to the pole/beam. There has been no change in chemical inventory. Business Emergency Plan and disclosure information is available electronically. Corrections to submittal, both inventory and site map were made during the inspection. Emergency contact information is posted on the wall above the phone in the shop.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS

MCLAREN UNIBODY INC (Continued) **S109282016**

Eval General Type:	Other/Unknown
Eval Date:	07-27-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted revised documents submitted on 7/27/16. Violations I169 and I292 regarding failure to submit HMBP documents electronically has been corrected.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	09-04-2013
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Mary Davis granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage areas. I did not observe any hazardous waste in trash cans or municipal trash. Waste paint (1), spent waterborne cleaning solution (1), waste oil (1) and waste antifreeze (1) drums are stored closed and labeled. Manifests were reviewed. Emergency card is posted in the shop by the entrance to the office.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-09-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct routine hazardous waste inspection. Cameron Okamoto granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage areas. I did not observe any hazardous waste in trash cans throughout the facility. Nineteen fluorescent lights were in the trash dumpster. According to Mr. Okomto, Filter Plus Recycling, who replaced the spray booth filters in the morning also replaced the lights and contact thought that the lights were transported off site by them. Facility contact was not aware that Filters Plus does not take the lights for proper disposal. The fluorescent lights were removed from the trash dumpster, placed in a box and labeled during the inspection. Management of universal waste, such as fluorescent lights, was discussed with Mr. Okamoto. Waste paint (1), spent waterborne cleaning solution (1), waste oil (1) and waste antifreeze (1) drums are stored closed and [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS

Enforcement Action:

Site ID:	411774
Site Name:	MCLAREN UNIBODY INC
Site Address:	20781 CANADA RD
Site City:	LAKE FOREST
Site Zip:	92630
Enf Action Date:	06-24-2015

MCLAREN UNIBODY INC (Continued) **S109282016**

Enf Action Type:	Notice of Violation (Unified Program)
Enf Action Description:	Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:	HMD/BEP NOV ISSUED 6-24-15.
Enf Action Division:	Orange County Environmental Health
Enf Action Program:	UNSPEC
Enf Action Source:	CERS

Coordinates:

Site ID:	411774
Facility Name:	MCLAREN UNIBODY INC
Env Int Type Code:	HMBP
Program ID:	10542040
Coord Name:	Not reported
Ref Point Type Desc:	Center of a facility or station.
Latitude:	33.660350
Longitude:	-117.673000

Affiliation:

Affiliation Type Desc:	Environmental Contact
Entity Name:	MARY ANNE DAVIS
Entity Title:	Not reported
Affiliation Address:	20781 CANADA ROAD
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92630
Affiliation Phone:	Not reported

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	20781 CANADA RD
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92630
Affiliation Phone:	Not reported

Affiliation Type Desc:	Parent Corporation
Entity Name:	MCLAREN UNIBODY INC
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Legal Owner
Entity Name:	MCLAREN UNIBODY INC
Entity Title:	Not reported
Affiliation Address:	20781 CANADA RD
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92630

MCLAREN UNIBODY INC (Continued) **S109282016**

Affiliation Phone:	(949) 855-0145
Affiliation Type Desc:	Identification Signer
Entity Name:	MARY ANNE DAVIS
Entity Title:	CORPORATE OFFICER
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Operator
Entity Name:	MCLAREN UNIBODY INC
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(949) 855-0145
Affiliation Type Desc:	CUPA District
Entity Name:	Orange County Env Health
Entity Title:	Not reported
Affiliation Address:	1241 East Dyer RoadSuite 120
Affiliation City:	Santa Ana
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92705-5611
Affiliation Phone:	(714) 433-6000
Affiliation Type Desc:	Document Preparer
Entity Name:	MARY ANNE DAVIS
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

EMI:

Year:	2006
County Code:	30
Air Basin:	SC
Facility ID:	148182
Air District Name:	SC
SIC Code:	7532
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	1.398352450966500434
Reactive Organic Gases Tons/Yr:	1.336
Carbon Monoxide Emissions Tons/Yr:	.005
NOX - Oxides of Nitrogen Tons/Yr:	.019

MCLAREN UNIBODY INC (Continued) **S109282016**

SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: .03
Part. Matter 10 Micrometers and Smllr Tons/Yr: .02884

Year: 2007
County Code: 30
Air Basin: SC
Facility ID: 148182
Air District Name: SC
SIC Code: 7532
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 1.398352450966500434
Reactive Organic Gases Tons/Yr: 1.336
Carbon Monoxide Emissions Tons/Yr: .005
NOX - Oxides of Nitrogen Tons/Yr: .019
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: .03
Part. Matter 10 Micrometers and Smllr Tons/Yr: .02884

CERS TANKS:
Site ID: 411774
CERS ID: 10542040
Site Name: MCLAREN UNIBODY INC
CERS Description: Chemical Storage Facilities

Violations:
Site ID: 411774
Site Name: MCLAREN UNIBODY INC
Violation Date: 03-02-2015
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description: Failure to complete and electronically submit hazardous material inventory information for all reportable hazardous materials on site at or above reportable quantities.
Violation Notes: Not reported
Violation Division: Orange County Environmental Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 411774
Site Name: MCLAREN UNIBODY INC
Violation Date: 08-14-2017
Citation: 22 CCR 15 66265.173 - California Code of Regulations, Title 22, Chapter 15, Section(s) 66265.173
Violation Description: Failure to meet the following container management requirements: (a) A container holding hazardous waste must always be closed during storage, except when it is necessary to add or remove waste. (b) A container holding hazardous waste must not be opened, handled, or stored in a manner which may rupture the container or cause it to leak.
Violation Notes: Returned to compliance on 08/14/2017. Waste oil (1) and waste antifreeze (1) drums are not stored closed. Please be advised that hazardous waste drums must be stored closed unless in active use. Bung holes on both drums were closed during the inspection. This violation has been corrected.

MCLAREN UNIBODY INC (Continued) **S109282016**

Violation Division: Orange County Environmental Health
Violation Program: HW
Violation Source: CERS

Site ID: 411774
Site Name: MCLAREN UNIBODY INC
Violation Date: 03-02-2015
Citation: HSC 6.95 25508(d) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(d)
Violation Description: Failure to complete and/or electronically submit a business plan when storing/handling a hazardous material at or above reportable quantities.
Violation Notes: Not reported
Violation Division: Orange County Environmental Health
Violation Program: HMRRP
Violation Source: CERS

Evaluation:
Eval General Type: Other/Unknown
Eval Date: 08-14-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed annual certification documents submitted to CERS on 8/14/17. Updated data in EC.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 08-25-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Documents submitted to E-submit on 7/30/15 were reviewed and declined with the following considerations: Acetylene form must be revised as follows: - ?Compressed Gas? must be added to ?Acetylene? in Chemical Name section. - Common Name must be changed from ?Welding Gas? to ?Acetylene.? - All checked boxes except for ?Flammable Gas? must be unchecked under ?Fire Code Hazard Classes.? - In addition to ?Fire,? the ?Pressure Release? box also be checked in ?Federal Hazard Categories? section. - ?Maximum Daily Amount? must be changed from ?5.0? to ?200? (the size of the largest container). - ?Days On Site? is reported at 30 days. ?Days On Site? should be changed to 365 days, unless this material is on site during specific days (dates should be included.) - ?Storage Pressure? must be changed from ?Ambient? to ?Above Ambient.? Documents submitted on 7/30/15 were reviewed and declined with the following considerations: Argon (Carbon Dioxide) form must be revised as [Truncated]
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 08-30-2018
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to conduct routine hazardous waste inspection. I walked through the facility, perimeter and inspected waste storage areas. I

MCLAREN UNIBODY INC (Continued) **S109282016**

did not observe any hazardous waste in municipal trash or trash cans throughout the facility. Waste paint (1), spent waterborne cleaning solution (1), waste oil (1) and waste antifreeze (1) drums are stored closed and labeled. Manifests were reviewed. New emergency card was provided to be filled out and posted.

Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-04-2013
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to conduct new hazardous materials chemical inventory and business emergency plan inspection. Mary Davis granted consent to conduct inspection. I walked through the facility and inspected hazardous materials storage area. The facility has hazardous materials, compressed gases, (200 cubic feet or greater) that meet the required disclosure. Facility is required and has been notified to electronically submit the following documents within 30 days of this inspection: - Business Activities form - Owner/Operator Identification form - Hazardous Material Chemical Inventory forms - Facility Site Map - Business Emergency Plan Documents must be electronically submitted by going to www.esubmit.ocgov.com and requesting a username and password. User guides and tutorials are located on the home page to help you get started. If you are having trouble, please call (714) 433-6000 and request to speak to the portal administrator.

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-22-2014
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector Comments: On site to conduct routine hazardous waste inspection. James Davis granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage areas. I did not observe any hazardous waste in trash cans throughout the facility or municipal trash. Waste paint (1), spent waterborne cleaning solution (1), waste oil (1) and waste antifreeze (1) drums are stored closed and labeled. The "accumulation start date" on the labels is the date when the last waste pick up occurred. Please be advised that in order to extend waste storage period, the "accumulation start date" may be written on the label(s) when there is 27 gallons of waste on site, then have all waste hauled off site by a registered transporter for proper disposal within 180 days of that date. Manifests were reviewed. Emergency card is posted on the wall in the shop by the door leading into the reception area.

Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 09-22-2014
Violations Found: No
Eval Type: Other, not routine, done by local agency

MCLAREN UNIBODY INC (Continued) **S109282016**

Eval Notes:	On site for follow up inspection to verify the volume of compressed gases on site and determine whether or not the facility must electronically submit documents. There is an oxygen gas cylinder on site with the volume unknown and it may store 200 cubic feet or more of this gas. The volume of the oxygen gas stored on site must be verified. Please notify this Agency of the volume of oxygen gas stored on site within 30 days of this inspection.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	07-26-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct routine hazardous waste inspection. Alec Okamoto granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage areas. I did not observe any hazardous waste in municipal trash or trash cans throughout the facility. Waste paint (1), spent waterborne cleaning solution (1), waste oil (1) and waste antifreeze (1) drums are stored closed and labeled. Manifests were reviewed. Emergency card is posted on the wall in the shop by the door leading into the reception area.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	09-04-2018
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted annual certifications documents submitted to CERS on 8/30/18.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	06-24-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Not reported
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	07-16-2013
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Follow up on outstanding violation. Sp
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection

MCLAREN UNIBODY INC (Continued) **S109282016**

Eval Date:	08-14-2017
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Mary Davis granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage areas. I did not observe any hazardous waste in municipal trash or trash cans throughout the facility. Waste paint (1) and spent waterborne cleaning solution (1) drums are stored closed and labeled. Waste oil (1) and waste antifreeze (1) drums are labeled but not stored closed. Bung holes on both drums were closed during the inspection. Please be advised that hazardous waste drums must be stored closed unless in active use. Manifests for were reviewed. Manifests dated in 2016 are not available on site. Missing manifests will be submitted to this agency within 72 hours of this inspection. Emergency card is posted on the wall in the shop by the door leading into the reception area.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-02-2015
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector Comments: Orange County Environmental Health as the Certified Unified Program Agency (OC CUPA) is the administrating agency for the Hazardous Materials Disclosure and Business Emergency Plan programs (HMD/BEP) previously administered by the Orange County Fire Authority. During the months of August and December of 2013, the OC CUPA sent out letters to regulated businesses requesting them to electronically submit their HMD/BEP forms. In addition, during the onsite inspection conducted on 9/4/13 and 9/22/14, your facility was notified again to submit HMD/BEP electronically. Electronic submission of these forms is a legal requirement. Failure to submit HMD/BEP forms is in violation of the California Health & Safety Code Chapter 6.95. According to our records there is no electronic submission for this facility. Please go to www.esubmit.ocgov.com to request a username and password and submit the following HMD/BEP forms within the next 30 days: - Business [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	04-23-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	4/23/16: File Review. Routine Inspection 9-4-13. SUBMITTED 7/30/15. Declined 8/25/15. No Resubmission. VIOLATIONS OUTSTANDING.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	07-26-2016
Violations Found:	No
Eval Type:	Routine done by local agency

MCLAREN UNIBODY INC (Continued) **S109282016**

Eval Notes:	Inspector Comments: On site to conduct hazardous materials chemical inventory and business emergency plan inspection. Alec Okamoto granted consent to conduct inspection. I walked through the facility, perimeter and inspected hazardous material storage area. Reported material, Argon/Carbon Dioxide and Acetylene gases, as reported were verified. Cylinders are chained to the pole/beam. There has been no change in chemical inventory. Business Emergency Plan and disclosure information is available electronically. Corrections to submittal, both inventory and site map were made during the inspection. Emergency contact information is posted on the wall above the phone in the shop.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	07-27-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted revised documents submitted on 7/27/16. Violations I169 and I292 regarding failure to submit HMBP documents electronically has been corrected.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	09-04-2013
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Mary Davis granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage areas. I did not observe any hazardous waste in trash cans or municipal trash. Waste paint (1), spent waterborne cleaning solution (1), waste oil (1) and waste antifreeze (1) drums are stored closed and labeled. Manifests were reviewed. Emergency card is posted in the shop by the entrance to the office.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-09-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct routine hazardous waste inspection. Cameron Okamoto granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage areas. I did not observe any hazardous waste in trash cans throughout the facility. Nineteen fluorescent lights were in the trash dumpster. According to Mr. Okomto, Filter Plus Recycling, who replaced the spray booth filters in the morning also replaced the lights and contact thought that the lights were transported off site by them. Facility contact was not aware that Filters Plus does not take the lights for proper disposal. The fluorescent lights were removed from the trash dumpster, placed in a box and labeled during the inspection. Management of universal waste, such as fluorescent lights, was

MCLAREN UNIBODY INC (Continued) **S109282016**

discussed with Mr. Okamoto. Waste paint (1), spent waterborne cleaning solution (1), waste oil (1) and waste antifreeze (1) drums are stored closed and [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Enforcement Action:
Site ID: 411774
Site Name: MCLAREN UNIBODY INC
Site Address: 20781 CANADA RD
Site City: LAKE FOREST
Site Zip: 92630
Enf Action Date: 06-24-2015
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: HMD/BEP NOV ISSUED 6-24-15.
Enf Action Division: Orange County Environmental Health
Enf Action Program: UNSPEC
Enf Action Source: CERS

Coordinates:
Site ID: 411774
Facility Name: MCLAREN UNIBODY INC
Env Int Type Code: HMBP
Program ID: 10542040
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 33.660350
Longitude: -117.673000

Affiliation:
Affiliation Type Desc: Environmental Contact
Entity Name: MARY ANNE DAVIS
Entity Title: Not reported
Affiliation Address: 20781 CANADA ROAD
Affiliation City: LAKE FOREST
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92630
Affiliation Phone: Not reported

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 20781 CANADA RD
Affiliation City: LAKE FOREST
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92630
Affiliation Phone: Not reported

Affiliation Type Desc: Parent Corporation
Entity Name: MCLAREN UNIBODY INC
Entity Title: Not reported
Affiliation Address: Not reported

MCLAREN UNIBODY INC (Continued) **S109282016**

Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	MCLAREN UNIBODY INC
Entity Title:	Not reported
Affiliation Address:	20781 CANADA RD
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92630
Affiliation Phone:	(949) 855-0145
Affiliation Type Desc:	Identification Signer
Entity Name:	MARY ANNE DAVIS
Entity Title:	CORPORATE OFFICER
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Operator
Entity Name:	MCLAREN UNIBODY INC
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(949) 855-0145
Affiliation Type Desc:	CUPA District
Entity Name:	Orange County Env Health
Entity Title:	Not reported
Affiliation Address:	1241 East Dyer RoadSuite 120
Affiliation City:	Santa Ana
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92705-5611
Affiliation Phone:	(714) 433-6000
Affiliation Type Desc:	Document Preparer
Entity Name:	MARY ANNE DAVIS
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

D9 North 1/8-1/4 0.128 mi. 678 ft. — **SEA COUNTRY TOWING/S&C PRO AUTOMOTIVE**
20611 PRISM PL
LAKE FOREST, CA 92630
Site 1 of 2 in cluster D

Database(s): **CERS HAZ WASTE, HAZNET, CERS**
EDR ID Number: **S113084122**
EPA ID Number: **N/A**

Relative: Higher
Actual: 658 ft.

CERS HAZ WASTE:

Site ID:	420164
CERS ID:	10573777
CERS Description:	Hazardous Waste Generator

Violations:

Site ID:	420164
Site Name:	SEA COUNTRY TOWING/S&C PRO AUTOMOTIVE
Violation Date:	02-09-2015
Citation:	22 CCR 12 66262.34(f) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(f)
Violation Description:	Failure to properly label hazardous waste accumulation containers with the following requirements: "Hazardous Waste", name and address of the generator, physical and chemical characteristics of the Hazardous Waste, and starting accumulation date.
Violation Notes:	Returned to compliance on 02/09/2015. Labels on all waste drums have faded. New labels were placed on drums and violation was corrected during the inspection.
Violation Division:	Orange County Environmental Health
Violation Program:	HW
Violation Source:	CERS

Evaluation:

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-01-2019
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Darius Pirnazar granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area in the shop. I did not observe any hazardous waste in municipal trash or trash cans throughout the facility. Waste oil (2), used oil filters (1) and waste antifreeze (1) drums are stored closed and labeled. Manifests were reviewed. Emergency card is posted in waiting area.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-13-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Abed Pirnazar granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area in the shop. I did not observe any hazardous waste in trash cans throughout the facility. Waste oil (2), used oil filters (1) and waste antifreeze (1) drums are stored closed. Manifests were reviewed. Emergency card is posted in waiting area.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS

SEA COUNTRY TOWING/S&C PRO AUTOMOTIVE (Continued) **S113084122**

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-26-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct routine hazardous waste inspection. Abed Pirnazar granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans throughout the facility. Waste oil (2), used oil filters (1) and waste antifreeze (1) drums are stored closed. Waste antifreeze has not been generated and drum is empty. Manifests were reviewed. Emergency card is posted in waiting area.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	02-06-2014
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Abed Pirnazar granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area. I did not observe hazardous waste in trash cans. Waste oil (2) and used oil filter (1) drums are stored closed and labeled. New labels were provided for waste oil drums since the existing ones have faded. Emergency card is posted in shop area.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-13-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Sea Country Towing 20611 Prism Pl. Lake Forest, CA 92630 On site to conduct new hazardous materials chemical inventory and business emergency plan inspection. Abed Pirnazar granted consent to conduct inspection. I walked through the facility and inspected hazardous materials storage area. Facility stores 110 gallons of waste oil that meet required disclosure quantities. Employees are trained in hazardous materials management annually and records are available for review. I assisted facility contacnt with creating account in CERS and the follwoing documents were uploaded during the inspection: - Business Activities form - Owner/Operator Identification form - Hazardous Material Chemical Inventory forms - Facility Site Map - Business Emergency Plan
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	02-09-2015
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct routine hazardous waste inspection. Zahra Moghaddam granted consent to conduct inspection. I

SEA COUNTRY TOWING/S&C PRO AUTOMOTIVE (Continued) **S113084122**

	walked through the facility, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans. Waste oil (2), used oil filters (1) and waste antifreeze (1) drums are stored closed with faded labels. New labels were placed on drums during the inspection. Manifests were reviewed. Emergency card is posted in waiting area.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-02-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	I walked through the facility, perimeter and inspected waste storage area in the shop. I did not observe any hazardous waste in trash cans throughout the facility. Waste oil (2), used oil filters (1) and waste antifreeze (1) drums are stored closed. Manifests were reviewed. Emergency card is posted in waiting area.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-31-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted documents submitted to CERS on 3/13/17.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS

Coordinates:

Site ID:	420164
Facility Name:	SEA COUNTRY TOWING/S&C PRO AUTOMOTIVE
Env Int Type Code:	HMBP
Program ID:	10573777
Coord Name:	Not reported
Ref Point Type Desc:	Center of a facility or station.
Latitude:	33.663000
Longitude:	-117.675240

Affiliation:

Affiliation Type Desc:	CUPA District
Entity Name:	Orange County Env Health
Entity Title:	Not reported
Affiliation Address:	1241 East Dyer RoadSuite 120
Affiliation City:	Santa Ana
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92705-5611
Affiliation Phone:	(714) 433-6000
Affiliation Type Desc:	Legal Owner
Entity Name:	ABED PIRNAZAR
Entity Title:	Not reported

SEA COUNTRY TOWING/S&C PRO AUTOMOTIVE (Continued) **S113084122**

Affiliation Address:	20611 PRISM PLACE
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92630
Affiliation Phone:	(949) 770-2617
Affiliation Type Desc:	Operator
Entity Name:	SEA COUNTRY TOWING & RECOVERY INC
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(949) 770-2617
Affiliation Type Desc:	Property Owner
Entity Name:	Abed Pirnazar
Entity Title:	Not reported
Affiliation Address:	20611 Prism Place
Affiliation City:	Lake Forest
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92630
Affiliation Phone:	(949) 770-2617
Affiliation Type Desc:	Document Preparer
Entity Name:	Zahra Moghadam
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	Zahra Moghadam
Entity Title:	ADMIN
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Parent Corporation
Entity Name:	SEA COUNTRY TOWING/S&C PRO AUTOMOTIVE
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

SEA COUNTRY TOWING/S&C PRO AUTOMOTIVE (Continued) **S113084122**

Affiliation Type Desc:	Environmental Contact
Entity Name:	DARIUS PIRNAZAR
Entity Title:	Not reported
Affiliation Address:	20611 PRISM PL
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92630
Affiliation Phone:	Not reported

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	20611 PRISM PL
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92630
Affiliation Phone:	Not reported

HAZNET:

Site Name:	ELECSYS INC
Year:	1999
GEPAID:	CAL000157473
Contact:	CORPORATE HEADQUARTERS
Telephone:	3096933300
Mailing Name:	Not reported
Mailing Address:	20611 PRISM PL
Mailing City,St,Zip:	LAKE FOREST, CA 926307803
Gen County:	Orange
TSD EPA ID:	TND000772186
TSD County:	99
Tons:	0.008
CA Waste Code:	211-Halogenated solvents (chloroforms, methyl chloride, perchloroethylene, etc)
Method:	T03-Treatment, Incineration
Facility County:	Orange

Site Name:	ELECSYS INC
Year:	1999
GEPAID:	CAL000157473
Contact:	CORPORATE HEADQUARTERS
Telephone:	3096933300
Mailing Name:	Not reported
Mailing Address:	20611 PRISM PL
Mailing City,St,Zip:	LAKE FOREST, CA 926307803
Gen County:	Orange
TSD EPA ID:	TND000772186
TSD County:	99
Tons:	0.018
CA Waste Code:	214-Unspecified solvent mixture
Method:	D99-Disposal, Other
Facility County:	Orange

Site Name:	ELECSYS INC
Year:	1999
GEPAID:	CAL000157473

SEA COUNTRY TOWING/S&C PRO AUTOMOTIVE (Continued) **S113084122**

Contact: CORPORATE HEADQUARTERS
Telephone: 3096933300
Mailing Name: Not reported
Mailing Address: 20611 PRISM PL
Mailing City,St,Zip: LAKE FOREST, CA 926307803
Gen County: Orange
TSD EPA ID: TND000772186
TSD County: 99
Tons: 0.006
CA Waste Code: 343-Unspecified organic liquid mixture
Method: T03-Treatment, Incineration
Facility County: Orange

Site Name: ELECSYS INC
Year: 1999
GEPAID: CAL000157473
Contact: CORPORATE HEADQUARTERS
Telephone: 3096933300
Mailing Name: Not reported
Mailing Address: 20611 PRISM PL
Mailing City,St,Zip: LAKE FOREST, CA 926307803
Gen County: Orange
TSD EPA ID: TND000772186
TSD County: 99
Tons: 0.0075
CA Waste Code: 792-Liquids with pH <= 2 with metals
Method: D99-Disposal, Other
Facility County: Orange

CERS TANKS:
Site ID: 420164
CERS ID: 10573777
Site Name: SEA COUNTRY TOWING/S&C PRO AUTOMOTIVE
CERS Description: Chemical Storage Facilities

Violations:
Site ID: 420164
Site Name: SEA COUNTRY TOWING/S&C PRO AUTOMOTIVE
Violation Date: 02-09-2015
Citation: 22 CCR 12 66262.34(f) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(f)
Violation Description: Failure to properly label hazardous waste accumulation containers with the following requirements: "Hazardous Waste", name and address of the generator, physical and chemical characteristics of the Hazardous Waste, and starting accumulation date.
Violation Notes: Returned to compliance on 02/09/2015. Labels on all waste drums have faded. New labels were placed on drums and violation was corrected during the inspection.
Violation Division: Orange County Environmental Health
Violation Program: HW
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-01-2019
Violations Found: No
Eval Type: Routine done by local agency

SEA COUNTRY TOWING/S&C PRO AUTOMOTIVE (Continued) **S113084122**

Eval Notes:	On site to conduct routine hazardous waste inspection. Darius Pirnazar granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area in the shop. I did not observe any hazardous waste in municipal trash or trash cans throughout the facility. Waste oil (2), used oil filters (1) and waste antifreeze (1) drums are stored closed and labeled. Manifests were reviewed. Emergency card is posted in waiting area.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-13-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Abed Pirnazar granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area in the shop. I did not observe any hazardous waste in trash cans throughout the facility. Waste oil (2), used oil filters (1) and waste antifreeze (1) drums are stored closed. Manifests were reviewed. Emergency card is posted in waiting area.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-26-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct routine hazardous waste inspection. Abed Pirnazar granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans throughout the facility. Waste oil (2), used oil filters (1) and waste antifreeze (1) drums are stored closed. Waste antifreeze has not been generated and drum is empty. Manifests were reviewed. Emergency card is posted in waiting area.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	02-06-2014
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Abed Pirnazar granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area. I did not observe hazardous waste in trash cans. Waste oil (2) and used oil filter (1) drums are stored closed and labeled. New labels were provided for waste oil drums since the existing ones have faded. Emergency card is posted in shop area.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS

SEA COUNTRY TOWING/S&C PRO AUTOMOTIVE (Continued) **S113084122**

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-13-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Sea Country Towing 20611 Prism Pl. Lake Forest, CA 92630 On site to conduct new hazardous materials chemical inventory and business emergency plan inspection. Abed Pirnazar granted consent to conduct inspection. I walked through the facility and inspected hazardous materials storage area. Facility stores 110 gallons of waste oil that meet required disclosure quantities. Employees are trained in hazardous materials management annually and records are available for review. I assisted facility contacnt with creating account in CERS and the follwoing documents were uploaded during the inspection: - Business Activities form - Owner/Operator Identification form - Hazardous Material Chemical Inventory forms - Facility Site Map - Business Emergency Plan
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	02-09-2015
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct routine hazardous waste inspection. Zahra Moghaddam granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans. Waste oil (2), used oil filters (1) and waste antifreeze (1) drums are stored closed with faded labels. New labels were placed on drums during the inspection. Manifests were reviewed. Emergency card is posted in waiting area.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-02-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	I walked through the facility, perimeter and inspected waste storage area in the shop. I did not observe any hazardous waste in trash cans throughout the facility. Waste oil (2), used oil filters (1) and waste antifreeze (1) drums are stored closed. Manifests were reviewed. Emergency card is posted in waiting area.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Other/Unknown
Eval Date:	03-31-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted documents submitted to CERS on 3/13/17.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS

SEA COUNTRY TOWING/S&C PRO AUTOMOTIVE (Continued) **S113084122**

Coordinates:

Site ID:	420164
Facility Name:	SEA COUNTRY TOWING/S&C PRO AUTOMOTIVE
Env Int Type Code:	HMBP
Program ID:	10573777
Coord Name:	Not reported
Ref Point Type Desc:	Center of a facility or station.
Latitude:	33.663000
Longitude:	-117.675240

Affiliation:

Affiliation Type Desc:	CUPA District
Entity Name:	Orange County Env Health
Entity Title:	Not reported
Affiliation Address:	1241 East Dyer RoadSuite 120
Affiliation City:	Santa Ana
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92705-5611
Affiliation Phone:	(714) 433-6000

Affiliation Type Desc:	Legal Owner
Entity Name:	ABED PIRNAZAR
Entity Title:	Not reported
Affiliation Address:	20611 PRISM PLACE
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92630
Affiliation Phone:	(949) 770-2617

Affiliation Type Desc:	Operator
Entity Name:	SEA COUNTRY TOWING & RECOVERY INC
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(949) 770-2617

Affiliation Type Desc:	Property Owner
Entity Name:	Abed Pirnazar
Entity Title:	Not reported
Affiliation Address:	20611 Prism Place
Affiliation City:	Lake Forest
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92630
Affiliation Phone:	(949) 770-2617

Affiliation Type Desc:	Document Preparer
Entity Name:	Zahra Moghadam
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported

SEA COUNTRY TOWING/S&C PRO AUTOMOTIVE (Continued) **S113084122**

Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	Zahra Moghadam
Entity Title:	ADMIN
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Parent Corporation
Entity Name:	SEA COUNTRY TOWING/S&C PRO AUTOMOTIVE
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Environmental Contact
Entity Name:	DARIUS PIRNAZAR
Entity Title:	Not reported
Affiliation Address:	20611 PRISM PL
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92630
Affiliation Phone:	Not reported
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	20611 PRISM PL
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92630
Affiliation Phone:	Not reported

D10 **SEA COUNTRY TOWING & RECOVERY INC** **RCRA NonGen / NLR** **1024832698**
North **20611 PRISM PL** **CAL000371066**
1/8-1/4 **LAKE FOREST, CA 92630**
0.128 mi.
678 ft. **Site 2 of 2 in cluster D**

Relative: **Higher**
Actual: **658 ft.**

RCRA NonGen / NLR:

Date form received by agency:	01/26/2012
Facility name:	SEA COUNTRY TOWING & RECOVERY INC
Facility address:	20611 PRISM PL LAKE FOREST, CA 92630
EPA ID:	CAL000371066

SEA COUNTRY TOWING & RECOVERY INC (Continued) **1024832698**

Contact: DARIUS PIRNAZAR
Contact address: 20611 PRISM PL
LAKE FOREST, CA 92630
Contact country: Not reported
Contact telephone: 949-770-2617
Contact email: PIRNAZAR@GMAIL.COM
EPA Region: 09
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: DARIUS PIRNAZAR
Owner/operator address: 20611 PRISM PL
LAKE FOREST, CA 92630
Owner/operator country: Not reported
Owner/operator telephone: 949-770-2617
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: SEA COUNTRY TOWING & RECOVERY INC
Owner/operator address: 20611 PRISM PL
LAKE FOREST, CA 92630
Owner/operator country: Not reported
Owner/operator telephone: 949-770-2617
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: Yes
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

11
East
1/8-1/4
0.137 mi.
722 ft.

V P BAKER RANCH
20745 CANADA RD
EL TORO, CA 92630

SWEEPS UST **S101589532**
CA FID UST **N/A**

Relative:
Higher

Actual:
658 ft.

SWEEPS UST:

Status:	Active
Comp Number:	10
Number:	9
Board Of Equalization:	44-015743
Referral Date:	09-30-92
Action Date:	04-03-92
Created Date:	02-29-88
Owner Tank Id:	Not reported
SWRCB Tank Id:	30-000-000010-000001
Tank Status:	A
Capacity:	10000
Active Date:	Not reported
Tank Use:	M.V. FUEL
STG:	P
Content:	REG UNLEADED
Number Of Tanks:	1

CA FID UST:

Facility ID:	30017405
Regulated By:	UTNKA
Regulated ID:	Not reported
Cortese Code:	Not reported
SIC Code:	Not reported
Facility Phone:	7148300595
Mail To:	Not reported
Mailing Address:	4000 BARRANCA PKY
Mailing Address 2:	Not reported
Mailing City,St,Zip:	EL TORO 92630
Contact:	Not reported
Contact Phone:	Not reported
DUNs Number:	Not reported
NPDES Number:	Not reported
EPA ID:	Not reported
Comments:	Not reported
Status:	Active

E12
NNW
1/8-1/4
0.153 mi.
806 ft.

ARB INC
20602 CIVIC CENTER DR
LAKE FOREST, CA 92630

Site 1 of 3 in cluster E

UST **U004282450**
N/A

Relative:
Higher

Actual:
677 ft.

UST:

Facility ID:	FA0024287
Permitting Agency:	Orange County Environmental Health
Latitude:	33.66284
Longitude:	-117.67637

ORANGE CO. UST:

Facility ID:	FA0024287

E13 **ARB INC** **CERS HAZ WASTE** **S123518081**
NNW **20602 CIVIC CENTER DR** **CERS TANKS** **N/A**
1/8-1/4 **LAKE FOREST, CA 92630** **CERS**
0.153 mi.
806 ft. **Site 2 of 3 in cluster E**

Relative:
Higher

Actual:
677 ft.

CERS HAZ WASTE:
Site ID: 415084
CERS ID: 10721305
CERS Description: Hazardous Waste Generator

Violations:
Site ID: 415084
Site Name: ARB INC
Violation Date: 01-19-2018
Citation: 23 CCR 16 2632(c)(2)(A)&(B) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2632(c)(2)(A)&(B)
Violation Description: Failure to continuously monitor the interstitial space of a double-walled tank with an audible and visual alarm system.
Violation Notes: Returned to compliance on 01/19/2018. Annular sensor for UST supplying fuel for dispensers 1,2 and 7 was stuck in riser and could not be removed. A new sensor, "like for like", was installed (ensuring that sensor is at bottom of tank) and passed when retested. This violation has been corrected.
Violation Division: Orange County Environmental Health
Violation Program: UST
Violation Source: CERS

Site ID: 415084
Site Name: ARB INC
Violation Date: 02-01-2019
Citation: 23 CCR 16 2637(f) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2637(f)
Violation Description: Failure to submit a copy of the secondary containment test results on the ?Secondary Containment Testing report Form? to the UPA within 30 days after the test.
Violation Notes: This agency received notification to conduct secondary containment test at this facility on 11/15/18. To date, a copy of the secondary containment report has not been received by this agency. Copies of test results must be submitted to this agency within 30 days of testing. A copy of the report must be submitted by 2/15/19.
Violation Division: Orange County Environmental Health
Violation Program: UST
Violation Source: CERS

Site ID: 415084
Site Name: ARB INC
Violation Date: 01-19-2018
Citation: HSC 6.75 25299.30-25299.34 - California Health and Safety Code, Chapter 6.75, Section(s) 25299.30-25299.34
Violation Description: Failure to submit and maintain complete and current Certification of Financial Responsibility or other mechanism of financial assurance.
Violation Notes: Returned to compliance on 01/31/2018. Certification of financial responsibility (CFR) expired on 1/13/18. Valid CFR must be obtained and a copy be electronically submitted within 30 days of this inspection.
Violation Division: Orange County Environmental Health
Violation Program: UST
Violation Source: CERS

ARB INC (Continued) **S123518081**

Site ID: 415084
Site Name: ARB INC
Violation Date: 12-22-2015
Citation: 23 CCR 16 2637(e) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2637(e)
Violation Description: Failure to submit a copy of the secondary containment test results to the CUPA within 30 days after the test.
Violation Notes: Returned to compliance on 01/25/2016. This agency has not received results for secondary containment test conducted at the site on 11/5/15. Test results must be submitted to this agency within 30 days of testing. A copy of the test results must be submitted to this agency by 1/5/16 to avoid enforcement action.
Violation Division: Orange County Environmental Health
Violation Program: UST
Violation Source: CERS

Evaluation:
Eval General Type: Other/Unknown
Eval Date: 01-23-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Inspector Comments: On site for follow up inspection since facility was notified to electronically submit HMBP documents during the onsite inspection conducted on 1/24/14 and inspection report dated 10/1/14 that included violations for failure to submit documents electronically. Facility has the following hazardous materials that meet the required disclosure quantities: - 40,000 gallons Diesel - 275 gallons of DEF - 16 propane tanks for forklift The following documents must be electronically submitted immediately to comply with outstanding violations and avoid further enforcement action: - Business Activities form - Owner/Operator Identification form - Hazardous Material Chemical Inventory forms - Facility Site Map - Business Emergency Plan
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 01-24-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: I received a copy of Monitoring System Certification, Spill Bucket Testing Report Form and Product Line Test Result Sheets for activities conducted on 1/20/17. All components passed test.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 01-24-2018
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: I received a copy of Monitoring System Certification, Spill Bucket Testing Report Form and Product Line Test Result Sheets for activities conducted on 1/19/18. All components passed test.
Eval Division: Orange County Environmental Health
Eval Program: UST

ARB INC (Continued) **S123518081**

Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-25-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector Comments: Reviewed Secondary Containment Testing Report Form (3 year SB989) for activities conducted on 11/5/15. All components passed test. Violation I296 regarding failure to submit secondary test results within 30 days of testing, cited in this agency's inspection report dated 12/22/15, has been corrected.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-25-2019
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to witness monitoring system certification testing activities and to conduct routine UST inspection. Annular and sump sensors alarmed properly (visual and audible) and shut down all turbines when submerged in water. UDCs have float and chain mechanism. Water was poured in all UDCs and all float and chains functioned properly. Line leak detectors were tested and passed. Line test was conducted since tank system does not have fail safe. Both lines passed. Site has flappers for overfill prevention. Drop tubes (with flappers) were replaced in Tanks 1 and 3 since they failed test conducted in November 2018. A copy of the Overfill Prevention Equipment Inspection Report Form for activities conducted in November 2018 must be submitted to this agency within 30 days of this inspection. Spill buckets were tested visually without any changes in water level. Valid permit (posted behind front counter in glass covered bulletin board), designated operator [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-17-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed annual certification documents (2 submittals) submitted to CERS on 2/6/17. Submittal was not accepted since Fire Code Hazard Classes was not listed for DEF and physical state for propane is not correct, reported as gas.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	04-14-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Accepted revised documents submitted to CERS on 3/7/17 with comment regarding adding Fire Code Hazard Classes for DEF in the next submission.

ARB INC (Continued) **S123518081**

Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	12-19-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed facility's Designated Operator form on E-submit. Form was accepted.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	12-29-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Monitor cert reschedule notification
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-09-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Facility information page submitted to CERS on 1/3/17 was not acceted since EPA ID# CAL000076760 listed for this facility is assigned to "Sacramento Occupational Medical GR" and is inactive. Correct EPA ID# for this facility is CAR000076760.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-12-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Monitor Certification Notification
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-19-2018
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	All annular and sump sensors, except for annular sensor for UST supplying fuel for dispensers 1,2 and 7, alarmed properly (visual and audible) and shut down all turbines when submerged in water. The annular sensor was stuck in riser and could not be removed. A new sensor, "like for like", was installed (ensuring that sensor is at bottom of tank) and passed when retested. UDCs have float and chain mechanism. Water was poured in all UDCs and all float and chains functioned properly. Line leak detectors (4) were tested and passed. Line test was conducted since tank system does not have fail safe.

ARB INC (Continued) **S123518081**

Lines passed test. Site has flappers for overfill prevention. Spill buckets were tested visually without any changes in water level. Valid permit (posted in glass covered bulleting board), designated operator documentation, monthly inspection reports, monitoring plan, response plans, employee training records, tank pages, certification of financial responsibility (CFR) [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 02-23-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed and accepted annual certification documents submitted to E-submit on 2/16/16.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 05-15-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed and accepted updated site map submitted to E-submit on 3/2/15.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 07-31-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Documents submitted on 7/30/15 were reviewed and declined with the following considerations: Since the Aboveground Petroleum Storage Tanks (AST) are located at 20632 Indian Ocean Dr., box D on the Business Activities form should be unchecked. Diesel #2: This material is reported as ?mixture? with CAS# 86478-34-6 for diesel listed in the mixture table. This CAS# does not exist. However, CAS# (68476-34-6) listed under ?Common Name? is correct. If this material is a ?mixture?, then the correct CAS# must be removed from box under ?Common Name? and be placed in the mixture table. You may also, report this material as ?pure? by changing hazardous material type box, leaving the CAS# under ?Common Name? and deleting information in mixture table. DEF: Since this material is not ?pure?, CAS# listed under ?Common Name? should be removed. Site map does not show adjacent streets, storm drain, access and exit points, emergency shutoffs (water, electricity and natural gas), [Truncated]
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 12-15-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency

ARB INC (Continued) **S123518081**

Eval Notes:	Not reported
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-06-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Monitor cert notification
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-17-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Monitor cert reschedule notification
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-20-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to witness monitoring system certification testing activities and to conduct routine UST inspection. All annular and sump sensors alarmed properly (visual and audible) and shut down all turbines when submerged in water. UDCs have float and chain mechanism. Water was poured in all UDCs and all float and chains functioned properly. Line leak detectors (4) were tested and passed. Line test was conducted since tank system does not have fail safe. Both line passed. Site has flappers for overfill prevention. Spill buckets were tested visually without any changes in water level. Valid permit, designated operator documentation, monthly inspection reports, monitoring plan, response plans, employee training records, tank pages, certification of financial responsibility (CFR) dated 1/13/17, copies of monitoring system certification and secondary containment reports are available for review. A copy of CFR must be submitted electronically within 30 of [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-22-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to witness monitoring system certification testing activities and to conduct routine UST inspection. All annular and sump sensors alarmed properly (visual and audible) and shut down all turbines when submerged in water. UDCs have float and chain mechanism. Water was poured in all UDCs and all float and chains functioned properly. Line leak detectors were tested and passed. The tank system does not have fail safe. Therefore, line test was

ARB INC (Continued) **S123518081**

conducted and passed. Site has flappers for overfill prevention. Spill buckets were tested visually without any changes in water level. Valid permit is posted in a glass covered bulletin board behind warehouse counter. Designated operator documentation, monthly inspection reports, monitoring plan, response plans, employee training records, tank pages, certification of financial responsibility, copies of monitoring system certification and secondary containment reports are available for [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 01-27-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed and accepted Certification Of Financial Responsibility with coverage period from 1/19/16 to 1/19/16, submitted to E-submit on 1/27/16.

Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 01-31-2018
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed and accepted annual certification documents submitted to CERS on 1/30/18 with comment regarding Inventory forms being conditionally accepted and requesting that Federal Hazard Categories be updated in next submission.

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 01-31-2018
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed and accepted documents submitted to CERS on 1/30/18, which included certification of updated financial responsibility with coverage period from 1/19/18 to 1/19/19. Violation I583 regarding failure to submit and maintain current Certification of Financial Responsibility, cited during routine inspection conducted on 1/19/18, has been corrected.

Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 02-01-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: I reviewed and accepted certification of financial responsibility submitted to E-submit on 1/27/16, with coverage period from 1/19/16 to 1/19/17. Submittal was accepted even though the Letter Of Credit amount listed on E-submit form is $1,000 rather $10,000 but the actual

ARB INC (Continued) **S123518081**

	signed copy of the State Form and attached CEO letter has correct amount listed.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-17-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted documents submitted to CERS on 2/6/17 that included Certification of Financial Responsibility with coverage period from 1/13/17 to 1/13/18.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-23-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted on 2/7/15 have been reviewed and declined with the following considerations: Waste oil tank chemical inventory form must be removed from this submittal since it is located at 20632 Indian Ocean Dr. (FA0036625). State Waste Code must be changed to ?221.? Site map does not show adjacent streets, storm drain, access and exit points, emergency shutoffs (water, electricity and natural gas), evacuation staging areas and emergency response equipment (fire extinguishers).
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	10-30-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	SB 989 test notification
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-03-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Lance York called and requested that both account for this business be linked in CERS. Linked sites in CERS.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-09-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	In preparation for onsite inspection, I checked CERS. Hazmat and UST

ARB INC (Continued) **S123518081**

data has not been transferred from E-submit to CERS. Discussed issue with Mike P. so data can be transferred. The site map did nottransfer when data was moved to CERS. I emailed facility contact, Lance York, and notified him that data was transferred and for him to upload site map into CERS>

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-20-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to conduct hazardous materials chemical inventory and business emergency plan inspection. Ron Sutherland granted consent to conduct inspection. I inspected hazardous material storage area (fuel island). There has been no changes in types and/or volumes of the hazardous material stored on site since last inspection or previous reporting period. Training that includes hazardous material management is provided annually. Evacuation site map is posted in shop. Emergency plan is available on site.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-23-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector Comments: On site to witness monitoring system certification testing activities and to conduct routine UST inspection. All annular and sump sensors alarmed properly (visual and audible) and shut down all turbines when submerged in water. UDCs have float and chain mechanism. Water was poured in all UDCs and all float and chains functioned properly. Line leak detectors were tested and passed. The tank system does not have fail safe. Therefore, line test was conducted and passed. Site has flappers for overfill prevention. Spill buckets were tested visually without any changes in water level. Valid permit is posted in a glass covered bulletin board behind warehouse counter. Designated operator documentation, monthly inspection reports, monitoring plan, response plans, employee training records, tank pages, certification of financial responsibility (expires 1/16/16), copies of monitoring system certification and secondary containment reports [Truncated]
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 01-28-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Inspector Comments: I received and reviewed a copy of the Monitoring System Certification, Mechanical Line Leak Detector, Product Line Test Result Sheet and Spill Bucket Testing Report Form for activities conducted 1/22/16. All components passed test.
Eval Division: Orange County Environmental Health

ARB INC (Continued) **S123518081**

Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-01-2019
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I received and reviewed the following documents: - Overfill Prevention Equipment Inspection Report Form for activities conducted on 11/12/18. The 15000 gallon and 20000 gallon tanks failed test due to shut off valve being activated at 98%. - Overfill Prevention Equipment Inspection Report Form for activities conducted on 1/25/19. Failed drop tubes were replaced and passed test with shut off valve being activated at 95%. - Monitoring System Certification Form, Line Leak Detector Test Form and Spill Container Testing Report Form for activities conducted on 1/25/19. All components passed test. Please be advised that this agency received notification to conduct secondary containment test at this facility on 11/15/18. To date, a copy of the secondary containment report has not been received by this agency. Copies of test results must be submitted to this agency within 30 days of testing. A copy of the report must be submitted by 2/15/19 to avoid enforcement action. [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-23-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Certification of Financial Responsibility with coverage period from 1/16/15 to 1/5/16 was submitted to E-submit. Site map submitted to E-submit on 2/7/15 was not accepted since locations of piping and ESO are not shown on map.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-24-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Violations regarding not submitting HMBP documents were corrected. Duplicate submittal (2/7/15) was deleted.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	08-20-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted documents submitted to E-submit on 7/31/15.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS

ARB INC (Continued) **S123518081**

Eval General Type: Other/Unknown
Eval Date: 12-22-2015
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Inspector Comments: This agency received notification for conducting secondary containment testing at the site on 11/5/15. To date, this agency has not received a copy of the secondary containment test report form. Test results must be submitted to this agency within 30 days of testing. A copy of the test results must be submitted to this agency by 1/5/16.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Affiliation:
Affiliation Type Desc: Environmental Contact
Entity Name: RON SUTHERLAND
Entity Title: Not reported
Affiliation Address: 20602 CIVIC CENTER DR.
Affiliation City: LAKE FOREST
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92630
Affiliation Phone: Not reported

Affiliation Type Desc: Property Owner
Entity Name: BIXBY-LAKE FOREST PROPERTYCO., LP
Entity Title: Not reported
Affiliation Address: 9777 WILSHIRE BLVD.
Affiliation City: BEVERLY HILLS
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 90212
Affiliation Phone: (323) 272-7777

Affiliation Type Desc: UST Tank Owner
Entity Name: ARB, INC.
Entity Title: Not reported
Affiliation Address: 20602 CIVIC CENTER DR.
Affiliation City: LAKE FOREST
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 92630
Affiliation Phone: (949) 454-7177

Affiliation Type Desc: Document Preparer
Entity Name: LANCE YORK
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Identification Signer
Entity Name: RON SUTHERLAND

ARB INC (Continued) **S123518081**

Entity Title: MAINTENANCE MANAGER
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: CUPA District
Entity Name: Orange County Env Health
Entity Title: Not reported
Affiliation Address: 1241 East Dyer RoadSuite 120
Affiliation City: Santa Ana
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92705-5611
Affiliation Phone: (714) 433-6000

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: PO BOX 5166
Affiliation City: LAKE FOREST
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92630
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner
Entity Name: ARB Inc
Entity Title: Not reported
Affiliation Address: PO BOX 5166
Affiliation City: LAKE FOREST
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 92630
Affiliation Phone: (949) 454-7177

Affiliation Type Desc: Operator
Entity Name: ARB Inc
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (949) 454-7177

Affiliation Type Desc: UST Tank Operator
Entity Name: ARB, INC.
Entity Title: Not reported
Affiliation Address: 20602 CIVIC CENTER DR.
Affiliation City: LAKE FOREST
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 92630
Affiliation Phone: (949) 454-7177

ARB INC (Continued) **S123518081**

Affiliation Type Desc:	Parent Corporation
Entity Name:	ARB Inc
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	UST Permit Applicant
Entity Name:	LANCE YORK
Entity Title:	OWNERS AUTHORIZED AGENT
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(949) 230-8931

Affiliation Type Desc:	UST Property Owner Name
Entity Name:	BIXBY-LAKE FOREST PROPERTY CO., LP.
Entity Title:	Not reported
Affiliation Address:	9777 WILSHIRE BLVD
Affiliation City:	BEVERLY HILLS
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	90212
Affiliation Phone:	(323) 272-7777

CERS TANKS:

Facility Name:	ARB INC
Site ID:	415084
CERS ID:	10721305
CERS Description:	Underground Storage Tank

Violations:

Site ID:	415084
Site Name:	ARB INC
Violation Date:	01-19-2018
Citation:	23 CCR 16 2632(c)(2)(A)&(B) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2632(c)(2)(A)&(B)
Violation Description:	Failure to continuously monitor the interstitial space of a double-walled tank with an audible and visual alarm system.
Violation Notes:	Returned to compliance on 01/19/2018. Annular sensor for UST supplying fuel for dispensers 1,2 and 7 was stuck in riser and could not be removed. A new sensor, "like for like", was installed (ensuring that sensor is at bottom of tank) and passed when retested. This violation has been corrected.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS

Site ID:	415084
Site Name:	ARB INC
Violation Date:	02-01-2019

ARB INC (Continued) **S123518081**

Citation: 23 CCR 16 2637(f) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2637(f)
Violation Description: Failure to submit a copy of the secondary containment test results on the ?Secondary Containment Testing report Form? to the UPA within 30 days after the test.
Violation Notes: This agency received notification to conduct secondary containment test at this facility on 11/15/18. To date, a copy of the secondary containment report has not been received by this agency. Copies of test results must be submitted to this agency within 30 days of testing. A copy of the report must be submitted by 2/15/19.
Violation Division: Orange County Environmental Health
Violation Program: UST
Violation Source: CERS

Site ID: 415084
Site Name: ARB INC
Violation Date: 01-19-2018
Citation: HSC 6.75 25299.30-25299.34 - California Health and Safety Code, Chapter 6.75, Section(s) 25299.30-25299.34
Violation Description: Failure to submit and maintain complete and current Certification of Financial Responsibility or other mechanism of financial assurance.
Violation Notes: Returned to compliance on 01/31/2018. Certification of financial responsibility (CFR) expired on 1/13/18. Valid CFR must be obtained and a copy be electronically submitted within 30 days of this inspection.
Violation Division: Orange County Environmental Health
Violation Program: UST
Violation Source: CERS

Site ID: 415084
Site Name: ARB INC
Violation Date: 12-22-2015
Citation: 23 CCR 16 2637(e) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2637(e)
Violation Description: Failure to submit a copy of the secondary containment test results to the CUPA within 30 days after the test.
Violation Notes: Returned to compliance on 01/25/2016. This agency has not received results for secondary containment test conducted at the site on 11/5/15. Test results must be submitted to this agency within 30 days of testing. A copy of the test results must be submitted to this agency by 1/5/16 to avoid enforcement action.
Violation Division: Orange County Environmental Health
Violation Program: UST
Violation Source: CERS

Evaluation:
Eval General Type: Other/Unknown
Eval Date: 01-23-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Inspector Comments: On site for follow up inspection since facility was notified to electronically submit HMBP documents during the onsite inspection conducted on 1/24/14 and inspection report dated 10/1/14 that included violations for failure to submit documents electronically. Facility has the following hazardous materials that meet the required disclosure quantities: - 40,000 gallons Diesel - 275 gallons of DEF - 16 propane tanks for forklift The following documents

ARB INC (Continued) **S123518081**

	must be electronically submitted immediately to comply with outstanding violations and avoid further enforcement action: - Business Activities form - Owner/Operator Identification form - Hazardous Material Chemical Inventory forms - Facility Site Map - Business Emergency Plan
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-24-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I received a copy of Monitoring System Certification, Spill Bucket Testing Report Form and Product Line Test Result Sheets for activities conducted on 1/20/17. All components passed test.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-24-2018
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I received a copy of Monitoring System Certification, Spill Bucket Testing Report Form and Product Line Test Result Sheets for activities conducted on 1/19/18. All components passed test.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-25-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector Comments: Reviewed Secondary Containment Testing Report Form (3 year SB989) for activities conducted on 11/5/15. All components passed test. Violation I296 regarding failure to submit secondary test results within 30 days of testing, cited in this agency's inspection report dated 12/22/15, has been corrected.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-25-2019
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to witness monitoring system certification testing activities and to conduct routine UST inspection. Annular and sump sensors alarmed properly (visual and audible) and shut down all turbines when submerged in water. UDCs have float and chain mechanism. Water was poured in all UDCs and all float and chains functioned properly. Line leak detectors were tested and passed. Line test was conducted since tank system does not have fail safe. Both lines passed. Site has flappers for overfill prevention. Drop tubes (with flappers) were replaced in Tanks 1 and 3 since they failed test conducted in November

ARB INC (Continued) **S123518081**

2018. A copy of the Overfill Prevention Equipment Inspection Report Form for activities conducted in November 2018 must be submitted to this agency within 30 days of this inspection. Spill buckets were tested visually without any changes in water level. Valid permit (posted behind front counter in glass covered bulletin board), designated operator [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 02-17-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed annual certification documents (2 submittals) submitted to CERS on 2/6/17. Submittal was not accepted since Fire Code Hazard Classes was not listed for DEF and physical state for propane is not correct, reported as gas.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 04-14-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Accepted revised documents submitted to CERS on 3/7/17 with comment regarding adding Fire Code Hazard Classes for DEF in the next submission.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 12-19-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed facility’s Designated Operator form on E-submit. Form was accepted.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 12-29-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Monitor cert reschedule notification
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 01-09-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Facility information page submitted to CERS on 1/3/17 was not acceted

ARB INC (Continued) **S123518081**

since EPA ID# CAL000076760 listed for this facility is assigned to "Sacramento Occupational Medical GR" and is inactive. Correct EPA ID# for this facility is CAR000076760.

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 01-12-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Monitor Certification Notification
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-19-2018
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: All annular and sump sensors, except for annular sensor for UST supplying fuel for dispensers 1,2 and 7, alarmed properly (visual and audible) and shut down all turbines when submerged in water. The annular sensor was stuck in riser and could not be removed. A new sensor, "like for like", was installed (ensuring that sensor is at bottom of tank) and passed when retested. UDCs have float and chain mechanism. Water was poured in all UDCs and all float and chains functioned properly. Line leak detectors (4) were tested and passed. Line test was conducted since tank system does not have fail safe. Lines passed test. Site has flappers for overfill prevention. Spill buckets were tested visually without any changes in water level. Valid permit (posted in glass covered bulleting board), designated operator documentation, monthly inspection reports, monitoring plan, response plans, employee training records, tank pages, certification of financial responsibility (CFR) [Truncated]
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 02-23-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed and accepted annual certification documents submitted to E-submit on 2/16/16.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 05-15-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed and accepted updated site map submitted to E-submit on 3/2/15.
Eval Division: Orange County Environmental Health
Eval Program: UST

ARB INC (Continued) **S123518081**

Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	07-31-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted on 7/30/15 were reviewed and declined with the following considerations: Since the Aboveground Petroleum Storage Tanks (AST) are located at 20632 Indian Ocean Dr., box D on the Business Activities form should be unchecked. Diesel #2: This material is reported as ?mixture? with CAS# 86478-34-6 for diesel listed in the mixture table. This CAS# does not exist. However, CAS# (68476-34-6) listed under ?Common Name? is correct. If this material is a ?mixture?, then the correct CAS# must be removed from box under ?Common Name? and be placed in the mixture table. You may also, report this material as ?pure? by changing hazardous material type box, leaving the CAS# under ?Common Name? and deleting information in mixture table. DEF: Since this material is not ?pure?, CAS# listed under ?Common Name? should be removed. Site map does not show adjacent streets, storm drain, access and exit points, emergency shutoffs (water, electricity and natural gas), [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	12-15-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Not reported
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-06-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Monitor cert notification
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-17-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Monitor cert reschedule notification
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-20-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to witness monitoring system certification testing activities

ARB INC (Continued) **S123518081**

and to conduct routine UST inspection. All annular and sump sensors alarmed properly (visual and audible) and shut down all turbines when submerged in water. UDCs have float and chain mechanism. Water was poured in all UDCs and all float and chains functioned properly. Line leak detectors (4) were tested and passed. Line test was conducted since tank system does not have fail safe. Both line passed. Site has flappers for overfill prevention. Spill buckets were tested visually without any changes in water level. Valid permit, designated operator documentation, monthly inspection reports, monitoring plan, response plans, employee training records, tank pages, certification of financial responsibility (CFR) dated 1/13/17, copies of monitoring system certification and secondary containment reports are available for review. A copy of CFR must be submitted electronically within 30 of [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-22-2016
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector Comments: On site to witness monitoring system certification testing activities and to conduct routine UST inspection. All annular and sump sensors alarmed properly (visual and audible) and shut down all turbines when submerged in water. UDCs have float and chain mechanism. Water was poured in all UDCs and all float and chains functioned properly. Line leak detectors were tested and passed. The tank system does not have fail safe. Therefore, line test was conducted and passed. Site has flappers for overfill prevention. Spill buckets were tested visually without any changes in water level. Valid permit is posted in a glass covered bulletin board behind warehouse counter. Designated operator documentation, monthly inspection reports, monitoring plan, response plans, employee training records, tank pages, certification of financial responsibility, copies of monitoring system certification and secondary containment reports are available for [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 01-27-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed and accepted Certification Of Financial Responsibility with coverage period from 1/19/16 to 1/19/16, submitted to E-submit on 1/27/16.

Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 01-31-2018
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed and accepted annual certification documents submitted to CERS

ARB INC (Continued) **S123518081**

	on 1/30/18 with comment regarding Inventory forms being conditionally accepted and requesting that Federal Hazard Categories be updated in next submission.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-31-2018
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted documents submitted to CERS on 1/30/18, which included certification of updated financial responsibility with coverage period from 1/19/18 to 1/19/19. Violation I583 regarding failure to submit and maintain current Certification of Financial Responsibility, cited during routine inspection conducted on 1/19/18, has been corrected.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-01-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I reviewed and accepted certification of financial responsibility submitted to E-submit on 1/27/16, with coverage period from 1/19/16 to 1/19/17. Submittal was accepted even though the Letter Of Credit amount listed on E-submit form is $1,000 rather $10,000 but the actual signed copy of the State Form and attached CEO letter has correct amount listed.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-17-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted documents submitted to CERS on 2/6/17 that included Certification of Financial Responsibility with coverage period from 1/13/17 to 1/13/18.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-23-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted on 2/7/15 have been reviewed and declined with the following considerations: Waste oil tank chemical inventory form must be removed from this submittal since it is located at 20632 Indian Ocean Dr. (FA0036625). State Waste Code must be changed to ?221.? Site map does not show adjacent streets, storm drain, access and exit points, emergency shutoffs (water, electricity and natural gas), evacuation staging areas and emergency response equipment (fire

ARB INC (Continued) **S123518081**

	extinguishers).
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	10-30-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	SB 989 test notification
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-03-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Lance York called and requested that both account for this business be linked in CERS. Linked sites in CERS.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-09-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	In preparation for onsite inspection, I checked CERS. Hazmat and UST data has not been transferred from E-submit to CERS. Discussed issue with Mike P. so data can be transferred. The site map did nottransfer when data was moved to CERS. I emailed facility contact, Lance York, and notified him that data was transferred and for him to upload site map into CERS>
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-20-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct hazardous materials chemical inventory and business emergency plan inspection. Ron Sutherland granted consent to conduct inspection. I inspected hazardous material storage area (fuel island). There has been no changes in types and/or volumes of the hazardous material stored on site since last inspection or previous reporting period. Training that includes hazardous material management is provided annually. Evacuation site map is posted in shop. Emergency plan is available on site.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-23-2015
Violations Found:	No

ARB INC (Continued) **S123518081**

Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to witness monitoring system certification testing activities and to conduct routine UST inspection. All annular and sump sensors alarmed properly (visual and audible) and shut down all turbines when submerged in water. UDCs have float and chain mechanism. Water was poured in all UDCs and all float and chains functioned properly. Line leak detectors were tested and passed. The tank system does not have fail safe. Therefore, line test was conducted and passed. Site has flappers for overfill prevention. Spill buckets were tested visually without any changes in water level. Valid permit is posted in a glass covered bulletin board behind warehouse counter. Designated operator documentation, monthly inspection reports, monitoring plan, response plans, employee training records, tank pages, certification of financial responsibility (expires 1/16/16), copies of monitoring system certification and secondary containment reports [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-28-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector Comments: I received and reviewed a copy of the Monitoring System Certification, Mechanical Line Leak Detector, Product Line Test Result Sheet and Spill Bucket Testing Report Form for activities conducted 1/22/16. All components passed test.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-01-2019
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I received and reviewed the following documents: - Overfill Prevention Equipment Inspection Report Form for activities conducted on 11/12/18. The 15000 gallon and 20000 gallon tanks failed test due to shut off valve being activated at 98%. - Overfill Prevention Equipment Inspection Report Form for activities conducted on 1/25/19. Failed drop tubes were replaced and passed test with shut off valve being activated at 95%. - Monitoring System Certification Form, Line Leak Detector Test Form and Spill Container Testing Report Form for activities conducted on 1/25/19. All components passed test. Please be advised that this agency received notification to conduct secondary containment test at this facility on 11/15/18. To date, a copy of the secondary containment report has not been received by this agency. Copies of test results must be submitted to this agency within 30 days of testing. A copy of the report must be submitted by 2/15/19 to avoid enforcement action. [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-23-2015

ARB INC (Continued) **S123518081**

Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Certification of Financial Responsibility with coverage period from 1/16/15 to 1/5/16 was submitted to E-submit. Site map submitted to E-submit on 2/7/15 was not accepted since locations of piping and ESO are not shown on map.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 02-24-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Violations regarding not submitting HMBP documents were corrected. Duplicate submittal (2/7/15) was deleted.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 08-20-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed and accepted documents submitted to E-submit on 7/31/15.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 12-22-2015
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Inspector Comments: This agency received notification for conducting secondary containment testing at the site on 11/5/15. To date, this agency has not received a copy of the secondary containment test report form. Test results must be submitted to this agency within 30 days of testing. A copy of the test results must be submitted to this agency by 1/5/16.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Affiliation:
Affiliation Type Desc: Environmental Contact
Entity Name: RON SUTHERLAND
Entity Title: Not reported
Affiliation Address: 20602 CIVIC CENTER DR.
Affiliation City: LAKE FOREST
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92630
Affiliation Phone: Not reported

Affiliation Type Desc: Property Owner
Entity Name: BIXBY-LAKE FOREST PROPERTYCO., LP
Entity Title: Not reported

ARB INC (Continued) **S123518081**

Affiliation Address:	9777 WILSHIRE BLVD.
Affiliation City:	BEVERLY HILLS
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	90212
Affiliation Phone:	(323) 272-7777
Affiliation Type Desc:	UST Tank Owner
Entity Name:	ARB, INC.
Entity Title:	Not reported
Affiliation Address:	20602 CIVIC CENTER DR.
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92630
Affiliation Phone:	(949) 454-7177
Affiliation Type Desc:	Document Preparer
Entity Name:	LANCE YORK
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	RON SUTHERLAND
Entity Title:	MAINTENANCE MANAGER
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	CUPA District
Entity Name:	Orange County Env Health
Entity Title:	Not reported
Affiliation Address:	1241 East Dyer RoadSuite 120
Affiliation City:	Santa Ana
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92705-5611
Affiliation Phone:	(714) 433-6000
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	PO BOX 5166
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92630
Affiliation Phone:	Not reported

ARB INC (Continued) **S123518081**

Affiliation Type Desc:	Legal Owner
Entity Name:	ARB Inc
Entity Title:	Not reported
Affiliation Address:	PO BOX 5166
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92630
Affiliation Phone:	(949) 454-7177

Affiliation Type Desc:	Operator
Entity Name:	ARB Inc
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(949) 454-7177

Affiliation Type Desc:	UST Tank Operator
Entity Name:	ARB, INC.
Entity Title:	Not reported
Affiliation Address:	20602 CIVIC CENTER DR.
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92630
Affiliation Phone:	(949) 454-7177

Affiliation Type Desc:	Parent Corporation
Entity Name:	ARB Inc
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	UST Permit Applicant
Entity Name:	LANCE YORK
Entity Title:	OWNERS AUTHORIZED AGENT
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(949) 230-8931

Affiliation Type Desc:	UST Property Owner Name
Entity Name:	BIXBY-LAKE FOREST PROPERTY CO., LP.
Entity Title:	Not reported
Affiliation Address:	9777 WILSHIRE BLVD
Affiliation City:	BEVERLY HILLS
Affiliation State:	CA
Affiliation Country:	United States

ARB INC (Continued) **S123518081**

Affiliation Zip: 90212
Affiliation Phone: (323) 272-7777

CERS TANKS:
Site ID: 415084
CERS ID: 10721305
Site Name: ARB INC
CERS Description: Chemical Storage Facilities

Violations:
Site ID: 415084
Site Name: ARB INC
Violation Date: 01-19-2018
Citation: 23 CCR 16 2632(c)(2)(A)&(B) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2632(c)(2)(A)&(B)
Violation Description: Failure to continuously monitor the interstitial space of a double-walled tank with an audible and visual alarm system.
Violation Notes: Returned to compliance on 01/19/2018. Annular sensor for UST supplying fuel for dispensers 1,2 and 7 was stuck in riser and could not be removed. A new sensor, "like for like", was installed (ensuring that sensor is at bottom of tank) and passed when retested. This violation has been corrected.
Violation Division: Orange County Environmental Health
Violation Program: UST
Violation Source: CERS

Site ID: 415084
Site Name: ARB INC
Violation Date: 02-01-2019
Citation: 23 CCR 16 2637(f) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2637(f)
Violation Description: Failure to submit a copy of the secondary containment test results on the ?Secondary Containment Testing report Form? to the UPA within 30 days after the test.
Violation Notes: This agency received notification to conduct secondary containment test at this facility on 11/15/18. To date, a copy of the secondary containment report has not been received by this agency. Copies of test results must be submitted to this agency within 30 days of testing. A copy of the report must be submitted by 2/15/19.
Violation Division: Orange County Environmental Health
Violation Program: UST
Violation Source: CERS

Site ID: 415084
Site Name: ARB INC
Violation Date: 01-19-2018
Citation: HSC 6.75 25299.30-25299.34 - California Health and Safety Code, Chapter 6.75, Section(s) 25299.30-25299.34
Violation Description: Failure to submit and maintain complete and current Certification of Financial Responsibility or other mechanism of financial assurance.
Violation Notes: Returned to compliance on 01/31/2018. Certification of financial responsibility (CFR) expired on 1/13/18. Valid CFR must be obtained and a copy be electronically submitted within 30 days of this inspection.
Violation Division: Orange County Environmental Health
Violation Program: UST

ARB INC (Continued) **S123518081**

Violation Source: CERS

Site ID: 415084
Site Name: ARB INC
Violation Date: 12-22-2015
Citation: 23 CCR 16 2637(e) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2637(e)
Violation Description: Failure to submit a copy of the secondary containment test results to the CUPA within 30 days after the test.
Violation Notes: Returned to compliance on 01/25/2016. This agency has not received results for secondary containment test conducted at the site on 11/5/15. Test results must be submitted to this agency within 30 days of testing. A copy of the test results must be submitted to this agency by 1/5/16 to avoid enforcement action.
Violation Division: Orange County Environmental Health
Violation Program: UST
Violation Source: CERS

Evaluation:
Eval General Type: Other/Unknown
Eval Date: 01-23-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Inspector Comments: On site for follow up inspection since facility was notified to electronically submit HMBP documents during the onsite inspection conducted on 1/24/14 and inspection report dated 10/1/14 that included violations for failure to submit documents electronically. Facility has the following hazardous materials that meet the required disclosure quantities: - 40,000 gallons Diesel - 275 gallons of DEF - 16 propane tanks for forklift The following documents must be electronically submitted immediately to comply with outstanding violations and avoid further enforcement action: - Business Activities form - Owner/Operator Identification form - Hazardous Material Chemical Inventory forms - Facility Site Map - Business Emergency Plan
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 01-24-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: I received a copy of Monitoring System Certification, Spill Bucket Testing Report Form and Product Line Test Result Sheets for activities conducted on 1/20/17. All components passed test.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 01-24-2018
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: I received a copy of Monitoring System Certification, Spill Bucket Testing Report Form and Product Line Test Result Sheets for activities conducted on 1/19/18. All components passed test.

ARB INC (Continued) **S123518081**

Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-25-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector Comments: Reviewed Secondary Containment Testing Report Form (3 year SB989) for activities conducted on 11/5/15. All components passed test. Violation I296 regarding failure to submit secondary test results within 30 days of testing, cited in this agency's inspection report dated 12/22/15, has been corrected.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-25-2019
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to witness monitoring system certification testing activities and to conduct routine UST inspection. Annular and sump sensors alarmed properly (visual and audible) and shut down all turbines when submerged in water. UDCs have float and chain mechanism. Water was poured in all UDCs and all float and chains functioned properly. Line leak detectors were tested and passed. Line test was conducted since tank system does not have fail safe. Both lines passed. Site has flappers for overfill prevention. Drop tubes (with flappers) were replaced in Tanks 1 and 3 since they failed test conducted in November 2018. A copy of the Overfill Prevention Equipment Inspection Report Form for activities conducted in November 2018 must be submitted to this agency within 30 days of this inspection. Spill buckets were tested visually without any changes in water level. Valid permit (posted behind front counter in glass covered bulletin board), designated operator [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-17-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed annual certification documents (2 submittals) submitted to CERS on 2/6/17. Submittal was not accepted since Fire Code Hazard Classes was not listed for DEF and physical state for propane is not correct, reported as gas.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	04-14-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Accepted revised documents submitted to CERS on 3/7/17 with comment

ARB INC (Continued) **S123518081**

	regarding adding Fire Code Hazard Classes for DEF in the next submission.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	12-19-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed facility's Designated Operator form on E-submit. Form was accepted.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	12-29-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Monitor cert reschedule notification
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-09-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Facility information page submitted to CERS on 1/3/17 was not acceted since EPA ID# CAL000076760 listed for this facility is assigned to "Sacramento Occupational Medical GR" and is inactive. Correct EPA ID# for this facility is CAR000076760.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-12-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Monitor Certification Notification
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-19-2018
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	All annular and sump sensors, except for annular sensor for UST supplying fuel for dispensers 1,2 and 7, alarmed properly (visual and audible) and shut down all turbines when submerged in water. The annular sensor was stuck in riser and could not be removed. A new sensor, "like for like", was installed (ensuring that sensor is at bottom of tank) and passed when retested. UDCs have float and chain mechanism. Water was poured in all UDCs and all float and chains

ARB INC (Continued) **S123518081**

functioned properly. Line leak detectors (4) were tested and passed. Line test was conducted since tank system does not have fail safe. Lines passed test. Site has flappers for overfill prevention. Spill buckets were tested visually without any changes in water level. Valid permit (posted in glass covered bulleting board), designated operator documentation, monthly inspection reports, monitoring plan, response plans, employee training records, tank pages, certification of financial responsibility (CFR) [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 02-23-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed and accepted annual certification documents submitted to E-submit on 2/16/16.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 05-15-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed and accepted updated site map submitted to E-submit on 3/2/15.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 07-31-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Documents submitted on 7/30/15 were reviewed and declined with the following considerations: Since the Aboveground Petroleum Storage Tanks (AST) are located at 20632 Indian Ocean Dr., box D on the Business Activities form should be unchecked. Diesel #2: This material is reported as ?mixture? with CAS# 86478-34-6 for diesel listed in the mixture table. This CAS# does not exist. However, CAS# (68476-34-6) listed under ?Common Name? is correct. If this material is a ?mixture?, then the correct CAS# must be removed from box under ?Common Name? and be placed in the mixture table. You may also, report this material as ?pure? by changing hazardous material type box, leaving the CAS# under ?Common Name? and deleting information in mixture table. DEF: Since this material is not ?pure?, CAS# listed under ?Common Name? should be removed. Site map does not show adjacent streets, storm drain, access and exit points, emergency shutoffs (water, electricity and natural gas), [Truncated]
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 12-15-2016

ARB INC (Continued) **S123518081**

Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Not reported
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-06-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Monitor cert notification
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-17-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Monitor cert reschedule notification
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-20-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to witness monitoring system certification testing activities and to conduct routine UST inspection. All annular and sump sensors alarmed properly (visual and audible) and shut down all turbines when submerged in water. UDCs have float and chain mechanism. Water was poured in all UDCs and all float and chains functioned properly. Line leak detectors (4) were tested and passed. Line test was conducted since tank system does not have fail safe. Both line passed. Site has flappers for overfill prevention. Spill buckets were tested visually without any changes in water level. Valid permit, designated operator documentation, monthly inspection reports, monitoring plan, response plans, employee training records, tank pages, certification of financial responsibility (CFR) dated 1/13/17, copies of monitoring system certification and secondary containment reports are available for review. A copy of CFR must be submitted electronically within 30 of [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-22-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to witness monitoring system certification testing activities and to conduct routine UST inspection. All annular and sump sensors alarmed properly (visual and audible) and shut down all turbines when submerged in water. UDCs have float and chain mechanism. Water was poured in all UDCs and all float and chains

ARB INC (Continued) **S123518081**

functioned properly. Line leak detectors were tested and passed. The tank system does not have fail safe. Therefore, line test was conducted and passed. Site has flappers for overfill prevention. Spill buckets were tested visually without any changes in water level. Valid permit is posted in a glass covered bulletin board behind warehouse counter. Designated operator documentation, monthly inspection reports, monitoring plan, response plans, employee training records, tank pages, certification of financial responsibility, copies of monitoring system certification and secondary containment reports are available for [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 01-27-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed and accepted Certification Of Financial Responsibility with coverage period from 1/19/16 to 1/19/16, submitted to E-submit on 1/27/16.

Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 01-31-2018
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed and accepted annual certification documents submitted to CERS on 1/30/18 with comment regarding Inventory forms being conditionally accepted and requesting that Federal Hazard Categories be updated in next submission.

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 01-31-2018
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed and accepted documents submitted to CERS on 1/30/18, which included certification of updated financial responsibility with coverage period from 1/19/18 to 1/19/19. Violation I583 regarding failure to submit and maintain current Certification of Financial Responsibility, cited during routine inspection conducted on 1/19/18, has been corrected.

Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 02-01-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: I reviewed and accepted certification of financial responsibility submitted to E-submit on 1/27/16, with coverage period from 1/19/16 to

ARB INC (Continued) **S123518081**

1/19/17. Submittal was accepted even though the Letter Of Credit amount listed on E-submit form is $1,000 rather $10,000 but the actual signed copy of the State Form and attached CEO letter has correct amount listed.

Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 02-17-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed and accepted documents submitted to CERS on 2/6/17 that included Certification of Financial Responsibility with coverage period from 1/13/17 to 1/13/18.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 02-23-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Documents submitted on 2/7/15 have been reviewed and declined with the following considerations: Waste oil tank chemical inventory form must be removed from this submittal since it is located at 20632 Indian Ocean Dr. (FA0036625). State Waste Code must be changed to ?221.? Site map does not show adjacent streets, storm drain, access and exit points, emergency shutoffs (water, electricity and natural gas), evacuation staging areas and emergency response equipment (fire extinguishers).
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 10-30-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: SB 989 test notification
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 01-03-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Lance York called and requested that both account for this business be linked in CERS. Linked sites in CERS.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 01-09-2017
Violations Found: No

ARB INC (Continued) **S123518081**

Eval Type:	Other, not routine, done by local agency
Eval Notes:	In preparation for onsite inspection, I checked CERS. Hazmat and UST data has not been transferred from E-submit to CERS. Discussed issue with Mike P. so data can be transferred. The site map did nottransfer when data was moved to CERS. I emailed facility contact, Lance York, and notified him that data was transferred and for him to upload site map into CERS>
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-20-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct hazardous materials chemical inventory and business emergency plan inspection. Ron Sutherland granted consent to conduct inspection. I inspected hazardous material storage area (fuel island). There has been no changes in types and/or volumes of the hazardous material stored on site since last inspection or previous reporting period. Training that includes hazardous material management is provided annually. Evacuation site map is posted in shop. Emergency plan is available on site.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-23-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to witness monitoring system certification testing activities and to conduct routine UST inspection. All annular and sump sensors alarmed properly (visual and audible) and shut down all turbines when submerged in water. UDCs have float and chain mechanism. Water was poured in all UDCs and all float and chains functioned properly. Line leak detectors were tested and passed. The tank system does not have fail safe. Therefore, line test was conducted and passed. Site has flappers for overfill prevention. Spill buckets were tested visually without any changes in water level. Valid permit is posted in a glass covered bulletin board behind warehouse counter. Designated operator documentation, monthly inspection reports, monitoring plan, response plans, employee training records, tank pages, certification of financial responsibility (expires 1/16/16), copies of monitoring system certification and secondary containment reports [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-28-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector Comments: I received and reviewed a copy of the Monitoring System Certification, Mechanical Line Leak Detector, Product Line Test Result Sheet and Spill Bucket Testing Report Form for activities

ARB INC (Continued) **S123518081**

	conducted 1/22/16. All components passed test.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-01-2019
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I received and reviewed the following documents: - Overfill Prevention Equipment Inspection Report Form for activities conducted on 11/12/18. The 15000 gallon and 20000 gallon tanks failed test due to shut off valve being activated at 98%. - Overfill Prevention Equipment Inspection Report Form for activities conducted on 1/25/19. Failed drop tubes were replaced and passed test with shut off valve being activated at 95%. - Monitoring System Certification Form, Line Leak Detector Test Form and Spill Container Testing Report Form for activities conducted on 1/25/19. All components passed test. Please be advised that this agency received notification to conduct secondary containment test at this facility on 11/15/18. To date, a copy of the secondary containment report has not been received by this agency. Copies of test results must be submitted to this agency within 30 days of testing. A copy of the report must be submitted by 2/15/19 to avoid enforcement action. [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-23-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Certification of Financial Responsibility with coverage period from 1/16/15 to 1/5/16 was submitted to E-submit. Site map submitted to E-submit on 2/7/15 was not accepted since locations of piping and ESO are not shown on map.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-24-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Violations regarding not submitting HMBP documents were corrected. Duplicate submittal (2/7/15) was deleted.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	08-20-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted documents submitted to E-submit on 7/31/15.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP

ARB INC (Continued) **S123518081**

Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 12-22-2015
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Inspector Comments: This agency received notification for conducting secondary containment testing at the site on 11/5/15. To date, this agency has not received a copy of the secondary containment test report form. Test results must be submitted to this agency within 30 days of testing. A copy of the test results must be submitted to this agency by 1/5/16.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Affiliation:
Affiliation Type Desc: Environmental Contact
Entity Name: RON SUTHERLAND
Entity Title: Not reported
Affiliation Address: 20602 CIVIC CENTER DR.
Affiliation City: LAKE FOREST
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92630
Affiliation Phone: Not reported

Affiliation Type Desc: Property Owner
Entity Name: BIXBY-LAKE FOREST PROPERTYCO., LP
Entity Title: Not reported
Affiliation Address: 9777 WILSHIRE BLVD.
Affiliation City: BEVERLY HILLS
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 90212
Affiliation Phone: (323) 272-7777

Affiliation Type Desc: UST Tank Owner
Entity Name: ARB, INC.
Entity Title: Not reported
Affiliation Address: 20602 CIVIC CENTER DR.
Affiliation City: LAKE FOREST
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 92630
Affiliation Phone: (949) 454-7177

Affiliation Type Desc: Document Preparer
Entity Name: LANCE YORK
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

ARB INC (Continued) **S123518081**

Affiliation Type Desc:	Identification Signer
Entity Name:	RON SUTHERLAND
Entity Title:	MAINTENANCE MANAGER
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	CUPA District
Entity Name:	Orange County Env Health
Entity Title:	Not reported
Affiliation Address:	1241 East Dyer RoadSuite 120
Affiliation City:	Santa Ana
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92705-5611
Affiliation Phone:	(714) 433-6000

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	PO BOX 5166
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92630
Affiliation Phone:	Not reported

Affiliation Type Desc:	Legal Owner
Entity Name:	ARB Inc
Entity Title:	Not reported
Affiliation Address:	PO BOX 5166
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92630
Affiliation Phone:	(949) 454-7177

Affiliation Type Desc:	Operator
Entity Name:	ARB Inc
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(949) 454-7177

Affiliation Type Desc:	UST Tank Operator
Entity Name:	ARB, INC.
Entity Title:	Not reported
Affiliation Address:	20602 CIVIC CENTER DR.
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	United States

ARB INC (Continued) **S123518081**

Affiliation Zip:	92630
Affiliation Phone:	(949) 454-7177
Affiliation Type Desc:	Parent Corporation
Entity Name:	ARB Inc
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	UST Permit Applicant
Entity Name:	LANCE YORK
Entity Title:	OWNERS AUTHORIZED AGENT
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(949) 230-8931
Affiliation Type Desc:	UST Property Owner Name
Entity Name:	BIXBY-LAKE FOREST PROPERTY CO., LP.
Entity Title:	Not reported
Affiliation Address:	9777 WILSHIRE BLVD
Affiliation City:	BEVERLY HILLS
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	90212
Affiliation Phone:	(323) 272-7777

F14 **SUNSTATE EQUIPMENT CO** **CERS HAZ WASTE** **S123512598**
West **20772 CIVIC CENTER DR** **CERS TANKS** **N/A**
1/8-1/4 **LAKE FOREST, CA 92630** **CERS**
0.153 mi.
808 ft. **Site 1 of 3 in cluster F**

Relative:
Higher

Actual:
638 ft.

CERS HAZ WASTE:

Site ID:	359105
CERS ID:	10540978
CERS Description:	Hazardous Waste Generator

Evaluation:

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-12-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Mike Williams granted consent to conduct inspection. I walked through the shop, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans throughout shop. Waste oil is stored in an aboveground tank that is kept closed and labeled. Waste antifreeze (1), used oil filters/metal (1) and used oil filters/paper (1) drums are stored closed and labeled. Manifests were reviewed. An emergency card was provided to be filled out and posted.

SUNSTATE EQUIPMENT CO (Continued) **S123512598**

Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	09-18-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct hazardous materials chemical inventory and business emergency plan (HMBEP) inspection. Street name has been changed from Indian Ocean Dr. to Civic Center Dr. Please update CERS (Facility Information and site map) with new address. I walked through the facility and inspected hazardous material storage areas inside shop and yard. There has been changes in types and/or volumes of the hazardous material stored on site since last inspection or previous reporting period. Facility does not store new antifreeze at disclosure threshold and does not store waste ATF. Waste antifreeze and ATF must be deleted from inventory. The following material previously not observed on site must be added to inventory: - 1004 cubic of oxygen gas (largest cylinder - 251 cubic feet) - 420 cubic of acetylene gas (largest cylinder - 118 cubic feet) - 330 gallons of Diesel Exhaust Fluid Site map must be revised to show locations of new material. In addition, [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	09-22-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct new hazardous materials chemical inventory and business emergency plan inspection. Paul Barnhouse assisted with the inspection. I walked through the facility and inspected hazardous materials storage areas. Facility has the following hazardous materials that meet required disclosure quantities: - 1250 gallons of diesel - 250 gallons of gasoline - 120 gallons of new motor oil - 120 gallons of hydraulic oil - 55 gallons of Zep Formula 940 detergent - 250 gallons of propane (tank) and propane cylinders (approximately 110 gallons) - 240 gallons of waste oil - 55 gallons of waste antifreeze Facility is required and has been notified to electronically submit the following documents within 30 days of this inspection: - Business Activities form - Owner/Operator Identification form - Hazardous Material Chemical Inventory forms - Facility Site Map - Business Emergency Plan Documents must be electronically [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-03-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted annual certification documents submitted to CERS on 1/30/17.
Eval Division:	Orange County Environmental Health

SUNSTATE EQUIPMENT CO (Continued) **S123512598**

Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-18-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted revised HMBP documents submitted to CERS on 2/17/16.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	09-22-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct hazardous waste generator inspection. Paul Barnhouse granted consent to conduct inspection. This business left/closed this location six years ago but came back and began operations again in June 2015. I walked through the facility, perimeter and inspected waste storage area. Facility is maintained very clean. I did not observe any hazardous waste in trash cans throughout the facility or municipal trash. Waste oil is stored in an aboveground tank that is kept closed and labeled. Waste antifreeze (1) and used oil filter (1) drums are stored closed and labeled. Manifest was reviewed. Emergency contact information is available on site.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	10-23-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 10/16/15 were reviewed and declined with the following considerations: - Waste Antifreeze: CAS# listed in Chemical Identification and Physical Properties section must be deleted and waste information be listed in Mixture Components section. - Hydraulic Oil: Information in Mixture Components section must be deleted and CAS# should be listed in Chemical Identification and Physical Properties section. Also, Fire Code Hazard Classes and ?Fire? as a Federal Hazard Categories must be listed. - Motor Oil: Chemical Name must be listed on form. Also, CAS# 6474X-XX-X listed for ?Various Lubricating Base Oils? in Mixture Components section is not acceptable, especially that this material is the main component at 85%. All digits of the CAS# must be provided or CAS# 64742-65-0 may be used. - Waste Motor Oil: CAS# 6474X-XX-X listed for ?Various Lubricating Base Oils? in Mixture Components section is not acceptable, especially that this material [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-17-2016
Violations Found:	No

SUNSTATE EQUIPMENT CO (Continued) **S123512598**

Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 2/2/16 were reviewed and not accepted with the following considerations: Antifreeze (new): ?State Waste Code? and ?Annual Waste Amount? should be removed since this material is not waste. Diesel Fuel No. 2: ?Annual Waste Amount? should be removed since this material is not waste. Gasoline: ?Annual Waste Amount? should be removed since this material is not waste. Motor Oil: ?State Waste Code? and ?Annual Waste Amount? should be removed since this material is not waste. The following material are below reporting quantities of 55 gallons, 200/1000 cubic feet or 500 pounds and must be removed: - Acetylene (less than 200 cubic feet) - Automatic Transmission Fluid (less than 55 gallons) - Nitrogen (less than 1000 cubic feet) - Argon/CO2 (less than 200 cubic feet) - Oxygen (less than 200 cubic feet) - Waste Oil Filters (less than 500 pounds) This agency administers the Hazardous Material Inspection program for this city [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	09-18-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct aboveground petroleum storage tank (APST) inspection. Street name has been changed from Indian Ocean Dr. to Civic Center Dr. Facility has the following APSTs: - 1500 gallon compartment tank (1250 gallon diesel & 250 gallon gasoline) - 120 gallon hydraulic oil - 120 gallon new motor oil - 240 gallons waste oil Weekly APST inspections are conducted and logs are included in the "Weekly Hazardous Material Storage Area Inspection Checklist." Annual employee training is provided and training records are available for review. SPCC plan dated 11/4/15 is available on site.
Eval Division:	Orange County Environmental Health
Eval Program:	APSA
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	09-18-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Street name has been changed from Indian Ocean Dr. to Civic Center Dr. I walked through the shop, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans throughout facility. Waste oil is stored in an aboveground tank that is kept closed and labeled. Waste antifreeze (1), spent absorbent (1), used oil filters/metal (1) and used oil filters/paper (1) drums are stored closed and labeled. Manifests were reviewed. "Weekly Hazardous Material Storage Area Inspection Checklist" are available for review. Emergency card is posted in posted in a glass covered bulletin board in front office area. A copy of Contingency Plan and Evacuation Plan is available on site.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS

SUNSTATE EQUIPMENT CO (Continued) **S123512598**

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-22-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector Comments: On site to conduct new Aboveground Petroleum Storage Tank (APST) inspection. This business left/closed this location six years ago but came back and began operations again in June 2015. I walked through the facility and perimeter. The facility has the following APSTs: - 1500 gallon compartment tank (1250 gallon diesel & 250 gallon gasoline) - 55 gallon new motor oil - 120 gallon hydraulic oil - 120 gallon new motor oil - 240 gallons waste oil SPCC plan is currently being prepared by an environmental consulting company.
Eval Division: Orange County Environmental Health
Eval Program: APSA
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 09-26-2018
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed Facility Information and Emergency documents submitted to CERS on 9/18/18. Facility Information was not accepted since street name was not changed to ?Civic Center Dr.? Emergency plan was accepted with comment to add Regional Water Quality Control Board's phone number in next submittal. I emailed a copy of inspection report dated 9/18/18 to CERS contact so inventory could be updated.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 10-30-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed and accepted revised documents submitted to CERS on 10/26/15.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Affiliation:
Affiliation Type Desc: Legal Owner
Entity Name: Sunstate Equipment Co., LLC.
Entity Title: Not reported
Affiliation Address: 5552 E. Washington Street
Affiliation City: Phoenix
Affiliation State: AZ
Affiliation Country: United States
Affiliation Zip: 85034
Affiliation Phone: (602) 275-2398

Affiliation Type Desc: Operator
Entity Name: Sunstate Equipment Co., L.L.C.
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported

SUNSTATE EQUIPMENT CO (Continued) **S123512598**

Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (602) 683-2268

Affiliation Type Desc: Parent Corporation
Entity Name: Sunstate Equipment Co
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Environmental Contact
Entity Name: Annie Bodell
Entity Title: Not reported
Affiliation Address: 5552 E. Washington Street
Affiliation City: Phoenix
Affiliation State: AZ
Affiliation Country: Not reported
Affiliation Zip: 85034
Affiliation Phone: Not reported

Affiliation Type Desc: Document Preparer
Entity Name: Annmarie Bodell
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 5552 E Washington St
Affiliation City: Phoenix
Affiliation State: AZ
Affiliation Country: Not reported
Affiliation Zip: 85034
Affiliation Phone: Not reported

Affiliation Type Desc: Identification Signer
Entity Name: Annmarie Bodell
Entity Title: Environmental & Compliance Specialist
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Property Owner
Entity Name: Sukut Real Properties, LP
Entity Title: Not reported

SUNSTATE EQUIPMENT CO (Continued) **S123512598**

Affiliation Address: 4010 W. Chandler Ave.
Affiliation City: Santa Ana
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 92704-5202
Affiliation Phone: (714) 460-1016

Affiliation Type Desc: CUPA District
Entity Name: Orange County Env Health
Entity Title: Not reported
Affiliation Address: 1241 East Dyer RoadSuite 120
Affiliation City: Santa Ana
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92705-5611
Affiliation Phone: (714) 433-6000

CERS TANKS:
Facility Name: SUNSTATE EQUIPMENT CO
Site ID: 359105
CERS ID: 10540978
CERS Description: Aboveground Petroleum Storage

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-12-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to conduct routine hazardous waste inspection. Mike Williams granted consent to conduct inspection. I walked through the shop, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans throughout shop. Waste oil is stored in an aboveground tank that is kept closed and labeled. Waste antifreeze (1), used oil filters/metal (1) and used oil filters/paper (1) drums are stored closed and labeled. Manifests were reviewed. An emergency card was provided to be filled out and posted.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-18-2018
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to conduct hazardous materials chemical inventory and business emergency plan (HMBEP) inspection. Street name has been changed from Indian Ocean Dr. to Civic Center Dr. Please update CERS (Facility Information and site map) with new address. I walked through the facility and inspected hazardous material storage areas inside shop and yard. There has been changes in types and/or volumes of the hazardous material stored on site since last inspection or previous reporting period. Facility does not store new antifreeze at disclosure threshold and does not store waste ATF. Waste antifreeze and ATF must be deleted from inventory. The following material previously not observed on site must be added to inventory: - 1004 cubic of oxygen gas (largest cylinder - 251 cubic feet) - 420 cubic of acetylene gas

SUNSTATE EQUIPMENT CO (Continued) **S123512598**

(largest cylinder - 118 cubic feet) - 330 gallons of Diesel Exhaust Fluid Site map must be revised to show locations of new material. In addition, [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-22-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector Comments: On site to conduct new hazardous materials chemical inventory and business emergency plan inspection. Paul Barnhouse assisted with the inspection. I walked through the facility and inspected hazardous materials storage areas. Facility has the following hazardous materials that meet required disclosure quantities: - 1250 gallons of diesel - 250 gallons of gasoline - 120 gallons of new motor oil - 120 gallons of hydraulic oil - 55 gallons of Zep Formula 940 detergent - 250 gallons of propane (tank) and propane cylinders (approximately 110 gallons) - 240 gallons of waste oil - 55 gallons of waste antifreeze Facility is required and has been notified to electronically submit the following documents within 30 days of this inspection: - Business Activities form - Owner/Operator Identification form - Hazardous Material Chemical Inventory forms - Facility Site Map - Business Emergency Plan Documents must be electronically [Truncated]
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 02-03-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed and accepted annual certification documents submitted to CERS on 1/30/17.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 02-18-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed and accepted revised HMBP documents submitted to CERS on 2/17/16.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-22-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector Comments: On site to conduct hazardous waste generator inspection. Paul Barnhouse granted consent to conduct inspection. This business left/closed this location six years ago but came back and

SUNSTATE EQUIPMENT CO (Continued) **S123512598**

began operations again in June 2015. I walked through the facility, perimeter and inspected waste storage area. Facility is maintained very clean. I did not observe any hazardous waste in trash cans throughout the facility or municipal trash. Waste oil is stored in an aboveground tank that is kept closed and labeled. Waste antifreeze (1) and used oil filter (1) drums are stored closed and labeled. Manifest was reviewed. Emergency contact information is available on site.

Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 10-23-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Documents submitted to CERS on 10/16/15 were reviewed and declined with the following considerations: - Waste Antifreeze: CAS# listed in Chemical Identification and Physical Properties section must be deleted and waste information be listed in Mixture Components section. - Hydraulic Oil: Information in Mixture Components section must be deleted and CAS# should be listed in Chemical Identification and Physical Properties section. Also, Fire Code Hazard Classes and ?Fire? as a Federal Hazard Categories must be listed. - Motor Oil: Chemical Name must be listed on form. Also, CAS# 6474X-XX-X listed for ?Various Lubricating Base Oils? in Mixture Components section is not acceptable, especially that this material is the main component at 85%. All digits of the CAS# must be provided or CAS# 64742-65-0 may be used. - Waste Motor Oil: CAS# 6474X-XX-X listed for ?Various Lubricating Base Oils? in Mixture Components section is not acceptable, especially that this material [Truncated]
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 02-17-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Documents submitted to CERS on 2/2/16 were reviewed and not accepted with the following considerations: Antifreeze (new): ?State Waste Code? and ?Annual Waste Amount? should be removed since this material is not waste. Diesel Fuel No. 2: ?Annual Waste Amount? should be removed since this material is not waste. Gasoline: ?Annual Waste Amount? should be removed since this material is not waste. Motor Oil: ?State Waste Code? and ?Annual Waste Amount? should be removed since this material is not waste. The following material are below reporting quantities of 55 gallons, 200/1000 cubic feet or 500 pounds and must be removed: - Acetylene (less than 200 cubic feet) - Automatic Transmission Fluid (less than 55 gallons) - Nitrogen (less than 1000 cubic feet) - Argon/CO2 (less than 200 cubic feet) - Oxygen (less than 200 cubic feet) - Waste Oil Filters (less than 500 pounds) This agency administers the Hazardous Material Inspection program for this city [Truncated]
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

SUNSTATE EQUIPMENT CO (Continued) **S123512598**

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	09-18-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct aboveground petroleum storage tank (APST) inspection. Street name has been changed from Indian Ocean Dr. to Civic Center Dr. Facility has the following APSTs: - 1500 gallon compartment tank (1250 gallon diesel & 250 gallon gasoline) - 120 gallon hydraulic oil - 120 gallon new motor oil - 240 gallons waste oil Weekly APST inspections are conducted and logs are included in the "Weekly Hazardous Material Storage Area Inspection Checklist." Annual employee training is provided and training records are available for review. SPCC plan dated 11/4/15 is available on site.
Eval Division:	Orange County Environmental Health
Eval Program:	APSA
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	09-18-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Street name has been changed from Indian Ocean Dr. to Civic Center Dr. I walked through the shop, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans throughout facility. Waste oil is stored in an aboveground tank that is kept closed and labeled. Waste antifreeze (1), spent absorbent (1), used oil filters/metal (1) and used oil filters/paper (1) drums are stored closed and labeled. Manifests were reviewed. "Weekly Hazardous Material Storage Area Inspection Checklist" are available for review. Emergency card is posted in posted in a glass covered bulletin board in front office area. A copy of Contingency Plan and Evacuation Plan is available on site.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	09-22-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct new Aboveground Petroleum Storage Tank (APST) inspection. This business left/closed this location six years ago but came back and began operations again in June 2015. I walked through the facility and perimeter. The facility has the following APSTs: - 1500 gallon compartment tank (1250 gallon diesel & 250 gallon gasoline) - 55 gallon new motor oil - 120 gallon hydraulic oil - 120 gallon new motor oil - 240 gallons waste oil SPCC plan is currently being prepared by an environmental consulting company.
Eval Division:	Orange County Environmental Health
Eval Program:	APSA
Eval Source:	CERS

Eval General Type:	Other/Unknown
Eval Date:	09-26-2018
Violations Found:	No

SUNSTATE EQUIPMENT CO (Continued) **S123512598**

Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed Facility Information and Emergency documents submitted to CERS on 9/18/18. Facility Information was not accepted since street name was not changed to ?Civic Center Dr.? Emergency plan was accepted with comment to add Regional Water Quality Control Board's phone number in next submittal. I emailed a copy of inspection report dated 9/18/18 to CERS contact so inventory could be updated.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 10-30-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed and accepted revised documents submitted to CERS on 10/26/15.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Affiliation:
Affiliation Type Desc: Legal Owner
Entity Name: Sunstate Equipment Co., LLC.
Entity Title: Not reported
Affiliation Address: 5552 E. Washington Street
Affiliation City: Phoenix
Affiliation State: AZ
Affiliation Country: United States
Affiliation Zip: 85034
Affiliation Phone: (602) 275-2398

Affiliation Type Desc: Operator
Entity Name: Sunstate Equipment Co., L.L.C.
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (602) 683-2268

Affiliation Type Desc: Parent Corporation
Entity Name: Sunstate Equipment Co
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Environmental Contact
Entity Name: Annie Bodell
Entity Title: Not reported
Affiliation Address: 5552 E. Washington Street
Affiliation City: Phoenix
Affiliation State: AZ

SUNSTATE EQUIPMENT CO (Continued) **S123512598**

Affiliation Country: Not reported
Affiliation Zip: 85034
Affiliation Phone: Not reported

Affiliation Type Desc: Document Preparer
Entity Name: Annmarie Bodell
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 5552 E Washington St
Affiliation City: Phoenix
Affiliation State: AZ
Affiliation Country: Not reported
Affiliation Zip: 85034
Affiliation Phone: Not reported

Affiliation Type Desc: Identification Signer
Entity Name: Annmarie Bodell
Entity Title: Environmental & Compliance Specialist
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Property Owner
Entity Name: Sukut Real Properties, LP
Entity Title: Not reported
Affiliation Address: 4010 W. Chandler Ave.
Affiliation City: Santa Ana
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 92704-5202
Affiliation Phone: (714) 460-1016

Affiliation Type Desc: CUPA District
Entity Name: Orange County Env Health
Entity Title: Not reported
Affiliation Address: 1241 East Dyer RoadSuite 120
Affiliation City: Santa Ana
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92705-5611
Affiliation Phone: (714) 433-6000

CERS TANKS:
Site ID: 359105

SUNSTATE EQUIPMENT CO (Continued) **S123512598**

CERS ID: 10540978
Site Name: SUNSTATE EQUIPMENT CO
CERS Description: Chemical Storage Facilities

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-12-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to conduct routine hazardous waste inspection. Mike Williams granted consent to conduct inspection. I walked through the shop, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans throughout shop. Waste oil is stored in an aboveground tank that is kept closed and labeled. Waste antifreeze (1), used oil filters/metal (1) and used oil filters/paper (1) drums are stored closed and labeled. Manifests were reviewed. An emergency card was provided to be filled out and posted.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-18-2018
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to conduct hazardous materials chemical inventory and business emergency plan (HMBEP) inspection. Street name has been changed from Indian Ocean Dr. to Civic Center Dr. Please update CERS (Facility Information and site map) with new address. I walked through the facility and inspected hazardous material storage areas inside shop and yard. There has been changes in types and/or volumes of the hazardous material stored on site since last inspection or previous reporting period. Facility does not store new antifreeze at disclosure threshold and does not store waste ATF. Waste antifreeze and ATF must be deleted from inventory. The following material previously not observed on site must be added to inventory: - 1004 cubic of oxygen gas (largest cylinder - 251 cubic feet) - 420 cubic of acetylene gas (largest cylinder - 118 cubic feet) - 330 gallons of Diesel Exhaust Fluid Site map must be revised to show locations of new material. In addition, [Truncated]
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-22-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector Comments: On site to conduct new hazardous materials chemical inventory and business emergency plan inspection. Paul Barnhouse assisted with the inspection. I walked through the facility and inspected hazardous materials storage areas. Facility has the following hazardous materials that meet required disclosure quantities: - 1250 gallons of diesel - 250 gallons of gasoline - 120 gallons of new motor oil - 120 gallons of hydraulic oil - 55 gallons of Zep Formula 940 detergent - 250 gallons of propane (tank) and propane cylinders (approximately 110 gallons) - 240 gallons of waste oil - 55 gallons of waste antifreeze Facility is required and has been

SUNSTATE EQUIPMENT CO (Continued) **S123512598**

notified to electronically submit the following documents within 30 days of this inspection: - Business Activities form - Owner/Operator Identification form - Hazardous Material Chemical Inventory forms - Facility Site Map - Business Emergency Plan Documents must be electronically [Truncated]
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 02-03-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed and accepted annual certification documents submitted to CERS on 1/30/17.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 02-18-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed and accepted revised HMBP documents submitted to CERS on 2/17/16.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-22-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector Comments: On site to conduct hazardous waste generator inspection. Paul Barnhouse granted consent to conduct inspection. This business left/closed this location six years ago but came back and began operations again in June 2015. I walked through the facility, perimeter and inspected waste storage area. Facility is maintained very clean. I did not observe any hazardous waste in trash cans throughout the facility or municipal trash. Waste oil is stored in an aboveground tank that is kept closed and labeled. Waste antifreeze (1) and used oil filter (1) drums are stored closed and labeled. Manifest was reviewed. Emergency contact information is available on site.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 10-23-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Documents submitted to CERS on 10/16/15 were reviewed and declined with the following considerations: - Waste Antifreeze: CAS# listed in Chemical Identification and Physical Properties section must be deleted and waste information be listed in Mixture Components section. - Hydraulic Oil: Information in Mixture Components section must be deleted and CAS# should be listed in Chemical Identification and

SUNSTATE EQUIPMENT CO (Continued) **S123512598**

Physical Properties section. Also, Fire Code Hazard Classes and ?Fire? as a Federal Hazard Categories must be listed. - Motor Oil: Chemical Name must be listed on form. Also, CAS# 6474X-XX-X listed for ?Various Lubricating Base Oils? in Mixture Components section is not acceptable, especially that this material is the main component at 85%. All digits of the CAS# must be provided or CAS# 64742-65-0 may be used. - Waste Motor Oil: CAS# 6474X-XX-X listed for ?Various Lubricating Base Oils? in Mixture Components section is not acceptable, especially that this material [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 02-17-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Documents submitted to CERS on 2/2/16 were reviewed and not accepted with the following considerations: Antifreeze (new): ?State Waste Code? and ?Annual Waste Amount? should be removed since this material is not waste. Diesel Fuel No. 2: ?Annual Waste Amount? should be removed since this material is not waste. Gasoline: ?Annual Waste Amount? should be removed since this material is not waste. Motor Oil: ?State Waste Code? and ?Annual Waste Amount? should be removed since this material is not waste. The following material are below reporting quantities of 55 gallons, 200/1000 cubic feet or 500 pounds and must be removed: - Acetylene (less than 200 cubic feet) - Automatic Transmission Fluid (less than 55 gallons) - Nitrogen (less than 1000 cubic feet) - Argon/CO2 (less than 200 cubic feet) - Oxygen (less than 200 cubic feet) - Waste Oil Filters (less than 500 pounds) This agency administers the Hazardous Material Inspection program for this city [Truncated]
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-18-2018
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to conduct aboveground petroleum storage tank (APST) inspection. Street name has been changed from Indian Ocean Dr. to Civic Center Dr. Facility has the following APSTs: - 1500 gallon compartment tank (1250 gallon diesel & 250 gallon gasoline) - 120 gallon hydraulic oil - 120 gallon new motor oil - 240 gallons waste oil Weekly APST inspections are conducted and logs are included in the "Weekly Hazardous Material Storage Area Inspection Checklist." Annual employee training is provided and training records are available for review. SPCC plan dated 11/4/15 is available on site.
Eval Division: Orange County Environmental Health
Eval Program: APSA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-18-2018
Violations Found: No
Eval Type: Routine done by local agency

SUNSTATE EQUIPMENT CO (Continued) **S123512598**

Eval Notes:	On site to conduct routine hazardous waste inspection. Street name has been changed from Indian Ocean Dr. to Civic Center Dr. I walked through the shop, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans throughout facility. Waste oil is stored in an aboveground tank that is kept closed and labeled. Waste antifreeze (1), spent absorbent (1), used oil filters/metal (1) and used oil filters/paper (1) drums are stored closed and labeled. Manifests were reviewed. "Weekly Hazardous Material Storage Area Inspection Checklist" are available for review. Emergency card is posted in posted in a glass covered bulletin board in front office area. A copy of Contingency Plan and Evacuation Plan is available on site.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	09-22-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct new Aboveground Petroleum Storage Tank (APST) inspection. This business left/closed this location six years ago but came back and began operations again in June 2015. I walked through the facility and perimeter. The facility has the following APSTs: - 1500 gallon compartment tank (1250 gallon diesel & 250 gallon gasoline) - 55 gallon new motor oil - 120 gallon hydraulic oil - 120 gallon new motor oil - 240 gallons waste oil SPCC plan is currently being prepared by an environmental consulting company.
Eval Division:	Orange County Environmental Health
Eval Program:	APSA
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	09-26-2018
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed Facility Information and Emergency documents submitted to CERS on 9/18/18. Facility Information was not accepted since street name was not changed to ?Civic Center Dr.? Emergency plan was accepted with comment to add Regional Water Quality Control Board's phone number in next submittal. I emailed a copy of inspection report dated 9/18/18 to CERS contact so inventory could be updated.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	10-30-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted revised documents submitted to CERS on 10/26/15.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS

SUNSTATE EQUIPMENT CO (Continued) **S123512598**

Affiliation:

Affiliation Type Desc:	Legal Owner
Entity Name:	Sunstate Equipment Co., LLC.
Entity Title:	Not reported
Affiliation Address:	5552 E. Washington Street
Affiliation City:	Phoenix
Affiliation State:	AZ
Affiliation Country:	United States
Affiliation Zip:	85034
Affiliation Phone:	(602) 275-2398

Affiliation Type Desc:	Operator
Entity Name:	Sunstate Equipment Co., L.L.C.
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(602) 683-2268

Affiliation Type Desc:	Parent Corporation
Entity Name:	Sunstate Equipment Co
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Environmental Contact
Entity Name:	Annie Bodell
Entity Title:	Not reported
Affiliation Address:	5552 E. Washington Street
Affiliation City:	Phoenix
Affiliation State:	AZ
Affiliation Country:	Not reported
Affiliation Zip:	85034
Affiliation Phone:	Not reported

Affiliation Type Desc:	Document Preparer
Entity Name:	Annmarie Bodell
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	5552 E Washington St
Affiliation City:	Phoenix
Affiliation State:	AZ

SUNSTATE EQUIPMENT CO (Continued) **S123512598**

Affiliation Country:	Not reported
Affiliation Zip:	85034
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	Annmarie Bodell
Entity Title:	Environmental & Compliance Specialist
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Property Owner
Entity Name:	Sukut Real Properties, LP
Entity Title:	Not reported
Affiliation Address:	4010 W. Chandler Ave.
Affiliation City:	Santa Ana
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92704-5202
Affiliation Phone:	(714) 460-1016
Affiliation Type Desc:	CUPA District
Entity Name:	Orange County Env Health
Entity Title:	Not reported
Affiliation Address:	1241 East Dyer RoadSuite 120
Affiliation City:	Santa Ana
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92705-5611
Affiliation Phone:	(714) 433-6000

15
WNW
1/8-1/4
0.156 mi.
825 ft.

GREENWASTE COMPOSTING **WMUDS/SWAT** **S104384477**
20712 INDIAN OCEAN DR **N/A**
LAKE FOREST CA, CA 92630

Relative:
Higher

Actual:
664 ft.

WMUDS/SWAT:

Edit Date:	Not reported
Complexity:	Not reported
Primary Waste:	SLDWST
Primary Waste Type:	Nonhazardous Solid Wastes/Influent or Solid Wastes that contain nonhazardous putrescible and non putrescible solid, semisolid, and liquid wastes (E.G., garbage, trash, refuse, paper, demolition and construction wastes, manure, vegetable or animal solid and semisolid waste).
Secondary Waste:	Not reported
Secondary Waste Type:	Not reported
Base Meridian:	Not reported
NPID:	Not reported
Tonnage:	0
Regional Board ID:	Not reported
Municipal Solid Waste:	False
Superorder:	False

GREENWASTE COMPOSTING (Continued) **S104384477**

Open To Public:	False
Waste List:	False
Agency Type:	Private
Agency Name:	PACIFIC WASTE MANAGEMENT
Agency Department:	Not reported
Agency Address:	20712 INDIAN OCEAN DR.
Agency City,St,Zip:	LAKE FOREST CA 92630
Agency Contact:	GARY PLUMLEY
Agency Telephone:	7145988181
Land Owner Name:	Not reported
Land Owner Address:	Not reported
Land Owner City,St,Zip:	Not reported
Land Owner Contact:	Not reported
Land Owner Phone:	Not reported
Region:	8
Facility Type:	Other - Does not fall into the category of Municipal/Domestic, Industrial, Agricultural or Solid Waste (Class I, II or III)
Facility Description:	Not reported
Facility Telephone:	Not reported
SWAT Facility Name:	Not reported
Primary SIC:	2875
Secondary SIC:	Not reported
Comments:	Not reported
Last Facility Editors:	Not reported
Waste Discharge System:	True
Solid Waste Assessment Test Program:	False
Toxic Pits Cleanup Act Program:	False
Resource Conservation Recovery Act:	False
Department of Defence:	False
Solid Waste Assessment Test Program:	Not reported
Threat to Water Quality:	Not reported
Sub Chapter 15:	True
Regional Board Project Officer:	JPL
Number of WMUDS at Facility:	0
Section Range:	Not reported
RCRA Facility:	No
Waste Discharge Requirements:	H
Self-Monitoring Rept. Frequency:	No Reporting Requirements
Waste Discharge System ID:	8 303062001
Solid Waste Information ID:	Not reported

F16 **AST** **A100184607**
WNW **20772 INDIAN OCEAN DR** **N/A**
1/8-1/4 **LAKE FOREST, CA**
0.177 mi.
936 ft. **Site 2 of 3 in cluster F**

Relative: AST:
Higher

Actual:
631 ft.

Certified Unified Program Agencies:	Orange
Owner:	SUNSTATE EQUIPMENT CO
Total Gallons:	1,320
CERSID:	Not reported
Facility ID:	Not reported
Business Name:	Not reported
Phone:	Not reported
Fax:	Not reported
Mailing Address:	Not reported
Mailing Address City:	Not reported

(Continued) **A100184607**

Mailing Address State:	Not reported
Mailing Address Zip Code:	Not reported
Operator Name:	Not reported
Operator Phone:	Not reported
Owner Phone:	Not reported
Owner Mail Address:	Not reported
Owner State:	Not reported
Owner Zip Code:	Not reported
Owner Country:	Not reported
Property Owner Name:	Not reported
Property Owner Phone:	Not reported
Property Owner Mailing Address:	Not reported
Property Owner City:	Not reported
Property Owner Stat :	Not reported
Property Owner Zip Code:	Not reported
Property Owner Country:	Not reported
EPAID:	Not reported

F17 **SUNSTATE EQUIPMENT CO** **AST** **A100425014**
WNW **20772 INDIAN OCEAN DR** **N/A**
1/8-1/4 **LAKE FOREST, CA 92630**
0.177 mi.
936 ft. **Site 3 of 3 in cluster F**

Relative: **Higher**

Actual: **631 ft.**

AST:

Certified Unified Program Agencies:	Not reported
Owner:	Sunstate Equipment Co., LLC.
Total Gallons:	Not reported
CERSID:	10540978
Facility ID:	FA0028626
Business Name:	SUNSTATE EQUIPMENT CO
Phone:	6026832268
Fax:	6027975681
Mailing Address:	5552 E Washington St
Mailing Address City:	Phoenix
Mailing Address State:	AZ
Mailing Address Zip Code:	85034
Operator Name:	Sunstate Equipment Co., L.L.C.
Operator Phone:	6026832268
Owner Phone:	(602) 275-2398
Owner Mail Address:	5552 E. Washington Street
Owner State:	AZ
Owner Zip Code:	85034
Owner Country:	United States
Property Owner Name:	Sukut Real Properties, LP
Property Owner Phone:	(714) 460-1016
Property Owner Mailing Address:	4010 W. Chandler Ave.
Property Owner City:	Santa Ana
Property Owner Stat :	CA
Property Owner Zip Code:	Not reported
Property Owner Country:	United States
EPAID:	CAL000194793

E18 **ARB INC** **RCRA-SQG** **1004675755**
NNW **20602 INDIAN OCEAN** **UST** **CAR000076760**
1/8-1/4 **LAKE FOREST, CA 92630** **AST**
0.183 mi. **FINDS**
965 ft. **Site 3 of 3 in cluster E** **ECHO**

Relative: Higher

Actual: 715 ft.

RCRA-SQG:

Date form received by agency:	03/03/2004
Facility name:	ARB INC
Facility address:	20602 INDIAN OCEAN LAKE FOREST, CA 92630
EPA ID:	CAR000076760
Contact:	JERRY J CLEGHORN
Contact address:	20602 INDIAN OCEAN LAKE FOREST, CA 92630
Contact country:	US
Contact telephone:	949-465-7302
Contact email:	JCLEGHORN@ARBINC.COM
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	JERRY CLEGHORN
Owner/operator address:	Not reported Not reported
Owner/operator country:	US
Owner/operator telephone:	Not reported
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	06/15/1998
Owner/Op end date:	Not reported

Owner/operator name:	ARB INC
Owner/operator address:	26000 COMMERCENTRE DRIVE LAKE FOREST, CA 92630
Owner/operator country:	US
Owner/operator telephone:	Not reported
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	01/01/1996
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No

ARB INC (Continued) **1004675755**

Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Historical Generators:

Date form received by agency:	02/17/2004
Site name:	ARB INC
Classification:	Small Quantity Generator

Date form received by agency:	07/03/2000
Site name:	A R B INC
Classification:	Small Quantity Generator

Hazardous Waste Summary:

. Waste code:	D001
. Waste name:	IGNITABLE WASTE

. Waste code:	D018
. Waste name:	BENZENE

. Waste code:	D039
. Waste name:	TETRACHLOROETHYLENE

Violation Status: No violations found

UST:

Facility ID:	Not reported
Permitting Agency:	Orange County Environmental Health
Latitude:	33.66284
Longitude:	-117.67637

AST:

Certified Unified Program Agencies:	Orange
Owner:	ARB INC
Total Gallons:	1,320
CERSID:	Not reported
Facility ID:	Not reported
Business Name:	Not reported
Phone:	Not reported
Fax:	Not reported
Mailing Address:	Not reported
Mailing Address City:	Not reported
Mailing Address State:	Not reported
Mailing Address Zip Code:	Not reported
Operator Name:	Not reported
Operator Phone:	Not reported
Owner Phone:	Not reported

ARB INC (Continued) **1004675755**

Owner Mail Address:	Not reported
Owner State:	Not reported
Owner Zip Code:	Not reported
Owner Country:	Not reported
Property Owner Name:	Not reported
Property Owner Phone:	Not reported
Property Owner Mailing Address:	Not reported
Property Owner City:	Not reported
Property Owner Stat :	Not reported
Property Owner Zip Code:	Not reported
Property Owner Country:	Not reported
EPAID:	Not reported

FINDS:

Registry ID: 110002939447

Environmental Interest/Information System

US National Pollutant Discharge Elimination System (NPDES) module of the Compliance Information System (ICIS) tracks surface water permits issued under the Clean Water Act. Under NPDES, all facilities that discharge pollutants from any point source into waters of the United States are required to obtain a permit. The permit will likely contain limits on what can be discharged, impose monitoring and reporting requirements, and include other provisions to ensure that the discharge does not adversely affect water quality.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

HAZARDOUS WASTE BIENNIAL REPORTER

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid:	1004675755
Registry ID:	110002939447
DFR URL:	http://echo.epa.gov/detailed-facility-report?fid=110002939447

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19 **BLAIRS TOWING** **CERS HAZ WASTE** **S113466003**
North **26100 DIMENSION DR** **HAZNET** **N/A**
1/8-1/4 **LAKE FOREST, CA 92630** **CERS**
0.186 mi.
983 ft.

Relative:
Higher

Actual:
654 ft.

CERS HAZ WASTE:

Site ID:	413204
CERS ID:	10547929
CERS Description:	Hazardous Waste Generator

Violations:

BLAIRS TOWING (Continued) **S113466003**

Site ID: 413204
Site Name: BLAIRS TOWING
Violation Date: 01-05-2018
Citation: 22 CCR 12 66262.12 - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.12
Violation Description: Failure to obtain an Identification Number prior to treating, storing, disposing of, transporting or offering for transportation any hazardous waste.
Violation Notes: Returned to compliance on 01/05/2018. EPA ID# for this business is inactive. An EPA ID# application was completed and submitted to DTSC to reactivate number. Violation has been corrected.
Violation Division: Orange County Environmental Health
Violation Program: HW
Violation Source: CERS

Site ID: 413204
Site Name: BLAIRS TOWING
Violation Date: 10-10-2014
Citation: HSC 6.95 25508(d) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(d)
Violation Description: Failure to complete and/or electronically submit a business plan when storing/handling a hazardous material at or above reportable quantities.
Violation Notes: Returned to compliance on 02/25/2015.
Violation Division: Orange County Environmental Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 413204
Site Name: BLAIRS TOWING
Violation Date: 01-15-2015
Citation: 22 CCR 12 66262.34(d) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(d)
Violation Description: Failure to dispose of hazardous waste within 180 days (or 270 if waste is transported over 200 miles) for the generator who generates less than 1000 kilogram per month, but more than 100 kilograms per month.
Violation Notes: Returned to compliance on 02/10/2015. Waste accumulation time for waste antifreeze has been exceeded. There is approximately 40/45 gallons stored on site. Waste antifreeze must be disposed of within 30 days of this inspection.
Violation Division: Orange County Environmental Health
Violation Program: HW
Violation Source: CERS

Site ID: 413204
Site Name: BLAIRS TOWING
Violation Date: 10-10-2014
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description: Failure to complete and electronically submit hazardous material inventory information for all reportable hazardous materials on site at or above reportable quantities.
Violation Notes: Returned to compliance on 02/25/2015.
Violation Division: Orange County Environmental Health
Violation Program: HMRRP
Violation Source: CERS

BLAIRS TOWING (Continued) **S113466003**

Evaluation:

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-05-2018
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	I walked through facility and perimeter. I did not observe any hazardous waste in trash cans throughout facility. Emergency card is posted in operations manager's office Assisted business with completion and submission of EPA ID# application to reactivate number.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-08-2014
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Blair's Towing 26100 Dimension Lake Forest, CA 92630 On site to conduct new hazardous materials chemical inventory and business emergency plan inspection. I walked through the facility and inspected hazardous materials storage areas. The facility has the following hazardous materials that meet required disclosure quantities: - New oil - Waste oil - Waste antifreeze - Diesel - Carbon/Argon compressed gas Facility is required and has been notified to electronically submit the following documents within 60 days of this inspection: - Business Activities form - Owner/Operator Identification form - Hazardous Material Chemical Inventory forms - Facility Site Map - Business Emergency Plan Documents must be electronically submitted by going to www.esubmit.ocgov.com and requesting a username and password. User guides and tutorials are located on the home page to help you get started. If you are having trouble, please call (714) 433-6000 and request to [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-18-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct hazardous materials chemical inventory and business emergency plan inspection. Jim Middleton granted consent to conduct inspection. I walked through the facility and inspected hazardous material storage areas, inside building and outside where the diesel aboveground tank is located. There has been no changes in types and/or volumes of the hazardous material stored on site since last inspection or previous reporting period, except one of the diesel aboveground tank has been removed from the facility. Diesel inventory and site map were updated to reflect removal of aboveground tank from the facility. Emergency card is posted in dispatch office and an additional card was provided to be posted on the main bulletin board in the shop. Evacuation site maps are posted throughout the facility. I assisted him in correcting inventory forms, upload new site map and submitted annual certification documents for 2017.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS

BLAIRS TOWING (Continued) **S113466003**

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-18-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Jim Middleton granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans or municipal trash. Waste oil is stored in an aboveground tank that is kept closed and is labeled. Waste antifreeze (1) and used oil filter (1) drums are stored closed and labeled. Manifests were reviewed. Emergency card is posted in dispatch office. An additional emergency card was provided to be posted on main bulletin board in the shop.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-20-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Discussed facility's request to waive penalty and their history in paying invoices. Emailed accounting department to them know penalties cannot be waived.
Eval Division:	Orange County Environmental Health
Eval Program:	APSA
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	04-08-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted documents submitted to E-submit on 4/6/15.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	09-12-2013
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Received email from accounting department asking if the APST charge should be refunded since they wrote there is less than 1000 gallon of petroleum products in aboveground storage tanks. I called and left message for Steve Albright at the facility to make sure that the information provided on 8/1/13 regarding APST inventory (2400 total capacity) is still correct. I emailed accounting and let them know not refund APST fee. Steve A. called back and left message stating that the APST capacity is still 2400 and there was miscommunication at their facility.
Eval Division:	Orange County Environmental Health
Eval Program:	APSA
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	10-10-2014
Violations Found:	Yes

BLAIRS TOWING (Continued) **S113466003**

Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector Comments: Orange County Environmental Health as the Certified Unified Program Agency (OC CUPA) is the administrating agency for the Hazardous Materials Disclosure and Business Emergency Plan programs (HMD/BEP) previously administered by the Orange County Fire Authority. During the months of August and December of 2013, the OC CUPA sent out letters to regulated businesses requesting them to electronically submit their HMD/BEP forms. In addition, during the onsite inspection conducted on 1/8/14, your facility was notified again to submit HMD/BEP electronically. Electronic submission of these forms is a legal requirement. Failure to submit HMD/BEP forms is in violation of the California Health & Safety Code Chapter 6.95. According to our records there is no electronic submission for this facility. Please go to www.esubmit.ocgov.com to request a username and password and submit the following HMD/BEP forms within the next 30 days: - Business Activities [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-11-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct routine hazardous waste inspection. Mike Paroske granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans or municipal trash. Waste oil is stored in an aboveground tank that is kept closed and is labeled. Waste antifreeze (1) and used oil filter (1) drums are stored closed and labeled. Manifests were reviewed. Emergency card is posted in dispatch area.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-15-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector Comments: On site for follow up inspection since facility was notified to electronically submit HMBP documents during the onsite inspection conducted on 1/8/14 and inspection report dated 10/10/14 that included violations for failure to submit documents electronically. Facility has the following hazardous materials that meet the required disclosure quantities: - 200 gallons of waste oil - 55 gallons of waste antifreeze - 110 gallons of new motor oil - 2000 gallons diesel The following documents must be electronically submitted immediately to comply with outstanding violations and avoid further enforcement action: - Business Activities form - Owner/Operator Identification form - Hazardous Material Chemical Inventory forms - Facility Site Map - Business Emergency Plan Provided copy of 10/10/14 inspection report.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS

BLAIRS TOWING (Continued) **S113466003**

Eval General Type:	Other/Unknown
Eval Date:	01-09-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Processed A21.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-11-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site for aboveground petroleum storage tank (APST) inspection. Mike Paroske assisted with the inspection. I walked through the facility and verified APSTs currently on site: - 1000 gallons diesel - 200 gallons of waste oil - 110 new motor oil Please be advised that this agency will remove this business from the APST inspection program since facility has been storing less than 1320 gallons of petroleum products on site for over a year.
Eval Division:	Orange County Environmental Health
Eval Program:	APSA
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-11-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted annual certification documents submitted to E-submit on 1/11/16. Business Activities was updated since facility is not in the APST program anymore.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-16-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I emailed example chemical inventory forms to facility so he can submit HMBP documents.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-16-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Received email from accounting sent to them by collection department. Facility was requesting explanation as to why they are being billed for APST program and request that penalty on unpaid invoice for 2014/2015 be waived. Facility has over 1320 gallons of petroleum products on site. I emailed accounting back stating that they are in the APST program, therefore the bill needs to be paid and that I need to discuss waiving penalty with supervisor.
Eval Division:	Orange County Environmental Health

BLAIRS TOWING (Continued) **S113466003**

Eval Program: APSA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-28-2019
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to conduct routine hazardous waste inspection. Jim Middleton granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans or municipal trash. Waste oil is stored in an aboveground tank that is kept closed and is labeled. Waste antifreeze (1) and used oil filter (1) drums are stored closed and labeled. Manifests were reviewed. Emergency card is posted in dispatch area.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 02-10-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Inspector Comments: I received a copy of manifest documenting removal of 50 gallons of waste antifreeze from the facility on 1/22/15. Violation I053, regarding waste accumulation time being exceeded, cited during the routine inspection conducted on1/15/15, has been corrected.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 08-01-2013
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: I received an updated Aboveground Petroleum Storage Tank (APST) Facility Statement. The total APST capacity for all tanks at the facility is 2400 gallons.
Eval Division: Orange County Environmental Health
Eval Program: APSA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-08-2014
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to conduct routine hazardous waste inspection. Steve Albright granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans or municipal trash. Waste oil is stored in an aboveground storage tank and is labeled. Used oil filter (1) and waste antifreeze (1) drums are stored closed and labeled. Manifests were reviewed. Emergency card is posted in the shop by the supervisor's office.
Eval Division: Orange County Environmental Health
Eval Program: HW

BLAIRS TOWING (Continued) **S113466003**

Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-15-2015
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector Comments: On site to conduct routine hazardous waste inspection. James Middleton granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans or municipal trash. Waste oil is stored in an aboveground tank and is labeled. Waste antifreeze (1) and used oil filter (1) drums are stored closed and labeled. Manifests were reviewed. Waste accumulation time for waste antifreeze has been exceeded. There is approximately 40/45 gallons stored on site. Waste antifreeze must be disposed of within 30 days of this inspection. An emergency card was provided to be filled out and posted.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 01-22-2018
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed and accepted annual certification documents submitted to CERS on 1/5/18.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 02-25-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Documents submitted to E-submit on 2/11/15 were reviewed and declined with the following considerations: Waste Antifreeze form must be revised as follows: - CAS# listed at the top of the page under ?Common Name? must be removed since this is not pure/new material. - ?Maximum Daily Amount? should be changed from ?5.0? to ?55.? - Name for waste in the ?Hazardous Component? section should be change to waste ?antifreeze.? Waste Oil form must be revised as follows: - CAS# listed at the top of the page under ?Common Name? must be removed since this is not pure/new material. - ?Maximum Daily Amount? should be changed from ?16.0? to ?200.? Employee Training section, ?III. Employee Training Program? must be completed. The site map does not contain locations of the emergency shutoffs (water, electricity and natural gas) and hazardous materials handling (spill containment products) storage areas. (Verified with facility contact that Business Owner/Operator [Truncated]
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-06-2015
Violations Found: No

BLAIRS TOWING (Continued) **S113466003**

Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to E-submit on 3/5/15 were reviewed and declined with the following considerations: Waste Antifreeze form must be revised as follows: - CAS# listed at the top of the page under ?Common Name? must be removed since this is not pure/new material. - ?Maximum Daily Amount? should be changed from ?5.0? to ?55.? - Name for waste in the ?Hazardous Component? section should be change to waste ?antifreeze.? Waste Oil form must be revised as follows: - CAS# listed at the top of the page under ?Common Name? must be removed since this is not pure/new material. - ?Maximum Daily Amount? should be changed from ?16.0? to ?200.? Employee Training section, ?III. Employee Training Program? must be completed. The site map does not contain locations of the emergency shutoffs (water, electricity and natural gas) and hazardous materials handling (spill containment products) storage areas.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	04-06-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents to E-submit submitted on 3/20/15 were reviewed and declined with the following consideration: This Agency had requested that CAS#s listed at the top of the page under ?Common Name? for waste oil and waste antifreeze be removed since they are not pure/new material. However, CAS#s listed at the bottom of the form in the ?Hazardous Component? section for both waste oil and waste antifreeze have been removed and should be listed again. Please delete CAS#s listed at the top of the form under ?Common Name? for waste oil and waste antifreeze and list them at the bottom of the form in the ?Hazardous Component? section.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	07-30-2013
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct Aboveground Petroleum Storage Tank (APSTs) inspection. The facility has the following APSTs: 1 - 150 gallon new oil 1 - 250 gallon waste oil 2 - 1000 gallon diesel tanks Facility has SPCC plan.
Eval Division:	Orange County Environmental Health
Eval Program:	APSA
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	07-31-2013
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I copied and emailed the APST Facility Statement submitted in 2010 and a blank form to Steve at the facility so he can review and submit an updated form if necessary.
Eval Division:	Orange County Environmental Health

BLAIRS TOWING (Continued) **S113466003**

Eval Program: APSA
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 12-21-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Went to site to conduct inspection. Facility contact was not on site.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Coordinates:
Site ID: 413204
Facility Name: BLAIRS TOWING
Env Int Type Code: HMBP
Program ID: 10547929
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 33.663520
Longitude: -117.675020

Affiliation:
Affiliation Type Desc: Identification Signer
Entity Name: JAMES MIDDLTON
Entity Title: OPERATIONS MANAGER
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Environmental Contact
Entity Name: JAMES R.MIDDLETON
Entity Title: Not reported
Affiliation Address: 26100 DIMENSION
Affiliation City: lake forest
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92630
Affiliation Phone: Not reported

Affiliation Type Desc: Parent Corporation
Entity Name: BLAIRS TOWING
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: CUPA District
Entity Name: Orange County Env Health
Entity Title: Not reported

BLAIRS TOWING (Continued) **S113466003**

Affiliation Address: 1241 East Dyer RoadSuite 120
Affiliation City: Santa Ana
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92705-5611
Affiliation Phone: (714) 433-6000

Affiliation Type Desc: Document Preparer
Entity Name: JAMES MIDDLETON
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 26100 DIMENSION DR
Affiliation City: LAKE FOREST
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92630
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner
Entity Name: BLAIRS TOWING INC
Entity Title: Not reported
Affiliation Address: 26100 DIMENSION DR
Affiliation City: LAKE FOREST
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 92630
Affiliation Phone: (949) 588-8000

Affiliation Type Desc: Operator
Entity Name: BLAIRS TOWING INC.
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (949) 588-8000

HAZNET:
Site Name: BLAIR'S TOWING INC
Year: 2012
GEPAID: CAL000302939
Contact: STEVE ALBRIGHT
Telephone: 9498379757
Mailing Name: Not reported
Mailing Address: 26100 DIMENSION DR
Mailing City,St,Zip: LAKE FOREST, CA 926307808

BLAIRS TOWING (Continued) **S113466003**

Gen County: Orange
TSD EPA ID: NVT330010000
TSD County: 99
Tons: 0.2
CA Waste Code: 352-Other organic solids
Method: H132-Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Facility County: Orange

Site Name: BLAIR'S TOWING INC
Year: 2010
GEPAID: CAL000302939
Contact: STEVE ALBRIGHT
Telephone: 9498379757
Mailing Name: Not reported
Mailing Address: 26100 DIMENSION DR
Mailing City,St,Zip: LAKE FOREST, CA 926307808
Gen County: Orange
TSD EPA ID: CAD097030993
TSD County: Los Angeles
Tons: 0.02
CA Waste Code: 352-Other organic solids
Method: H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County: Orange

CERS TANKS:
Site ID: 413204
CERS ID: 10547929
Site Name: BLAIRS TOWING
CERS Description: Chemical Storage Facilities

Violations:
Site ID: 413204
Site Name: BLAIRS TOWING
Violation Date: 01-05-2018
Citation: 22 CCR 12 66262.12 - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.12
Violation Description: Failure to obtain an Identification Number prior to treating, storing, disposing of, transporting or offering for transportation any hazardous waste.
Violation Notes: Returned to compliance on 01/05/2018. EPA ID# for this business is inactive. An EPA ID# application was completed and submitted to DTSC to reactivate number. Violation has been corrected.
Violation Division: Orange County Environmental Health
Violation Program: HW
Violation Source: CERS

Site ID: 413204
Site Name: BLAIRS TOWING
Violation Date: 10-10-2014
Citation: HSC 6.95 25508(d) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(d)
Violation Description: Failure to complete and/or electronically submit a business plan when storing/handling a hazardous material at or above reportable quantities.
Violation Notes: Returned to compliance on 02/25/2015.

BLAIRS TOWING (Continued) **S113466003**

Violation Division: Orange County Environmental Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 413204
Site Name: BLAIRS TOWING
Violation Date: 01-15-2015
Citation: 22 CCR 12 66262.34(d) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(d)
Violation Description: Failure to dispose of hazardous waste within 180 days (or 270 if waste is transported over 200 miles) for the generator who generates less than 1000 kilogram per month, but more than 100 kilograms per month.
Violation Notes: Returned to compliance on 02/10/2015. Waste accumulation time for waste antifreeze has been exceeded. There is approximately 40/45 gallons stored on site. Waste antifreeze must be disposed of within 30 days of this inspection.
Violation Division: Orange County Environmental Health
Violation Program: HW
Violation Source: CERS

Site ID: 413204
Site Name: BLAIRS TOWING
Violation Date: 10-10-2014
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description: Failure to complete and electronically submit hazardous material inventory information for all reportable hazardous materials on site at or above reportable quantities.
Violation Notes: Returned to compliance on 02/25/2015.
Violation Division: Orange County Environmental Health
Violation Program: HMRRP
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-05-2018
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: I walked through facility and perimeter. I did not observe any hazardous waste in trash cans throughout facility. Emergency card is posted in operations manager's office Assisted business with completion and submission of EPA ID# application to reactivate number.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-08-2014
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Blair's Towing 26100 Dimension Lake Forest, CA 92630 On site to conduct new hazardous materials chemical inventory and business emergency plan inspection. I walked through the facility and inspected hazardous materials storage areas. The facility has the following hazardous materials that meet required disclosure quantities: - New oil - Waste oil - Waste antifreeze - Diesel - Carbon/Argon compressed gas Facility is required and has been notified to electronically

BLAIRS TOWING (Continued) **S113466003**

submit the following documents within 60 days of this inspection: - Business Activities form - Owner/Operator Identification form - Hazardous Material Chemical Inventory forms - Facility Site Map - Business Emergency Plan Documents must be electronically submitted by going to www.esubmit.ocgov.com and requesting a username and password. User guides and tutorials are located on the home page to help you get started. If you are having trouble, please call (714) 433-6000 and request to [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-18-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to conduct hazardous materials chemical inventory and business emergency plan inspection. Jim Middleton granted consent to conduct inspection. I walked through the facility and inspected hazardous material storage areas, inside building and outside where the diesel aboveground tank is located. There has been no changes in types and/or volumes of the hazardous material stored on site since last inspection or previous reporting period, except one of the diesel aboveground tank has been removed from the facility. Diesel inventory and site map were updated to reflect removal of aboveground tank from the facility. Emergency card is posted in dispatch office and an additional card was provided to be posted on the main bulletin board in the shop. Evacuation site maps are posted throughout the facility. I assisted him in correcting inventory forms, upload new site map and submitted annual certification documents for 2017.

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-18-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to conduct routine hazardous waste inspection. Jim Middleton granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans or municipal trash. Waste oil is stored in an aboveground tank that is kept closed and is labeled. Waste antifreeze (1) and used oil filter (1) drums are stored closed and labeled. Manifests were reviewed. Emergency card is posted in dispatch office. An additional emergency card was provided to be posted on main bulletin board in the shop.

Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 01-20-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Discussed facility's request to waive penalty and their history in paying invoices. Emailed accounting department to them know penalties

BLAIRS TOWING (Continued) **S113466003**

	cannot be waived.
Eval Division:	Orange County Environmental Health
Eval Program:	APSA
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	04-08-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted documents submitted to E-submit on 4/6/15.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	09-12-2013
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Received email from accounting department asking if the APST charge should be refunded since they wrote there is less than 1000 gallon of petroleum products in aboveground storage tanks. I called and left message for Steve Albright at the facility to make sure that the information provided on 8/1/13 regarding APST inventory (2400 total capacity) is still correct. I emailed accounting and let them know not refund APST fee. Steve A. called back and left message stating that the APST capacity is still 2400 and there was miscommunication at their facility.
Eval Division:	Orange County Environmental Health
Eval Program:	APSA
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	10-10-2014
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector Comments: Orange County Environmental Health as the Certified Unified Program Agency (OC CUPA) is the administrating agency for the Hazardous Materials Disclosure and Business Emergency Plan programs (HMD/BEP) previously administered by the Orange County Fire Authority. During the months of August and December of 2013, the OC CUPA sent out letters to regulated businesses requesting them to electronically submit their HMD/BEP forms. In addition, during the onsite inspection conducted on 1/8/14, your facility was notified again to submit HMD/BEP electronically. Electronic submission of these forms is a legal requirement. Failure to submit HMD/BEP forms is in violation of the California Health & Safety Code Chapter 6.95. According to our records there is no electronic submission for this facility. Please go to www.esubmit.ocgov.com to request a username and password and submit the following HMD/BEP forms within the next 30 days: - Business Activities [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-11-2016
Violations Found:	No

BLAIRS TOWING (Continued) **S113466003**

Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct routine hazardous waste inspection. Mike Paroske granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans or municipal trash. Waste oil is stored in an aboveground tank that is kept closed and is labeled. Waste antifreeze (1) and used oil filter (1) drums are stored closed and labeled. Manifests were reviewed. Emergency card is posted in dispatch area.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-15-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector Comments: On site for follow up inspection since facility was notified to electronically submit HMBP documents during the onsite inspection conducted on 1/8/14 and inspection report dated 10/10/14 that included violations for failure to submit documents electronically. Facility has the following hazardous materials that meet the required disclosure quantities: - 200 gallons of waste oil - 55 gallons of waste antifreeze - 110 gallons of new motor oil - 2000 gallons diesel The following documents must be electronically submitted immediately to comply with outstanding violations and avoid further enforcement action: - Business Activities form - Owner/Operator Identification form - Hazardous Material Chemical Inventory forms - Facility Site Map - Business Emergency Plan Provided copy of 10/10/14 inspection report.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-09-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Processed A21.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-11-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site for aboveground petroleum storage tank (APST) inspection. Mike Paroske assisted with the inspection. I walked through the facility and verified APSTs currently on site: - 1000 gallons diesel - 200 gallons of waste oil - 110 new motor oil Please be advised that this agency will remove this business from the APST inspection program since facility has been storing less than 1320 gallons of petroleum products on site for over a year.
Eval Division:	Orange County Environmental Health
Eval Program:	APSA
Eval Source:	CERS

BLAIRS TOWING (Continued) **S113466003**

Eval General Type:	Other/Unknown
Eval Date:	01-11-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted annual certification documents submitted to E-submit on 1/11/16. Business Activities was updated since facility is not in the APST program anymore.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-16-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I emailed example chemical inventory forms to facility so he can submit HMBP documents.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-16-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Received email from accounting sent to them by collection department. Facility was requesting explanation as to why they are being billed for APST program and request that penalty on unpaid invoice for 2014/2015 be waived. Facility has over 1320 gallons of petroleum products on site. I emailed accounting back stating that they are in the APST program, therefore the bill needs to be paid and that I need to discuss waiving penalty with supervisor.
Eval Division:	Orange County Environmental Health
Eval Program:	APSA
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-28-2019
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Jim Middleton granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans or municipal trash. Waste oil is stored in an aboveground tank that is kept closed and is labeled. Waste antifreeze (1) and used oil filter (1) drums are stored closed and labeled. Manifests were reviewed. Emergency card is posted in dispatch area.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-10-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector Comments: I received a copy of manifest documenting removal

BLAIRS TOWING (Continued) **S113466003**

of 50 gallons of waste antifreeze from the facility on 1/22/15. Violation I053, regarding waste accumulation time being exceeded, cited during the routine inspection conducted on1/15/15, has been corrected.

Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 08-01-2013
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: I received an updated Aboveground Petroleum Storage Tank (APST) Facility Statement. The total APST capacity for all tanks at the facility is 2400 gallons.
Eval Division: Orange County Environmental Health
Eval Program: APSA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-08-2014
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to conduct routine hazardous waste inspection. Steve Albright granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans or municipal trash. Waste oil is stored in an aboveground storage tank and is labeled. Used oil filter (1) and waste antifreeze (1) drums are stored closed and labeled. Manifests were reviewed. Emergency card is posted in the shop by the supervisor's office.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-15-2015
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector Comments: On site to conduct routine hazardous waste inspection. James Middleton granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans or municipal trash. Waste oil is stored in an aboveground tank and is labeled. Waste antifreeze (1) and used oil filter (1) drums are stored closed and labeled. Manifests were reviewed. Waste accumulation time for waste antifreeze has been exceeded. There is approximately 40/45 gallons stored on site. Waste antifreeze must be disposed of within 30 days of this inspection. An emergency card was provided to be filled out and posted.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 01-22-2018
Violations Found: No

BLAIRS TOWING (Continued) **S113466003**

Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed and accepted annual certification documents submitted to CERS on 1/5/18.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 02-25-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Documents submitted to E-submit on 2/11/15 were reviewed and declined with the following considerations: Waste Antifreeze form must be revised as follows: - CAS# listed at the top of the page under ?Common Name? must be removed since this is not pure/new material. - ?Maximum Daily Amount? should be changed from ?5.0? to ?55.? - Name for waste in the ?Hazardous Component? section should be change to waste ?antifreeze.? Waste Oil form must be revised as follows: - CAS# listed at the top of the page under ?Common Name? must be removed since this is not pure/new material. - ?Maximum Daily Amount? should be changed from ?16.0? to ?200.? Employee Training section, ?III. Employee Training Program? must be completed. The site map does not contain locations of the emergency shutoffs (water, electricity and natural gas) and hazardous materials handling (spill containment products) storage areas. (Verified with facility contact that Business Owner/Operator [Truncated]
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-06-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Documents submitted to E-submit on 3/5/15 were reviewed and declined with the following considerations: Waste Antifreeze form must be revised as follows: - CAS# listed at the top of the page under ?Common Name? must be removed since this is not pure/new material. - ?Maximum Daily Amount? should be changed from ?5.0? to ?55.? - Name for waste in the ?Hazardous Component? section should be change to waste ?antifreeze.? Waste Oil form must be revised as follows: - CAS# listed at the top of the page under ?Common Name? must be removed since this is not pure/new material. - ?Maximum Daily Amount? should be changed from ?16.0? to ?200.? Employee Training section, ?III. Employee Training Program? must be completed. The site map does not contain locations of the emergency shutoffs (water, electricity and natural gas) and hazardous materials handling (spill containment products) storage areas.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 04-06-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Documents to E-submit submitted on 3/20/15 were reviewed and declined

BLAIRS TOWING (Continued) **S113466003**

with the following consideration: This Agency had requested that CAS#s listed at the top of the page under ?Common Name? for waste oil and waste antifreeze be removed since they are not pure/new material. However, CAS#s listed at the bottom of the form in the ?Hazardous Component? section for both waste oil and waste antifreeze have been removed and should be listed again. Please delete CAS#s listed at the top of the form under ?Common Name? for waste oil and waste antifreeze and list them at the bottom of the form in the ?Hazardous Component? section.

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-30-2013
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to conduct Aboveground Petroleum Storage Tank (APSTs) inspection. The facility has the following APSTs: 1 - 150 gallon new oil 1 - 250 gallon waste oil 2 - 1000 gallon diesel tanks Facility has SPCC plan.
Eval Division: Orange County Environmental Health
Eval Program: APSA
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 07-31-2013
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: I copied and emailed the APST Facility Statement submitted in 2010 and a blank form to Steve at the facility so he can review and submit an updated form if necessary.
Eval Division: Orange County Environmental Health
Eval Program: APSA
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 12-21-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Went to site to conduct inspection. Facility contact was not on site.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Coordinates:
Site ID: 413204
Facility Name: BLAIRS TOWING
Env Int Type Code: HMBP
Program ID: 10547929
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 33.663520
Longitude: -117.675020

Affiliation:

BLAIRS TOWING (Continued) **S113466003**

Affiliation Type Desc:	Identification Signer
Entity Name:	JAMES MIDDLTON
Entity Title:	OPERATIONS MANAGER
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Environmental Contact
Entity Name:	JAMES R.MIDDLETON
Entity Title:	Not reported
Affiliation Address:	26100 DIMENSION
Affiliation City:	lake forest
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92630
Affiliation Phone:	Not reported

Affiliation Type Desc:	Parent Corporation
Entity Name:	BLAIRS TOWING
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	CUPA District
Entity Name:	Orange County Env Health
Entity Title:	Not reported
Affiliation Address:	1241 East Dyer RoadSuite 120
Affiliation City:	Santa Ana
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92705-5611
Affiliation Phone:	(714) 433-6000

Affiliation Type Desc:	Document Preparer
Entity Name:	JAMES MIDDLETON
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	26100 DIMENSION DR
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	Not reported

BLAIRS TOWING (Continued) **S113466003**

Affiliation Zip: 92630
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner
Entity Name: BLAIRS TOWING INC
Entity Title: Not reported
Affiliation Address: 26100 DIMENSION DR
Affiliation City: LAKE FOREST
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 92630
Affiliation Phone: (949) 588-8000

Affiliation Type Desc: Operator
Entity Name: BLAIRS TOWING INC.
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (949) 588-8000

20
NNE
1/8-1/4
0.223 mi.
1180 ft.

PANASONIC AVIONICS CORPORATION **CERS HAZ WASTE** **S123537808**
26229 ENTERPRISE CT **N/A**
LAKE FOREST, CA 92630

Relative:
Higher

Actual:
686 ft.

CERS HAZ WASTE:
Site ID: 426056
CERS ID: 10743949
CERS Description: Hazardous Waste Generator

Coordinates:
Site ID: 426056
Facility Name: Panasonic Avionics Corporation
Env Int Type Code: HWG
Program ID: 10743949
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 33.663710
Longitude: -117.673010

Affiliation:
Affiliation Type Desc: Document Preparer
Entity Name: Valerie Stone
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Operator
Entity Name: PANASONIC AVIONICS CORPORATION

PANASONIC AVIONICS CORPORATION (Continued) **S123537808**

Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(949) 672-2000
Affiliation Type Desc:	Parent Corporation
Entity Name:	PANASONIC
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Environmental Contact
Entity Name:	DONNA BRUNOT
Entity Title:	Not reported
Affiliation Address:	26140 ENTERPRISE WAY
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92630
Affiliation Phone:	Not reported
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	26200 ENTERPRISE WAY
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92630
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	VALERIE STONE
Entity Title:	MANAGER, EHS
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	CUPA District
Entity Name:	Orange County Env Health
Entity Title:	Not reported
Affiliation Address:	1241 East Dyer RoadSuite 120
Affiliation City:	Santa Ana
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92705-5611
Affiliation Phone:	(714) 433-6000

PANASONIC AVIONICS CORPORATION (Continued) **S123537808**

Affiliation Type Desc:	Legal Owner
Entity Name:	PANASONIC AVIONICS CORPORATION
Entity Title:	Not reported
Affiliation Address:	26200 ENTERPRISE WAY
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92630
Affiliation Phone:	(949) 672-2000

21
NNW
1/8-1/4
0.230 mi.
1216 ft.

ARB INC **CERS HAZ WASTE** **S123517196**
20632 CIVIC CENTER DR **CERS TANKS** **N/A**
LAKE FOREST, CA 92630 **CERS**

Relative:
Higher

Actual:
727 ft.

CERS HAZ WASTE:

Site ID:	410695
CERS ID:	10545232
CERS Description:	Hazardous Waste Generator

Violations:

Site ID:	410695
Site Name:	ARB INC
Violation Date:	10-01-2014
Citation:	HSC 6.95 25508(d) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(d)
Violation Description:	Failure to complete and/or electronically submit a business plan when storing/handling a hazardous material at or above reportable quantities.
Violation Notes:	Returned to compliance on 07/18/2015.
Violation Division:	Orange County Environmental Health
Violation Program:	HMRRP
Violation Source:	CERS

Site ID:	410695
Site Name:	ARB INC
Violation Date:	10-01-2014
Citation:	HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description:	Failure to complete and electronically submit hazardous material inventory information for all reportable hazardous materials on site at or above reportable quantities.
Violation Notes:	Returned to compliance on 07/18/2015.
Violation Division:	Orange County Environmental Health
Violation Program:	HMRRP
Violation Source:	CERS

Evaluation:

Eval General Type:	Other/Unknown
Eval Date:	01-03-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Lance York called and requested that both account for this business be linked in CERS. Linked sites in CERS.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP

ARB INC (Continued) **S123517196**

Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-19-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	I walked through shop and perimeter. I did not observe any hazardous waste in trash cans throughout the facility. All tanks and drums storing hazardous waste were closed and properly labeled.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-20-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site for aboveground petroleum storage tank (APST) inspection. Facility stores 4800 gallons of regulated petroleum products on site. Weekly container inspection logs are available for review. SPCC plan dated 12/5/16 is available on site.
Eval Division:	Orange County Environmental Health
Eval Program:	APSA
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-20-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Craig Stark granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage areas, inside and outside shop. I did not observed any hazardous waste in trash cans or municipal trash. Waste oil is stored in aboveground storage tanks (one inside shop and one outside) that are kept closed and are labeled. Waste antifreeze (1), used oil filter (2), oily absorbent (3) and waste aerosols (1) drums are stored closed and labeled. Manifests were reviewed. Emergency contact and phone numbers are posted in the shop.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-23-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Purged file.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-23-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector Comments: On site for follow up inspection since facility was notified to electronically submit HMBP documents during the onsite

ARB INC (Continued) **S123517196**

inspection conducted on 1/24/14 and inspection report dated 10/1/14 that included violations for failure to submit documents electronically. Argon and helium volumes observed on site are below reportable quantity 0f 1000 cubic feet for each gas. Three cylinders of nitrogen (one in shop and two in enclosure outside) were observed on site. However, the total volume could not be verified since the cylinders did have tags. Nitrogen must be reported if total volume stored on site is equal to or greater than 1000 cubic feet. Facility has the following hazardous materials that meet the required disclosure quantities: - 3987 cubic feet of oxygen - 601 cubic feet of acetylene - 700 gallons of waste oil - 150 gallons of transmission oil - 350 gallons of hydraulic oil - 350 gallons of motor oil - 55 gallons of waste antifreeze [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 05-03-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed revised documents submitted to CERS on 3/30/17 and did not accept it since a site revised map showing new locations of hazardous waste was not submitted. Also, ?Fire Code Hazard Classes? for diesel and Transmission Fluid must be corrected and ?Used Absorbent ? Debris? line listed in mixture components table on Used Absorbent inventory form should be deleted.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 07-31-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed and accepted documents submitted to E-submit on 7/31/15.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 10-01-2014
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Inspector Comments: Orange County Environmental Health as the Certified Unified Program Agency (OC CUPA) is the administrating agency for the Hazardous Materials Disclosure and Business Emergency Plan programs (HMD/BEP) previously administered by the Orange County Fire Authority. During the months of August and December of 2013, the OC CUPA sent out letters to regulated businesses requesting them to electronically submit their HMD/BEP forms. In addition, during the onsite inspection conducted on 1/24/14 your company was notified again to submit HMD/BEP electronically. Electronic submission of these forms is a legal requirement. Failure to submit HMD/BEP forms is in violation of the California Health & Safety Code Chapter 6.95. According to our records there is no electronic submission for this facility. Please go to www.esubmit.ocgov.com to request a username and

ARB INC (Continued) **S123517196**

password and submit the following HMD/BEP forms within the next 30 days: - Business Activities - [Truncated]
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-20-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to conduct hazardous materials chemical inventory and business emergency plan inspection. Craig Stark granted consent to conduct inspection. I walked through the facility and inspected hazardous material storage areas, inside and outside facility. There has been no changes in types and/or volumes of the hazardous material stored on site since last inspection or previous reporting period. The location of hazardous waste drums has changed. Site map must be updated to show the new location of the hazardous waste drums and be electronically submitted. Compressed gas cylinders that are not in use are stored in metal cages. Training that includes hazardous material management is provided annually. Training records are maintained at the safety office. Emergency contact information is available on site.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-23-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector Comments: On site to conduct routine hazardous waste inspection. Craig Stark granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage areas. I did not observed any hazardous waste in trash cans or municipal trash. Waste oil is stored in aboveground storage tanks (one inside shop and one outside) and are labeled. Waste antifreeze (1), used oil filter (1) and oily absorbent (1) drums are stored closed and labeled. Manifests were reviewed. Emergency contact and phone numbers are posted in the shop.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-24-2014
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to conduct routine hazardous waste inspection. Craig Stark granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage areas. Waste oil is stored in aboveground storage tanks (one inside shop and one outside) and are labeled. Waste antifreeze (1) and oily absorbent (1) drums stored closed and labeled. A new label was provided for the waste antifreeze tank since the existing one is fading. Manifests were reviewed. Emergency contact and phone numbers are posted in the shop.
Eval Division: Orange County Environmental Health
Eval Program: HW

ARB INC (Continued) **S123517196**

Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-25-2019
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Frank Lockwood granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage areas inside and outside building. I did not observed any hazardous waste in trash cans or municipal trash. Waste oil stored in aboveground storage tanks (one inside shop and one outside) that are kept closed and are labeled. Waste antifreeze (1), used oil filter (1) and oily absorbent (1) drums are stored closed and labeled. Manifests were reviewed. Emergency contact and phone numbers are posted in the shop.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-23-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted annual certification documents submitted to E-submit on 2/16/16.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	06-24-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Not reported
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	06-29-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Received call from Lance York, facility consultant uploading HMBP documents. I explained that this site needs its own submittal since it has its own address.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	07-18-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to E-submit on 7/17/15 were reviewed and declined with the following considerations: The following material are below reportable volumes of 500 pounds or 1000 cubic feet and should be deleted: - Drained Used Oil Filters - Helium - Nitrogen Hydraulic Oil:

ARB INC (Continued) **S123517196**

CAS# is not listed for the main hazardous component at 96%, mineral oil. CAS# must be listed in the mixtures component section. CAS# 64742-52-5 may be used for mineral oil. Motor Oil: CAS# 6474-XX-X listed for ?Various Lubricating Base Oils? in Mixture Components section is not acceptable, especially that this material is the main component at 85%. All digits of the CAS# must be provided. You may either use CAS# 64742-58-1 listed for reported new oil stored on site or CAS# 64742-65-0 Transmission Oil form must be revised as follows: - Chemical Name should be changed to ?Petroleum Hydrocarbon Distillates.? - Common Name should be changed to Transmission ?Fluid.? - This material is [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-22-2016
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector Comments: On site to conduct routine hazardous waste inspection. Craig Stark granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage areas. I did not observed any hazardous waste in trash cans or municipal trash. Waste oil is stored in aboveground storage tanks (one inside shop and one outside) that are kept closed and are labeled. Waste antifreeze (1), used oil filter (2) and oily absorbent (1) drums are stored closed and labeled. Manifests were reviewed. Emergency contact and phone numbers are posted in the shop.

Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-24-2014
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to conduct new hazardous materials chemical inventory and business emergency plan inspection. I walked through the facility and inspected hazardous materials storage area. Facility has hazardous materials that meet the required disclosure quantities. Facility is required and has been notified to electronically submit the following documents within 60 days of this inspection: - Business Activities form - Owner/Operator Identification form - Hazardous Material Chemical Inventory forms - Facility Site Map - Business Emergency Plan Documents must be electronically submitted by going to www.esubmit.ocgov.com and requesting a username and password. User guides and tutorials are located on the home page to help you get started. If you are having trouble, please call (714) 433-6000 and request to speak to the portal administrator.

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-17-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency

ARB INC (Continued) **S123517196**

Eval Notes: Reviewed annual certification documents submitted to CERS on 2/13/17. Hazardous Materials Inventory was not accepted and with the following considerations: - ?Fire Code Hazard Classes? are not listed on inventory forms. - Revised site map showing new locations of hazardous waste drums inside shop as observed during onsite inspection conducted on 1/20/17 was not submitted. In addition, a request was made to add cross/adjacent street names and access and excess points on site map.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 05-22-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed revised documents submitted to CERS on 5/9/17. The site map was not accepted since north arrow, locations of emergency shutoffs (electricity, water and natural gas), and evacuation staging area that were shown on previous site map, are not shown on current site map.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 07-26-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed and accepted revised site map submitted to CERS on 6/28/17.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Enforcement Action:
Site ID: 410695
Site Name: ARB INC
Site Address: 20632 CIVIC CENTER DR
Site City: LAKE FOREST
Site Zip: 92630
Enf Action Date: 06-24-2015
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: HMD/BEP.
Enf Action Division: Orange County Environmental Health
Enf Action Program: HMRRP
Enf Action Source: CERS

Affiliation:
Affiliation Type Desc: CUPA District
Entity Name: Orange County Env Health
Entity Title: Not reported
Affiliation Address: 1241 East Dyer RoadSuite 120
Affiliation City: Santa Ana
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92705-5611
Affiliation Phone: (714) 433-6000

ARB INC (Continued) **S123517196**

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	PO BOX 5166
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92630
Affiliation Phone:	Not reported

Affiliation Type Desc:	Identification Signer
Entity Name:	Lance York
Entity Title:	CONSULTANT
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Parent Corporation
Entity Name:	ARB Inc
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Environmental Contact
Entity Name:	CRAIG STARK
Entity Title:	Not reported
Affiliation Address:	26000 CIVIC CENTER DR.
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92630
Affiliation Phone:	Not reported

Affiliation Type Desc:	Operator
Entity Name:	ARB, INC.
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(949) 465-7302

Affiliation Type Desc:	Legal Owner
Entity Name:	ARB Inc
Entity Title:	Not reported
Affiliation Address:	PO BOX 5166
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	United States

ARB INC (Continued) **S123517196**

Affiliation Zip: 92630
Affiliation Phone: (949) 589-9242

Affiliation Type Desc: Document Preparer
Entity Name: LANCE YORK
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

CERS TANKS:
Facility Name: ARB INC
Site ID: 410695
CERS ID: 10545232
CERS Description: Aboveground Petroleum Storage

Violations:
Site ID: 410695
Site Name: ARB INC
Violation Date: 10-01-2014
Citation: HSC 6.95 25508(d) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(d)
Violation Description: Failure to complete and/or electronically submit a business plan when storing/handling a hazardous material at or above reportable quantities.
Violation Notes: Returned to compliance on 07/18/2015.
Violation Division: Orange County Environmental Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 410695
Site Name: ARB INC
Violation Date: 10-01-2014
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description: Failure to complete and electronically submit hazardous material inventory information for all reportable hazardous materials on site at or above reportable quantities.
Violation Notes: Returned to compliance on 07/18/2015.
Violation Division: Orange County Environmental Health
Violation Program: HMRRP
Violation Source: CERS

Evaluation:
Eval General Type: Other/Unknown
Eval Date: 01-03-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Lance York called and requested that both account for this business be linked in CERS. Linked sites in CERS.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

ARB INC (Continued) **S123517196**

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-19-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	I walked through shop and perimeter. I did not observe any hazardous waste in trash cans throughout the facility. All tanks and drums storing hazardous waste were closed and properly labeled.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-20-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site for aboveground petroleum storage tank (APST) inspection. Facility stores 4800 gallons of regulated petroleum products on site. Weekly container inspection logs are available for review. SPCC plan dated 12/5/16 is available on site.
Eval Division:	Orange County Environmental Health
Eval Program:	APSA
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-20-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Craig Stark granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage areas, inside and outside shop. I did not observed any hazardous waste in trash cans or municipal trash. Waste oil is stored in aboveground storage tanks (one inside shop and one outside) that are kept closed and are labeled. Waste antifreeze (1), used oil filter (2), oily absorbent (3) and waste aerosols (1) drums are stored closed and labeled. Manifests were reviewed. Emergency contact and phone numbers are posted in the shop.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-23-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Purged file.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-23-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector Comments: On site for follow up inspection since facility was notified to electronically submit HMBP documents during the onsite inspection conducted on 1/24/14 and inspection report dated 10/1/14 that included violations for failure to submit documents

ARB INC (Continued) **S123517196**

electronically. Argon and helium volumes observed on site are below reportable quantity 0f 1000 cubic feet for each gas. Three cylinders of nitrogen (one in shop and two in enclosure outside) were observed on site. However, the total volume could not be verified since the cylinders did have tags. Nitrogen must be reported if total volume stored on site is equal to or greater than 1000 cubic feet. Facility has the following hazardous materials that meet the required disclosure quantities: - 3987 cubic feet of oxygen - 601 cubic feet of acetylene - 700 gallons of waste oil - 150 gallons of transmission oil - 350 gallons of hydraulic oil - 350 gallons of motor oil - 55 gallons of waste antifreeze [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 05-03-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed revised documents submitted to CERS on 3/30/17 and did not accept it since a site revised map showing new locations of hazardous waste was not submitted. Also, ?Fire Code Hazard Classes? for diesel and Transmission Fluid must be corrected and ?Used Absorbent ? Debris? line listed in mixture components table on Used Absorbent inventory form should be deleted.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 07-31-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed and accepted documents submitted to E-submit on 7/31/15.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 10-01-2014
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Inspector Comments: Orange County Environmental Health as the Certified Unified Program Agency (OC CUPA) is the administrating agency for the Hazardous Materials Disclosure and Business Emergency Plan programs (HMD/BEP) previously administered by the Orange County Fire Authority. During the months of August and December of 2013, the OC CUPA sent out letters to regulated businesses requesting them to electronically submit their HMD/BEP forms. In addition, during the onsite inspection conducted on 1/24/14 your company was notified again to submit HMD/BEP electronically. Electronic submission of these forms is a legal requirement. Failure to submit HMD/BEP forms is in violation of the California Health & Safety Code Chapter 6.95. According to our records there is no electronic submission for this facility. Please go to www.esubmit.ocgov.com to request a username and password and submit the following HMD/BEP forms within the next 30 days: - Business Activities - [Truncated]

ARB INC (Continued) **S123517196**

Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-20-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct hazardous materials chemical inventory and business emergency plan inspection. Craig Stark granted consent to conduct inspection. I walked through the facility and inspected hazardous material storage areas, inside and outside facility. There has been no changes in types and/or volumes of the hazardous material stored on site since last inspection or previous reporting period. The location of hazardous waste drums has changed. Site map must be updated to show the new location of the hazardous waste drums and be electronically submitted. Compressed gas cylinders that are not in use are stored in metal cages. Training that includes hazardous material management is provided annually. Training records are maintained at the safety office. Emergency contact information is available on site.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-23-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct routine hazardous waste inspection. Craig Stark granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage areas. I did not observed any hazardous waste in trash cans or municipal trash. Waste oil is stored in aboveground storage tanks (one inside shop and one outside) and are labeled. Waste antifreeze (1), used oil filter (1) and oily absorbent (1) drums are stored closed and labeled. Manifests were reviewed. Emergency contact and phone numbers are posted in the shop.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-24-2014
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Craig Stark granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage areas. Waste oil is stored in aboveground storage tanks (one inside shop and one outside) and are labeled. Waste antifreeze (1) and oily absorbent (1) drums stored closed and labeled. A new label was provided for the waste antifreeze tank since the existing one is fading. Manifests were reviewed. Emergency contact and phone numbers are posted in the shop.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS

ARB INC (Continued) **S123517196**

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-25-2019
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Frank Lockwood granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage areas inside and outside building. I did not observed any hazardous waste in trash cans or municipal trash. Waste oil stored in aboveground storage tanks (one inside shop and one outside) that are kept closed and are labeled. Waste antifreeze (1), used oil filter (1) and oily absorbent (1) drums are stored closed and labeled. Manifests were reviewed. Emergency contact and phone numbers are posted in the shop.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-23-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted annual certification documents submitted to E-submit on 2/16/16.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	06-24-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Not reported
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	06-29-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Received call from Lance York, facility consultant uploading HMBP documents. I explained that this site needs its own submittal since it has its own address.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	07-18-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to E-submit on 7/17/15 were reviewed and declined with the following considerations: The following material are below reportable volumes of 500 pounds or 1000 cubic feet and should be deleted: - Drained Used Oil Filters - Helium - Nitrogen Hydraulic Oil: CAS# is not listed for the main hazardous component at 96%, mineral oil. CAS# must be listed in the mixtures component section. CAS#

ARB INC (Continued) **S123517196**

64742-52-5 may be used for mineral oil. Motor Oil: CAS# 6474-XX-X listed for ?Various Lubricating Base Oils? in Mixture Components section is not acceptable, especially that this material is the main component at 85%. All digits of the CAS# must be provided. You may either use CAS# 64742-58-1 listed for reported new oil stored on site or CAS# 64742-65-0 Transmission Oil form must be revised as follows: - Chemical Name should be changed to ?Petroleum Hydrocarbon Distillates.? - Common Name should be changed to Transmission ?Fluid.? - This material is [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-22-2016
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector Comments: On site to conduct routine hazardous waste inspection. Craig Stark granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage areas. I did not observed any hazardous waste in trash cans or municipal trash. Waste oil is stored in aboveground storage tanks (one inside shop and one outside) that are kept closed and are labeled. Waste antifreeze (1), used oil filter (2) and oily absorbent (1) drums are stored closed and labeled. Manifests were reviewed. Emergency contact and phone numbers are posted in the shop.

Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-24-2014
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to conduct new hazardous materials chemical inventory and business emergency plan inspection. I walked through the facility and inspected hazardous materials storage area. Facility has hazardous materials that meet the required disclosure quantities. Facility is required and has been notified to electronically submit the following documents within 60 days of this inspection: - Business Activities form - Owner/Operator Identification form - Hazardous Material Chemical Inventory forms - Facility Site Map - Business Emergency Plan Documents must be electronically submitted by going to www.esubmit.ocgov.com and requesting a username and password. User guides and tutorials are located on the home page to help you get started. If you are having trouble, please call (714) 433-6000 and request to speak to the portal administrator.

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-17-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed annual certification documents submitted to CERS on 2/13/17. Hazardous Materials Inventory was not accepted and with the following

ARB INC (Continued) **S123517196**

considerations: - ?Fire Code Hazard Classes? are not listed on inventory forms. - Revised site map showing new locations of hazardous waste drums inside shop as observed during onsite inspection conducted on 1/20/17 was not submitted. In addition, a request was made to add cross/adjacent street names and access and excess points on site map.

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 05-22-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed revised documents submitted to CERS on 5/9/17. The site map was not accepted since north arrow, locations of emergency shutoffs (electricity, water and natural gas), and evacuation staging area that were shown on previous site map, are not shown on current site map.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 07-26-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed and accepted revised site map submitted to CERS on 6/28/17.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Enforcement Action:
Site ID: 410695
Site Name: ARB INC
Site Address: 20632 CIVIC CENTER DR
Site City: LAKE FOREST
Site Zip: 92630
Enf Action Date: 06-24-2015
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: HMD/BEP.
Enf Action Division: Orange County Environmental Health
Enf Action Program: HMRRP
Enf Action Source: CERS

Affiliation:
Affiliation Type Desc: CUPA District
Entity Name: Orange County Env Health
Entity Title: Not reported
Affiliation Address: 1241 East Dyer RoadSuite 120
Affiliation City: Santa Ana
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92705-5611
Affiliation Phone: (714) 433-6000

Affiliation Type Desc: Facility Mailing Address

ARB INC (Continued) **S123517196**

Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	PO BOX 5166
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92630
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	Lance York
Entity Title:	CONSULTANT
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Parent Corporation
Entity Name:	ARB Inc
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Environmental Contact
Entity Name:	CRAIG STARK
Entity Title:	Not reported
Affiliation Address:	26000 CIVIC CENTER DR.
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92630
Affiliation Phone:	Not reported
Affiliation Type Desc:	Operator
Entity Name:	ARB, INC.
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(949) 465-7302
Affiliation Type Desc:	Legal Owner
Entity Name:	ARB Inc
Entity Title:	Not reported
Affiliation Address:	PO BOX 5166
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92630

ARB INC (Continued) **S123517196**

Affiliation Phone: (949) 589-9242

Affiliation Type Desc: Document Preparer
Entity Name: LANCE YORK
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

CERS TANKS:
Site ID: 410695
CERS ID: 10545232
Site Name: ARB INC
CERS Description: Chemical Storage Facilities

Violations:
Site ID: 410695
Site Name: ARB INC
Violation Date: 10-01-2014
Citation: HSC 6.95 25508(d) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(d)
Violation Description: Failure to complete and/or electronically submit a business plan when storing/handling a hazardous material at or above reportable quantities.
Violation Notes: Returned to compliance on 07/18/2015.
Violation Division: Orange County Environmental Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 410695
Site Name: ARB INC
Violation Date: 10-01-2014
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description: Failure to complete and electronically submit hazardous material inventory information for all reportable hazardous materials on site at or above reportable quantities.
Violation Notes: Returned to compliance on 07/18/2015.
Violation Division: Orange County Environmental Health
Violation Program: HMRRP
Violation Source: CERS

Evaluation:
Eval General Type: Other/Unknown
Eval Date: 01-03-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Lance York called and requested that both account for this business be linked in CERS. Linked sites in CERS.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

ARB INC (Continued) **S123517196**

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-19-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	I walked through shop and perimeter. I did not observe any hazardous waste in trash cans throughout the facility. All tanks and drums storing hazardous waste were closed and properly labeled.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-20-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site for aboveground petroleum storage tank (APST) inspection. Facility stores 4800 gallons of regulated petroleum products on site. Weekly container inspection logs are available for review. SPCC plan dated 12/5/16 is available on site.
Eval Division:	Orange County Environmental Health
Eval Program:	APSA
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-20-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Craig Stark granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage areas, inside and outside shop. I did not observed any hazardous waste in trash cans or municipal trash. Waste oil is stored in aboveground storage tanks (one inside shop and one outside) that are kept closed and are labeled. Waste antifreeze (1), used oil filter (2), oily absorbent (3) and waste aerosols (1) drums are stored closed and labeled. Manifests were reviewed. Emergency contact and phone numbers are posted in the shop.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-23-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Purged file.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-23-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector Comments: On site for follow up inspection since facility was notified to electronically submit HMBP documents during the onsite inspection conducted on 1/24/14 and inspection report dated 10/1/14 that included violations for failure to submit documents

ARB INC (Continued) **S123517196**

electronically. Argon and helium volumes observed on site are below reportable quantity 0f 1000 cubic feet for each gas. Three cylinders of nitrogen (one in shop and two in enclosure outside) were observed on site. However, the total volume could not be verified since the cylinders did have tags. Nitrogen must be reported if total volume stored on site is equal to or greater than 1000 cubic feet. Facility has the following hazardous materials that meet the required disclosure quantities: - 3987 cubic feet of oxygen - 601 cubic feet of acetylene - 700 gallons of waste oil - 150 gallons of transmission oil - 350 gallons of hydraulic oil - 350 gallons of motor oil - 55 gallons of waste antifreeze [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 05-03-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed revised documents submitted to CERS on 3/30/17 and did not accept it since a site revised map showing new locations of hazardous waste was not submitted. Also, ?Fire Code Hazard Classes? for diesel and Transmission Fluid must be corrected and ?Used Absorbent ? Debris? line listed in mixture components table on Used Absorbent inventory form should be deleted.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 07-31-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed and accepted documents submitted to E-submit on 7/31/15.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 10-01-2014
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Inspector Comments: Orange County Environmental Health as the Certified Unified Program Agency (OC CUPA) is the administrating agency for the Hazardous Materials Disclosure and Business Emergency Plan programs (HMD/BEP) previously administered by the Orange County Fire Authority. During the months of August and December of 2013, the OC CUPA sent out letters to regulated businesses requesting them to electronically submit their HMD/BEP forms. In addition, during the onsite inspection conducted on 1/24/14 your company was notified again to submit HMD/BEP electronically. Electronic submission of these forms is a legal requirement. Failure to submit HMD/BEP forms is in violation of the California Health & Safety Code Chapter 6.95. According to our records there is no electronic submission for this facility. Please go to www.esubmit.ocgov.com to request a username and password and submit the following HMD/BEP forms within the next 30 days: - Business Activities - [Truncated]

ARB INC (Continued) **S123517196**

Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-20-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct hazardous materials chemical inventory and business emergency plan inspection. Craig Stark granted consent to conduct inspection. I walked through the facility and inspected hazardous material storage areas, inside and outside facility. There has been no changes in types and/or volumes of the hazardous material stored on site since last inspection or previous reporting period. The location of hazardous waste drums has changed. Site map must be updated to show the new location of the hazardous waste drums and be electronically submitted. Compressed gas cylinders that are not in use are stored in metal cages. Training that includes hazardous material management is provided annually. Training records are maintained at the safety office. Emergency contact information is available on site.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-23-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct routine hazardous waste inspection. Craig Stark granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage areas. I did not observed any hazardous waste in trash cans or municipal trash. Waste oil is stored in aboveground storage tanks (one inside shop and one outside) and are labeled. Waste antifreeze (1), used oil filter (1) and oily absorbent (1) drums are stored closed and labeled. Manifests were reviewed. Emergency contact and phone numbers are posted in the shop.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-24-2014
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Craig Stark granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage areas. Waste oil is stored in aboveground storage tanks (one inside shop and one outside) and are labeled. Waste antifreeze (1) and oily absorbent (1) drums stored closed and labeled. A new label was provided for the waste antifreeze tank since the existing one is fading. Manifests were reviewed. Emergency contact and phone numbers are posted in the shop.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS

ARB INC (Continued) **S123517196**

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-25-2019
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Frank Lockwood granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage areas inside and outside building. I did not observed any hazardous waste in trash cans or municipal trash. Waste oil stored in aboveground storage tanks (one inside shop and one outside) that are kept closed and are labeled. Waste antifreeze (1), used oil filter (1) and oily absorbent (1) drums are stored closed and labeled. Manifests were reviewed. Emergency contact and phone numbers are posted in the shop.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-23-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted annual certification documents submitted to E-submit on 2/16/16.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	06-24-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Not reported
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	06-29-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Received call from Lance York, facility consultant uploading HMBP documents. I explained that this site needs its own submittal since it has its own address.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	07-18-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to E-submit on 7/17/15 were reviewed and declined with the following considerations: The following material are below reportable volumes of 500 pounds or 1000 cubic feet and should be deleted: - Drained Used Oil Filters - Helium - Nitrogen Hydraulic Oil: CAS# is not listed for the main hazardous component at 96%, mineral oil. CAS# must be listed in the mixtures component section. CAS#

ARB INC (Continued) **S123517196**

64742-52-5 may be used for mineral oil. Motor Oil: CAS# 6474-XX-X listed for ?Various Lubricating Base Oils? in Mixture Components section is not acceptable, especially that this material is the main component at 85%. All digits of the CAS# must be provided. You may either use CAS# 64742-58-1 listed for reported new oil stored on site or CAS# 64742-65-0 Transmission Oil form must be revised as follows: - Chemical Name should be changed to ?Petroleum Hydrocarbon Distillates.? - Common Name should be changed to Transmission ?Fluid.? - This material is [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-22-2016
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector Comments: On site to conduct routine hazardous waste inspection. Craig Stark granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage areas. I did not observed any hazardous waste in trash cans or municipal trash. Waste oil is stored in aboveground storage tanks (one inside shop and one outside) that are kept closed and are labeled. Waste antifreeze (1), used oil filter (2) and oily absorbent (1) drums are stored closed and labeled. Manifests were reviewed. Emergency contact and phone numbers are posted in the shop.

Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-24-2014
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to conduct new hazardous materials chemical inventory and business emergency plan inspection. I walked through the facility and inspected hazardous materials storage area. Facility has hazardous materials that meet the required disclosure quantities. Facility is required and has been notified to electronically submit the following documents within 60 days of this inspection: - Business Activities form - Owner/Operator Identification form - Hazardous Material Chemical Inventory forms - Facility Site Map - Business Emergency Plan Documents must be electronically submitted by going to www.esubmit.ocgov.com and requesting a username and password. User guides and tutorials are located on the home page to help you get started. If you are having trouble, please call (714) 433-6000 and request to speak to the portal administrator.

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-17-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed annual certification documents submitted to CERS on 2/13/17. Hazardous Materials Inventory was not accepted and with the following

ARB INC (Continued) **S123517196**

considerations: - ?Fire Code Hazard Classes? are not listed on inventory forms. - Revised site map showing new locations of hazardous waste drums inside shop as observed during onsite inspection conducted on 1/20/17 was not submitted. In addition, a request was made to add cross/adjacent street names and access and excess points on site map.

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 05-22-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed revised documents submitted to CERS on 5/9/17. The site map was not accepted since north arrow, locations of emergency shutoffs (electricity, water and natural gas), and evacuation staging area that were shown on previous site map, are not shown on current site map.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 07-26-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed and accepted revised site map submitted to CERS on 6/28/17.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Enforcement Action:
Site ID: 410695
Site Name: ARB INC
Site Address: 20632 CIVIC CENTER DR
Site City: LAKE FOREST
Site Zip: 92630
Enf Action Date: 06-24-2015
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: HMD/BEP.
Enf Action Division: Orange County Environmental Health
Enf Action Program: HMRRP
Enf Action Source: CERS

Affiliation:
Affiliation Type Desc: CUPA District
Entity Name: Orange County Env Health
Entity Title: Not reported
Affiliation Address: 1241 East Dyer RoadSuite 120
Affiliation City: Santa Ana
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92705-5611
Affiliation Phone: (714) 433-6000

Affiliation Type Desc: Facility Mailing Address

ARB INC (Continued) **S123517196**

Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	PO BOX 5166
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92630
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	Lance York
Entity Title:	CONSULTANT
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Parent Corporation
Entity Name:	ARB Inc
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Environmental Contact
Entity Name:	CRAIG STARK
Entity Title:	Not reported
Affiliation Address:	26000 CIVIC CENTER DR.
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92630
Affiliation Phone:	Not reported
Affiliation Type Desc:	Operator
Entity Name:	ARB, INC.
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(949) 465-7302
Affiliation Type Desc:	Legal Owner
Entity Name:	ARB Inc
Entity Title:	Not reported
Affiliation Address:	PO BOX 5166
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92630

ARB INC (Continued) **S123517196**

Affiliation Phone:	(949) 589-9242
Affiliation Type Desc:	Document Preparer
Entity Name:	LANCE YORK
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

G22 **FOREVER GREEN ART INC** **RCRA-SQG** **1001195438**
ENE **20611 CANADA RD** **FINDS** **CAR000020172**
1/8-1/4 **LAKE FOREST, CA 92630** **ECHO**
0.238 mi. **HAZNET**
1258 ft. **Site 1 of 3 in cluster G**

Relative:
Higher

Actual:
668 ft.

RCRA-SQG:

Date form received by agency:	06/05/1997
Facility name:	FOREVER GREEN ART INC
Facility address:	20611 CANADA RD LAKE FOREST, CA 92630
EPA ID:	CAR000020172
Mailing address:	BARENTS SEA CIRCLE LAKE FOREST, CA 92630
Contact:	MIKE REEDER
Contact address:	20382 BARENTS SEA CIRCLE LAKE FOREST, CA 92630
Contact country:	US
Contact telephone:	714-768-3005
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	FOREVER GREEN ART INC
Owner/operator address:	20382 BARENTS SEA CIR LAKE FOREST, CA 92630
Owner/operator country:	Not reported
Owner/operator telephone:	714-768-3005
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No

FOREVER GREEN ART INC (Continued) **1001195438**

Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

FINDS:

Registry ID: 110002917611

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Registry ID: 110070324923

Environmental Interest/Information System
OSHA ESTABLISHMENT

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:
Envid: 1001195438
Registry ID: 110002917611
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110002917611

HAZNET:
Site Name: FOREVER GREEN ART INC
Year: 1999
GEPAID: CAR000020172
Contact: FOREVER GREEN ART INC
Telephone: 0000000000
Mailing Name: Not reported
Mailing Address: 20382 BARENTS SEA CIRCLE
Mailing City,St,Zip: LAKE FOREST, CA 926300000
Gen County: Orange
TSD EPA ID: CAD008302903
TSD County: Los Angeles
Tons: 0.165
CA Waste Code: 331-Off-specification, aged or surplus organics

FOREVER GREEN ART INC (Continued) **1001195438**

Method: R01-Recycler
Facility County: Orange

Site Name: FOREVER GREEN ART INC
Year: 1997
GEPAID: CAR000020172
Contact: ALFRED L DAVIS COO
Telephone: 9497683005
Mailing Name: Not reported
Mailing Address: 20382 BARENTS SEA CIRCLE
Mailing City,St,Zip: LAKE FOREST, CA 926300000
Gen County: Orange
TSD EPA ID: CAD000088252
TSD County: Los Angeles
Tons: 0.374
CA Waste Code: 343-Unspecified organic liquid mixture
Method: H01-Transfer Station
Facility County: Orange

Site Name: FOREVER GREEN ART INC
Year: 1997
GEPAID: CAR000020172
Contact: ALFRED L DAVIS COO
Telephone: 9497683005
Mailing Name: Not reported
Mailing Address: 20382 BARENTS SEA CIRCLE
Mailing City,St,Zip: LAKE FOREST, CA 926300000
Gen County: Orange
TSD EPA ID: CAD000088252
TSD County: Los Angeles
Tons: 0.15
CA Waste Code: 331-Off-specification, aged or surplus organics
Method: H01-Transfer Station
Facility County: Orange

Site Name: FOREVER GREEN ART INC
Year: 1997
GEPAID: CAR000020172
Contact: ALFRED L DAVIS COO
Telephone: 9497683005
Mailing Name: Not reported
Mailing Address: 20382 BARENTS SEA CIRCLE
Mailing City,St,Zip: LAKE FOREST, CA 926300000
Gen County: Orange
TSD EPA ID: CAD000088252
TSD County: Los Angeles
Tons: 1.098
CA Waste Code: 551-Laboratory waste chemicals
Method: H01-Transfer Station
Facility County: Orange

Site Name: FOREVER GREEN ART INC
Year: 1997
GEPAID: CAR000020172
Contact: ALFRED L DAVIS COO
Telephone: 9497683005
Mailing Name: Not reported

FOREVER GREEN ART INC (Continued) **1001195438**

Mailing Address:	20382 BARENTS SEA CIRCLE
Mailing City,St,Zip:	LAKE FOREST, CA 926300000
Gen County:	Orange
TSD EPA ID:	CAD050806850
TSD County:	Los Angeles
Tons:	0.01
CA Waste Code:	551-Laboratory waste chemicals
Method:	-
Facility County:	Orange

Click this hyperlink while viewing on your computer to access
1 additional CA_HAZNET: record(s) in the EDR Site Report.

G23 **LOS ALISOS RANCH** **HIST UST** **U001577229**
ENE **20571 CANADA RD** **N/A**
1/8-1/4 **EL TORO, CA 92646**
0.243 mi.
1284 ft. **Site 2 of 3 in cluster G**

Relative: **Higher**

Actual: **668 ft.**

HIST UST:

File Number:	0002EBFF
URL:	http://geotracker.waterboards.ca.gov/ustpdfs/pdf/0002EBFF.pdf
Region:	STATE
Facility ID:	00000023543
Facility Type:	Other
Other Type:	NURSERY/FARMING
Contact Name:	S. NAKASE
Telephone:	7149626604
Owner Name:	NAKASE BROTHERS WHOLESALE NURS
Owner Address:	9441 KREPP DR.
Owner City,St,Zip:	HUNTINGTON BEACH, CA 92646
Total Tanks:	0003
Tank Num:	001
Container Num:	001
Year Installed:	Not reported
Tank Capacity:	00000200
Tank Used for:	PRODUCT
Type of Fuel:	DIESEL
Container Construction Thickness:	Not reported
Leak Detection:	Stock Inventor
Tank Num:	002
Container Num:	G735150
Year Installed:	Not reported
Tank Capacity:	00001000
Tank Used for:	PRODUCT
Type of Fuel:	REGULAR
Container Construction Thickness:	10
Leak Detection:	Stock Inventor
Tank Num:	003
Container Num:	002
Year Installed:	Not reported
Tank Capacity:	00000280
Tank Used for:	PRODUCT
Type of Fuel:	DIESEL
Container Construction Thickness:	Not reported

LOS ALISOS RANCH (Continued) **U001577229**

Leak Detection: Stock Inventor

Click here for Geo Tracker PDF:

24
North
1/8-1/4
0.247 mi.
1302 ft.

ARB INC **UST** **U003721263**
26032 COMMERCENTRE DR **N/A**
LAKE FOREST, CA 92630

Relative:
Higher

Actual:
696 ft.

UST:
Facility ID: 18624
Permitting Agency: ORANGE COUNTY
Latitude: 33.663077
Longitude: -117.676481

G25
ENE
1/8-1/4
0.249 mi.
1314 ft.

SALEEN ALLEN R R R SPEEDLAB INC **RCRA-SQG** **1004676851**
20622 CANADA RD **FINDS** **CAR000090308**
LAKE FOREST, CA 92630 **ECHO**

Site 3 of 3 in cluster G

Relative:
Higher

Actual:
668 ft.

RCRA-SQG:
Date form received by agency: 01/17/2001
Facility name: SALEEN ALLEN R R R SPEEDLAB INC
Facility address: 20622 CANADA RD
LAKE FOREST, CA 92630
EPA ID: CAR000090308
Mailing address: 9 WHATNEY
IRVINE, CA 92618
Contact: MARNI JOHNSON
Contact address: 9 WHATNEY
IRVINE, CA 92618
Contact country: US
Contact telephone: 949-829-8704
Contact email: Not reported
EPA Region: 09
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: SALEEN INC
Owner/operator address: 9 WHATNEY
IRVINE, CA 92618
Owner/operator country: Not reported
Owner/operator telephone: 949-597-4900
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported

SALEEN ALLEN R R R SPEEDLAB INC (Continued) **1004676851**

Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: F001
. Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLORETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Violation Status: No violations found

FINDS:

Registry ID: 110012211748

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

SALEEN ALLEN R R R SPEEDLAB INC (Continued) **1004676851**

Envid: 1004676851
Registry ID: 110012211748
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110012211748

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26 **CHEVRON** **LUST** **U003659611**
East **20731 LAKE FOREST** **SWEEPS UST** **N/A**
1/4-1/2 **LAKE FOREST, CA 92630** **HIST CORTESE**
0.373 mi. **CERS**
1968 ft.

Relative:
Higher

Actual:
705 ft.

LUST:
Lead Agency: ORANGE COUNTY LOP
Case Type: LUST Cleanup Site
Geo Track: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0605902102
Global Id: T0605902102
Latitude: 33.6458268
Longitude: -117.6890547
Status: Completed - Case Closed
Status Date: 04/20/1998
Case Worker: KL
RB Case Number: 083003083T
Local Agency: ORANGE COUNTY LOP
File Location: Local Agency
Local Case Number: 97UT037
Potential Media Affect: Soil
Potential Contaminants of Concern: Gasoline
Site History: Not reported

LUST:
Global Id: T0605902102
Contact Type: Local Agency Caseworker
Contact Name: JAMES STROZIER
Organization Name: ORANGE COUNTY LOP
Address: 1241 E. DYER ROAD SUITE 120
City: SANTA ANA
Email: jstrozier@ochca.com
Phone Number: 7144336273

Global Id: T0605902102
Contact Type: Local Agency Caseworker
Contact Name: KEVIN LAMBERT
Organization Name: ORANGE COUNTY LOP
Address: 1241 E DYER ROAD SUITE 120
City: SANTA ANA
Email: klambert@ochca.com
Phone Number: 7144336261

Global Id: T0605902102
Contact Type: Regional Board Caseworker
Contact Name: MIGUEL OVIEDO
Organization Name: SANTA ANA RWQCB (REGION 8)
Address: 3737 Main Street, Suite 500
City: RIVERSIDE
Email: miguel.oviedo@waterboards.ca.gov
Phone Number: 9517823238

LUST:
Global Id: T0605902102

CHEVRON (Continued) **U003659611**

Action Type: Other
Date: 09/12/1997
Action: Leak Reported

Global Id: T0605902102
Action Type: ENFORCEMENT
Date: 03/02/1998
Action: LOP Case Closure Summary to RB

Global Id: T0605902102
Action Type: Other
Date: 09/12/1997
Action: Leak Discovery

LUST:
Global Id: T0605902102
Status: Completed - Case Closed
Status Date: 04/20/1998

Global Id: T0605902102
Status: Open - Case Begin Date
Status Date: 09/12/1997

ORANGE CO. LUST:
Region: ORANGE
Facility Id: 97UT037
Released Substance: Gasoline-Automotive (motor gasoline and additives), leaded & unleaded
Date Closed: 04/20/1998
Record ID: RO0001932

LUST REG 8:
Region: 8
County: Orange
Regional Board: Santa Ana Region
Facility Status: Case Closed
Case Number: 083003083T
Local Case Num: 97UT037
Case Type: Soil only
Substance: Gasoline
Qty Leaked: 0
Abate Method: Not reported
Cross Street: Not reported
Enf Type: Not reported
Funding: Not reported
How Discovered: Tank Closure
How Stopped: Close Tank
Leak Cause: Unknown
Leak Source: Unknown
Global ID: T0605902102
How Stopped Date: 9/9/9999
Enter Date: Not reported
Date Confirmation of Leak Began: Not reported
Date Preliminary Assessment Began: Not reported
Discover Date: 9/12/1997
Enforcement Date: Not reported

CHEVRON (Continued) **U003659611**

Close Date:	4/20/1998
Date Prelim Assessment Workplan Submitted:	Not reported
Date Pollution Characterization Began:	Not reported
Date Remediation Plan Submitted:	Not reported
Date Remedial Action Underway:	Not reported
Date Post Remedial Action Monitoring:	Not reported
Enter Date:	Not reported
GW Qualifies:	Not reported
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.6458268
Longitude:	-117.6890547
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	1
MTBE Tested:	Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.
MTBE Class:	*
Staff:	TME
Staff Initials:	JS
Lead Agency:	Local Agency
Local Agency:	30000L
Hydr Basin #:	Not reported
Beneficial:	MUN
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported

Summary: Not reported

SWEEPS UST:

Status:	Active
Comp Number:	11761
Number:	9
Board Of Equalization:	Not reported
Referral Date:	09-30-92
Action Date:	09-15-92
Created Date:	02-29-88
Owner Tank Id:	Not reported
SWRCB Tank Id:	30-000-011761-000001
Tank Status:	A
Capacity:	12000
Active Date:	Not reported
Tank Use:	M.V. FUEL
STG:	P
Content:	REG UNLEADED
Number Of Tanks:	3

Status:	Active
Comp Number:	11761
Number:	9
Board Of Equalization:	Not reported
Referral Date:	09-30-92
Action Date:	09-15-92

CHEVRON (Continued) **U003659611**

Created Date: 02-29-88
Owner Tank Id: Not reported
SWRCB Tank Id: 30-000-011761-000002
Tank Status: A
Capacity: 12000
Active Date: Not reported
Tank Use: M.V. FUEL
STG: P
Content: REG UNLEADED
Number Of Tanks: Not reported

Status: Active
Comp Number: 11761
Number: 9
Board Of Equalization: Not reported
Referral Date: 09-30-92
Action Date: 09-15-92
Created Date: 02-29-88
Owner Tank Id: Not reported
SWRCB Tank Id: 30-000-011761-000003
Tank Status: A
Capacity: 12000
Active Date: Not reported
Tank Use: M.V. FUEL
STG: P
Content: DIESEL
Number Of Tanks: Not reported

HIST CORTESE:
Region: CORTESE
Facility County Code: 30
Reg By: LTNKA
Reg Id: 083003083T

CERS TANKS:
Site ID: 242907
CERS ID: T0605902102
Site Name: CHEVRON
CERS Description: Leaking Underground Storage Tank Cleanup Site

Affiliation:
Affiliation Type Desc: Regional Board Caseworker
Entity Name: MIGUEL OVIEDO - SANTA ANA RWQCB (REGION 8)
Entity Title: Not reported
Affiliation Address: 3737 Main Street, Suite 500
Affiliation City: RIVERSIDE
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: 9517823238

Affiliation Type Desc: Local Agency Caseworker
Entity Name: KEVIN LAMBERT - ORANGE COUNTY LOP
Entity Title: Not reported
Affiliation Address: 1241 E DYER ROAD SUITE 120
Affiliation City: SANTA ANA
Affiliation State: CA

CHEVRON (Continued) **U003659611**

Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	7144336261
Affiliation Type Desc:	Local Agency Caseworker
Entity Name:	JAMES STROZIER - ORANGE COUNTY LOP
Entity Title:	Not reported
Affiliation Address:	1241 E. DYER ROAD SUITE 120
Affiliation City:	SANTA ANA
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	7144336273

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27 **BEACON BAY CAR WASH** **LUST S105774228**
ENE **20602 LAKE FOREST** **CERS N/A**
1/4-1/2 **LAKE FOREST, CA 92630**
0.489 mi.
2583 ft.

Relative:
Higher

Actual:
701 ft.

LUST:

Lead Agency:	ORANGE COUNTY LOP
Case Type:	LUST Cleanup Site
Geo Track:	http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0605999998
Global Id:	T0605999998
Latitude:	33.663041
Longitude:	-117.666454
Status:	Completed - Case Closed
Status Date:	09/12/2002
Case Worker:	KL
RB Case Number:	083003899T
Local Agency:	ORANGE COUNTY LOP
File Location:	Local Agency
Local Case Number:	02UT003
Potential Media Affect:	Under Investigation
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

LUST:

Global Id:	T0605999998
Contact Type:	Local Agency Caseworker
Contact Name:	JAMES STROZIER
Organization Name:	ORANGE COUNTY LOP
Address:	1241 E. DYER ROAD SUITE 120
City:	SANTA ANA
Email:	jstrozier@ochca.com
Phone Number:	7144336273
Global Id:	T0605999998
Contact Type:	Local Agency Caseworker
Contact Name:	KEVIN LAMBERT
Organization Name:	ORANGE COUNTY LOP
Address:	1241 E DYER ROAD SUITE 120
City:	SANTA ANA
Email:	klambert@ochca.com
Phone Number:	7144336261

BEACON BAY CAR WASH (Continued) **S105774228**

Global Id: T0605999998
Contact Type: Regional Board Caseworker
Contact Name: NANCY OLSON-MARTIN
Organization Name: SANTA ANA RWQCB (REGION 8)
Address: 3737 MAIN STREET, SUITE 500
City: RIVERSIDE
Email: nolson-martin@waterboards.ca.gov
Phone Number: Not reported

LUST:
Global Id: T0605999998
Action Type: ENFORCEMENT
Date: 09/12/2002
Action: Closure/No Further Action Letter

LUST:
Global Id: T0605999998
Status: Completed - Case Closed
Status Date: 09/12/2002

Global Id: T0605999998
Status: Open - Case Begin Date
Status Date: 09/12/2002

ORANGE CO. LUST:
Region: ORANGE
Facility Id: 02UT003
Released Substance: Gasoline-Automotive (motor gasoline and additives), leaded & unleaded
Date Closed: 09/12/2002
Record ID: RO0003032

LUST REG 8:
Region: 8
County: Orange
Regional Board: Santa Ana Region
Facility Status: Case Closed
Case Number: 083003899T
Local Case Num: 02UT003
Case Type: Undefined
Substance: Gasoline
Qty Leaked: 0
Abate Method: Not reported
Cross Street: Not reported
Enf Type: Not reported
Funding: Not reported
How Discovered: Tank Closure
How Stopped: Close Tank
Leak Cause: Unknown
Leak Source: Unknown
Global ID: T0605999998
How Stopped Date: 9/9/9999
Enter Date: Not reported
Date Confirmation of Leak Began: Not reported
Date Preliminary Assessment Began: Not reported

BEACON BAY CAR WASH (Continued) **S105774228**

Discover Date:	1/1/1965
Enforcement Date:	Not reported
Close Date:	9/12/2002
Date Prelim Assessment Workplan Submitted:	Not reported
Date Pollution Characterization Began:	Not reported
Date Remediation Plan Submitted:	Not reported
Date Remedial Action Underway:	Not reported
Date Post Remedial Action Monitoring:	Not reported
Enter Date:	Not reported
GW Qualifies:	Not reported
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.662755
Longitude:	-117.667306
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	1
MTBE Tested:	Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.
MTBE Class:	*
Staff:	NOM
Staff Initials:	JS
Lead Agency:	Local Agency
Local Agency:	30000L
Hydr Basin #:	Not reported
Beneficial:	MUN
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported

Summary: Not reported

CERS TANKS:

Site ID:	233682
CERS ID:	T0605999998
Site Name:	BEACON BAY CAR WASH
CERS Description:	Leaking Underground Storage Tank Cleanup Site

Affiliation:

Affiliation Type Desc:	Regional Board Caseworker
Entity Name:	NANCY OLSON-MARTIN - SANTA ANA RWQCB (REGION 8)
Entity Title:	Not reported
Affiliation Address:	3737 MAIN STREET, SUITE 500
Affiliation City:	RIVERSIDE
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Local Agency Caseworker
Entity Name:	KEVIN LAMBERT - ORANGE COUNTY LOP
Entity Title:	Not reported
Affiliation Address:	1241 E DYER ROAD SUITE 120
Affiliation City:	SANTA ANA

BEACON BAY CAR WASH (Continued) **S105774228**

Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	7144336261
Affiliation Type Desc:	Local Agency Caseworker
Entity Name:	JAMES STROZIER - ORANGE COUNTY LOP
Entity Title:	Not reported
Affiliation Address:	1241 E. DYER ROAD SUITE 120
Affiliation City:	SANTA ANA
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	7144336273

Count: 0 records. ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
		NO SITES FOUND			

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 04/11/2019
Date Data Arrived at EDR: 04/18/2019
Date Made Active in Reports: 05/14/2019
Number of Days to Update: 26

Source: EPA
Telephone: N/A
Last EDR Contact: 06/06/2019
Next Scheduled EDR Contact: 07/15/2019
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 04/11/2019
Date Data Arrived at EDR: 04/18/2019
Date Made Active in Reports: 05/14/2019
Number of Days to Update: 26

Source: EPA
Telephone: N/A
Last EDR Contact: 06/06/2019
Next Scheduled EDR Contact: 07/15/2019
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Federal Delisted NPL site list

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 04/11/2019
Date Data Arrived at EDR: 04/18/2019
Date Made Active in Reports: 05/14/2019
Number of Days to Update: 26

Source: EPA
Telephone: N/A
Last EDR Contact: 06/06/2019
Next Scheduled EDR Contact: 07/15/2019
Data Release Frequency: Quarterly

Federal CERCLIS list

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 04/03/2019
Date Data Arrived at EDR: 04/05/2019
Date Made Active in Reports: 05/14/2019
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 04/05/2019
Next Scheduled EDR Contact: 07/15/2019
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 04/11/2019
Date Data Arrived at EDR: 04/18/2019
Date Made Active in Reports: 05/23/2019
Number of Days to Update: 35

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 06/06/2019
Next Scheduled EDR Contact: 07/29/2019
Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 04/11/2019
Date Data Arrived at EDR: 04/18/2019
Date Made Active in Reports: 05/23/2019
Number of Days to Update: 35

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 06/06/2019
Next Scheduled EDR Contact: 07/29/2019
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 03/25/2019
Date Data Arrived at EDR: 03/27/2019
Date Made Active in Reports: 04/17/2019
Number of Days to Update: 21

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 03/27/2019
Next Scheduled EDR Contact: 07/08/2019
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 03/25/2019
Date Data Arrived at EDR: 03/27/2019
Date Made Active in Reports: 04/17/2019
Number of Days to Update: 21

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/27/2019
Next Scheduled EDR Contact: 07/08/2019
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/25/2019
Date Data Arrived at EDR: 03/27/2019
Date Made Active in Reports: 04/17/2019
Number of Days to Update: 21

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/27/2019
Next Scheduled EDR Contact: 07/08/2019
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 03/25/2019
Date Data Arrived at EDR: 03/27/2019
Date Made Active in Reports: 04/17/2019
Number of Days to Update: 21

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/27/2019
Next Scheduled EDR Contact: 07/08/2019
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/25/2019
Date Data Arrived at EDR: 03/27/2019
Date Made Active in Reports: 04/17/2019
Number of Days to Update: 21

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/27/2019
Next Scheduled EDR Contact: 07/08/2019
Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 02/22/2019
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 04/17/2019
Number of Days to Update: 41

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 05/10/2019
Next Scheduled EDR Contact: 08/26/2019
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 01/31/2019
Date Data Arrived at EDR: 02/04/2019
Date Made Active in Reports: 03/08/2019
Number of Days to Update: 32

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 05/29/2019
Next Scheduled EDR Contact: 09/09/2019
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 01/31/2019
Date Data Arrived at EDR: 02/04/2019
Date Made Active in Reports: 03/08/2019
Number of Days to Update: 32

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 05/29/2019
Next Scheduled EDR Contact: 09/09/2019
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 03/25/2019
Date Data Arrived at EDR: 03/26/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 36

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 03/26/2019
Next Scheduled EDR Contact: 07/08/2019
Data Release Frequency: Quarterly

State- and tribal - equivalent NPL

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 01/28/2019
Date Data Arrived at EDR: 01/29/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 35

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 04/30/2019
Next Scheduled EDR Contact: 08/12/2019
Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 01/28/2019
Date Data Arrived at EDR: 01/29/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 35

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 04/30/2019
Next Scheduled EDR Contact: 08/12/2019
Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 02/11/2019
Date Data Arrived at EDR: 02/12/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 21

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 05/14/2019
Next Scheduled EDR Contact: 08/26/2019
Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

LUST: Leaking Underground Fuel Tank Report (GEOTRACKER)

Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 12/10/2018
Date Data Arrived at EDR: 12/11/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 12/11/2018
Next Scheduled EDR Contact: 03/25/2019
Data Release Frequency: Quarterly

LUST REG 9: Leaking Underground Storage Tank Report

Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: No Update Planned

LUST REG 8: Leaking Underground Storage Tanks

California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Varies

LUST REG 6V: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 6L: Leaking Underground Storage Tank Case Listing

For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

LUST REG 4: Underground Storage Tank Leak List

Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

LUST REG 3: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List

Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-622-2433
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

LUST REG 1: Active Toxic Site Investigation

Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-570-3769
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 7: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 10/10/2018
Date Data Arrived at EDR: 03/08/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 54

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 04/26/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 10/16/2018
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55
Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 04/26/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 02/19/2019
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 04/26/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 11/01/2018
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55
Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 04/26/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 09/24/2018
Date Data Arrived at EDR: 03/12/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 50
Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 04/26/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 10/13/2018
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55
Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 04/26/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 10/12/2018
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55
Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 04/26/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 10/17/2018
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55
Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 04/26/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

CPS-SLIC: Statewide SLIC Cases (GEOTRACKER)

Cleanup Program Sites (CPS; also known as Site Cleanups [SC] and formerly known as Spills, Leaks, Investigations, and Cleanups [SLIC] sites) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 12/10/2018
Date Data Arrived at EDR: 12/11/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 03/25/2019
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: Semi-Annually

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: Varies

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Semi-Annually

SLIC REG 6L: SLIC Sites
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36

Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11

Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: Annually

State and tribal registered storage tank lists

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 05/15/2017
Date Data Arrived at EDR: 05/30/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 136

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 04/25/2019
Next Scheduled EDR Contact: 07/22/2019
Data Release Frequency: Varies

UST CLOSURE: Proposed Closure of Underground Storage Tank (UST) Cases

UST cases that are being considered for closure by either the State Water Resources Control Board or the Executive Director have been posted for a 60-day public comment period. UST Case Closures being proposed for consideration by the State Water Resources Control Board. These are primarily UST cases that meet closure criteria under the decisional framework in State Water Board Resolution No. 92-49 and other Board orders. UST Case Closures proposed for consideration by the Executive Director pursuant to State Water Board Resolution No. 2012-0061. These are cases that meet the criteria of the Low-Threat UST Case Closure Policy. UST Case Closure Review Denials and Approved Orders.

Date of Government Version: 03/11/2019
Date Data Arrived at EDR: 03/13/2019
Date Made Active in Reports: 04/03/2019
Number of Days to Update: 21

Source: State Water Resources Control Board
Telephone: 916-327-7844
Last EDR Contact: 03/13/2019
Next Scheduled EDR Contact: 06/24/2019
Data Release Frequency: Varies

UST: Active UST Facilities

Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 12/10/2018
Date Data Arrived at EDR: 12/11/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 35

Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 12/11/2018
Next Scheduled EDR Contact: 03/25/2019
Data Release Frequency: Semi-Annually

MILITARY UST SITES: Military UST Sites (GEOTRACKER)

Military ust sites

Date of Government Version: 12/10/2018
Date Data Arrived at EDR: 12/11/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 03/25/2019
Data Release Frequency: Varies

AST: Aboveground Petroleum Storage Tank Facilities

A listing of aboveground storage tank petroleum storage tank locations.

Date of Government Version: 07/06/2016
Date Data Arrived at EDR: 07/12/2016
Date Made Active in Reports: 09/19/2016
Number of Days to Update: 69

Source: California Environmental Protection Agency
Telephone: 916-327-5092
Last EDR Contact: 03/18/2019
Next Scheduled EDR Contact: 07/01/2019
Data Release Frequency: Quarterly

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 10/16/2018
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 04/26/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 10/10/2018
Date Data Arrived at EDR: 03/08/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 54

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 04/26/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 10/17/2018
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 04/26/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 11/07/2018
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 04/26/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 11/01/2018
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 04/26/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 10/12/2018
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 04/26/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 09/24/2018
Date Data Arrived at EDR: 03/12/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 50

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 04/26/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 10/03/2018
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 04/26/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

INDIAN VCP R1: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142
Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 03/25/2019
Next Scheduled EDR Contact: 07/08/2019
Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27
Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

VCP: Voluntary Cleanup Program Properties
Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 01/28/2019
Date Data Arrived at EDR: 01/29/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 35
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 04/30/2019
Next Scheduled EDR Contact: 08/12/2019
Data Release Frequency: Quarterly

State and tribal Brownfields sites

BROWNFIELDS: Considered Brownfieds Sites Listing
A listing of sites the SWRCB considers to be Brownfields since these are sites have come to them through the MOA Process.

Date of Government Version: 03/25/2019
Date Data Arrived at EDR: 03/26/2019
Date Made Active in Reports: 04/29/2019
Number of Days to Update: 34
Source: State Water Resources Control Board
Telephone: 916-323-7905
Last EDR Contact: 03/26/2019
Next Scheduled EDR Contact: 07/08/2019
Data Release Frequency: Quarterly

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites
Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 12/17/2018
Date Data Arrived at EDR: 12/18/2018
Date Made Active in Reports: 01/11/2019
Number of Days to Update: 24
Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 06/04/2019
Next Scheduled EDR Contact: 07/01/2019
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT: Waste Management Unit Database

Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 04/25/2019
Next Scheduled EDR Contact: 08/12/2019
Data Release Frequency: No Update Planned

SWRCY: Recycler Database

A listing of recycling facilities in California.

Date of Government Version: 03/11/2019
Date Data Arrived at EDR: 03/13/2019
Date Made Active in Reports: 04/30/2019
Number of Days to Update: 48

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 03/13/2019
Next Scheduled EDR Contact: 06/24/2019
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing

A listing of registered waste tire haulers.

Date of Government Version: 03/26/2019
Date Data Arrived at EDR: 03/27/2019
Date Made Active in Reports: 04/30/2019
Number of Days to Update: 34

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 05/09/2019
Next Scheduled EDR Contact: 08/26/2019
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 04/26/2019
Next Scheduled EDR Contact: 08/12/2019
Data Release Frequency: Varies

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 04/22/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: No Update Planned

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land

A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176

Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 04/23/2019
Next Scheduled EDR Contact: 08/12/2019
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 02/24/2019
Date Data Arrived at EDR: 02/26/2019
Date Made Active in Reports: 04/17/2019
Number of Days to Update: 50

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 05/24/2019
Next Scheduled EDR Contact: 09/09/2019
Data Release Frequency: No Update Planned

HIST CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21

Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 01/28/2019
Date Data Arrived at EDR: 01/29/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 35

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 04/30/2019
Next Scheduled EDR Contact: 08/12/2019
Data Release Frequency: Quarterly

CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 06/12/2018
Date Made Active in Reports: 08/06/2018
Number of Days to Update: 55

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 05/02/2019
Next Scheduled EDR Contact: 07/22/2019
Data Release Frequency: Varies

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: No Update Planned

CERS HAZ WASTE: CERS HAZ WASTE

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, and RCRA LQ HW Generator programs.

Date of Government Version: 04/09/2019
Date Data Arrived at EDR: 04/11/2019
Date Made Active in Reports: 05/08/2019
Number of Days to Update: 27

Source: CalEPA
Telephone: 916-323-2514
Last EDR Contact: 04/11/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Quarterly

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 02/24/2019
Date Data Arrived at EDR: 02/26/2019
Date Made Active in Reports: 04/17/2019
Number of Days to Update: 50

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 05/24/2019
Next Scheduled EDR Contact: 09/09/2019
Data Release Frequency: Quarterly

PFAS: PFAS Contamination Site Location Listing

A listing of PFAS contaminated sites included in the GeoTracker database.

Date of Government Version: 02/21/2019
Date Data Arrived at EDR: 02/22/2019
Date Made Active in Reports: 04/15/2019
Number of Days to Update: 52

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 05/16/2019
Next Scheduled EDR Contact: 06/24/2019
Data Release Frequency: Varies

Local Lists of Registered Storage Tanks

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

UST MENDOCINO: Mendocino County UST Database

A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 12/04/2018
Date Data Arrived at EDR: 12/06/2018
Date Made Active in Reports: 12/14/2018
Number of Days to Update: 8

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 05/24/2019
Next Scheduled EDR Contact: 09/09/2019
Data Release Frequency: Annually

HIST UST: Hazardous Substance Storage Container Database

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SAN FRANCISCO AST: Aboveground Storage Tank Site Listing
Aboveground storage tank sites

Date of Government Version: 09/11/2018
Date Data Arrived at EDR: 09/12/2018
Date Made Active in Reports: 10/11/2018
Number of Days to Update: 29

Source: San Francisco County Department of Public Health
Telephone: 415-252-3896
Last EDR Contact: 05/02/2019
Next Scheduled EDR Contact: 08/19/2019
Data Release Frequency: Varies

CA FID UST: Facility Inventory Database
The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24

Source: California Environmental Protection Agency
Telephone: 916-341-5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CERS TANKS: California Environmental Reporting System (CERS) Tanks
List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs.

Date of Government Version: 04/09/2019
Date Data Arrived at EDR: 04/11/2019
Date Made Active in Reports: 05/08/2019
Number of Days to Update: 27

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 04/11/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Quarterly

Local Land Records

LIENS: Environmental Liens Listing
A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 02/28/2019
Date Data Arrived at EDR: 03/01/2019
Date Made Active in Reports: 04/02/2019
Number of Days to Update: 32

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 06/03/2019
Next Scheduled EDR Contact: 09/16/2019
Data Release Frequency: Varies

LIENS 2: CERCLA Lien Information
A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 04/11/2019
Date Data Arrived at EDR: 04/18/2019
Date Made Active in Reports: 05/23/2019
Number of Days to Update: 35

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 06/06/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Semi-Annually

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 03/04/2019
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 04/01/2019
Number of Days to Update: 27

Source: DTSC and SWRCB
Telephone: 916-323-3400
Last EDR Contact: 06/04/2019
Next Scheduled EDR Contact: 09/16/2019
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 03/25/2019
Date Data Arrived at EDR: 03/26/2019
Date Made Active in Reports: 05/14/2019
Number of Days to Update: 49

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 03/26/2019
Next Scheduled EDR Contact: 07/08/2019
Data Release Frequency: Quarterly

CHMIRS: California Hazardous Material Incident Report System

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 10/24/2018
Date Data Arrived at EDR: 01/24/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 40

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 04/26/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Semi-Annually

LDS: Land Disposal Sites Listing (GEOTRACKER)

Land Disposal sites (Landfills) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 12/10/2018
Date Data Arrived at EDR: 12/11/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 35

Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 03/25/2019
Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing (GEOTRACKER)

Military sites (consisting of: Military UST sites; Military Privatized sites; and Military Cleanup sites [formerly known as DoD non UST]) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 12/10/2018
Date Data Arrived at EDR: 12/11/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 03/25/2019
Data Release Frequency: Quarterly

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 06/06/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/22/2013
Number of Days to Update: 50

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 03/25/2019
Date Data Arrived at EDR: 03/27/2019
Date Made Active in Reports: 04/17/2019
Number of Days to Update: 21

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/27/2019
Next Scheduled EDR Contact: 07/08/2019
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 03/07/2019
Date Data Arrived at EDR: 04/03/2019
Date Made Active in Reports: 05/23/2019
Number of Days to Update: 50

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 05/21/2019
Next Scheduled EDR Contact: 09/02/2019
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 04/12/2019
Next Scheduled EDR Contact: 07/22/2019
Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 04/12/2019
Next Scheduled EDR Contact: 07/22/2019
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 05/13/2019
Next Scheduled EDR Contact: 08/26/2019
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 03/25/2019
Date Data Arrived at EDR: 03/26/2019
Date Made Active in Reports: 05/07/2019
Number of Days to Update: 42

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 03/26/2019
Next Scheduled EDR Contact: 07/08/2019
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 05/06/2019
Next Scheduled EDR Contact: 08/19/2019
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 05/10/2019
Next Scheduled EDR Contact: 08/19/2019
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 06/21/2017
Date Made Active in Reports: 01/05/2018
Number of Days to Update: 198

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 03/22/2019
Next Scheduled EDR Contact: 07/01/2019
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 01/10/2018
Date Made Active in Reports: 01/12/2018
Number of Days to Update: 2

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 05/24/2019
Next Scheduled EDR Contact: 09/02/2019
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 12/10/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 77

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 04/24/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 04/11/2019
Date Data Arrived at EDR: 04/18/2019
Date Made Active in Reports: 05/23/2019
Number of Days to Update: 35

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 06/06/2019
Next Scheduled EDR Contact: 09/16/2019
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 04/25/2019
Date Data Arrived at EDR: 05/02/2019
Date Made Active in Reports: 05/23/2019
Number of Days to Update: 21

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 04/22/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties
A listing of verified Potentially Responsible Parties

Date of Government Version: 04/11/2019
Date Data Arrived at EDR: 04/18/2019
Date Made Active in Reports: 05/23/2019
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 06/06/2019
Next Scheduled EDR Contact: 08/19/2019
Data Release Frequency: Quarterly

PADS: PCB Activity Database System
PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 03/20/2019
Date Data Arrived at EDR: 04/10/2019
Date Made Active in Reports: 05/14/2019
Number of Days to Update: 34

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 04/10/2019
Next Scheduled EDR Contact: 07/22/2019
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System
The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 04/08/2019
Next Scheduled EDR Contact: 07/22/2019
Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Quarterly

MLTS: Material Licensing Tracking System
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 08/30/2016
Date Data Arrived at EDR: 09/08/2016
Date Made Active in Reports: 10/21/2016
Number of Days to Update: 43

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 04/22/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

COAL ASH DOE: Steam-Electric Plant Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76

Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 06/07/2019
Next Scheduled EDR Contact: 09/16/2019
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 07/01/2014
Date Data Arrived at EDR: 09/10/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 06/07/2019
Next Scheduled EDR Contact: 09/16/2019
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 05/24/2017
Date Data Arrived at EDR: 11/30/2017
Date Made Active in Reports: 12/15/2017
Number of Days to Update: 15

Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 04/26/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 04/02/2019
Date Data Arrived at EDR: 04/02/2019
Date Made Active in Reports: 05/14/2019
Number of Days to Update: 42

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 04/02/2019
Next Scheduled EDR Contact: 07/15/2019
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 12/03/2018
Date Data Arrived at EDR: 01/29/2019
Date Made Active in Reports: 03/21/2019
Number of Days to Update: 51

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 04/30/2019
Next Scheduled EDR Contact: 08/12/2019
Data Release Frequency: Quarterly

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 03/31/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 05/23/2019
Number of Days to Update: 30

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 04/05/2019
Next Scheduled EDR Contact: 07/22/2019
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2015
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 09/28/2017
Number of Days to Update: 218

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 05/24/2019
Next Scheduled EDR Contact: 09/02/2019
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 04/11/2019
Next Scheduled EDR Contact: 07/22/2019
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 08/08/2017
Date Data Arrived at EDR: 09/11/2018
Date Made Active in Reports: 09/14/2018
Number of Days to Update: 3

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 05/02/2019
Next Scheduled EDR Contact: 08/19/2019
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 06/23/2017
Date Data Arrived at EDR: 10/11/2017
Date Made Active in Reports: 11/03/2017
Number of Days to Update: 23

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 05/24/2019
Next Scheduled EDR Contact: 09/02/2019
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 04/11/2019
Date Data Arrived at EDR: 04/18/2019
Date Made Active in Reports: 05/14/2019
Number of Days to Update: 26

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 06/06/2019
Next Scheduled EDR Contact: 07/15/2019
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 11/27/2018
Date Data Arrived at EDR: 02/27/2019
Date Made Active in Reports: 04/01/2019
Number of Days to Update: 33

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 05/29/2019
Next Scheduled EDR Contact: 09/09/2019
Data Release Frequency: Semi-Annually

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 12/05/2005
Date Data Arrived at EDR: 02/29/2008
Date Made Active in Reports: 04/18/2008
Number of Days to Update: 49

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 05/31/2019
Next Scheduled EDR Contact: 09/09/2019
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 05/31/2019
Next Scheduled EDR Contact: 09/09/2019
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 03/27/2019
Date Data Arrived at EDR: 03/28/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 34

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 03/21/2019
Next Scheduled EDR Contact: 06/24/2019
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 02/15/2019
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 03/15/2019
Number of Days to Update: 10

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 06/05/2019
Next Scheduled EDR Contact: 09/16/2019
Data Release Frequency: Quarterly

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 04/07/2019
Date Data Arrived at EDR: 04/09/2019
Date Made Active in Reports: 05/23/2019
Number of Days to Update: 44

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 04/09/2019
Next Scheduled EDR Contact: 07/22/2019
Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 01/17/2019
Date Made Active in Reports: 04/01/2019
Number of Days to Update: 74

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 04/15/2019
Next Scheduled EDR Contact: 07/29/2019
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

DOCKET HWC: Hazardous Waste Compliance Docket Listing
A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 07/26/2018
Date Made Active in Reports: 10/05/2018
Number of Days to Update: 71
Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 05/24/2019
Next Scheduled EDR Contact: 09/09/2019
Data Release Frequency: Varies

FUELS PROGRAM: EPA Fuels Program Registered Listing
This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 02/19/2019
Date Data Arrived at EDR: 02/21/2019
Date Made Active in Reports: 04/01/2019
Number of Days to Update: 39
Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 05/21/2019
Next Scheduled EDR Contact: 09/02/2019
Data Release Frequency: Quarterly

CA BOND EXP. PLAN: Bond Expenditure Plan
Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6
Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CORTESE: "Cortese" Hazardous Waste & Substances Sites List
The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 03/25/2019
Date Data Arrived at EDR: 03/26/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 36
Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 03/26/2019
Next Scheduled EDR Contact: 07/08/2019
Data Release Frequency: Quarterly

CUPA SAN FRANCISCO CO: CUPA Facility Listing
Cupa facilities

Date of Government Version: 04/18/2019
Date Data Arrived at EDR: 04/19/2019
Date Made Active in Reports: 04/30/2019
Number of Days to Update: 11
Source: San Francisco County Department of Environmental Health
Telephone: 415-252-3896
Last EDR Contact: 04/18/2019
Next Scheduled EDR Contact: 08/19/2019
Data Release Frequency: Varies

CUPA LIVERMORE-PLEASANTON: CUPA Facility Listing
list of facilities associated with the various CUPA programs in Livermore-Pleasanton

Date of Government Version: 01/23/2019
Date Data Arrived at EDR: 02/26/2019
Date Made Active in Reports: 04/01/2019
Number of Days to Update: 34
Source: Livermore-Pleasanton Fire Department
Telephone: 925-454-2361
Last EDR Contact: 05/14/2019
Next Scheduled EDR Contact: 08/26/2019
Data Release Frequency: Varies

DRYCLEAN SOUTH COAST: South Coast Air Quality Management District Drycleaner Listing
A listing of dry cleaners in the South Coast Air Quality Management District

Date of Government Version: 03/19/2019
Date Data Arrived at EDR: 03/22/2019
Date Made Active in Reports: 04/09/2019
Number of Days to Update: 18

Source: South Coast Air Quality Management District
Telephone: 909-396-3211
Last EDR Contact: 05/23/2019
Next Scheduled EDR Contact: 09/09/2019
Data Release Frequency: Varies

DRYCLEANERS: Cleaner Facilities

A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 03/01/2019
Date Data Arrived at EDR: 04/25/2019
Date Made Active in Reports: 05/30/2019
Number of Days to Update: 35

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 06/03/2019
Next Scheduled EDR Contact: 09/16/2019
Data Release Frequency: Annually

DRYCLEAN AVAQMD: Antelope Valley Air Quality Management District Drycleaner Listing

A listing of dry cleaners in the Antelope Valley Air Quality Management District.

Date of Government Version: 02/27/2019
Date Data Arrived at EDR: 02/28/2019
Date Made Active in Reports: 04/01/2019
Number of Days to Update: 32

Source: Antelope Valley Air Quality Management District
Telephone: 661-723-8070
Last EDR Contact: 06/03/2019
Next Scheduled EDR Contact: 09/16/2019
Data Release Frequency: Varies

EMI: Emissions Inventory Data

Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 06/20/2018
Date Made Active in Reports: 08/06/2018
Number of Days to Update: 47

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 03/22/2019
Next Scheduled EDR Contact: 07/01/2019
Data Release Frequency: Varies

ENF: Enforcement Action Listing

A listing of Water Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Violation, Expedited Payment Letter, and Staff Enforcement Letter.

Date of Government Version: 11/01/2018
Date Data Arrived at EDR: 11/02/2018
Date Made Active in Reports: 12/13/2018
Number of Days to Update: 41

Source: State Water Resoruces Control Board
Telephone: 916-445-9379
Last EDR Contact: 05/14/2019
Next Scheduled EDR Contact: 08/26/2019
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing

Financial Assurance information

Date of Government Version: 01/10/2019
Date Data Arrived at EDR: 01/23/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 41

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 04/22/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information Listing

A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 02/15/2019
Date Data Arrived at EDR: 02/19/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 14

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 05/09/2019
Next Scheduled EDR Contact: 08/26/2019
Data Release Frequency: Varies

HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method. This database begins with calendar year 1993.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 04/09/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 50

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 04/22/2019
Next Scheduled EDR Contact: 07/22/2019
Data Release Frequency: Annually

ICE: ICE

Contains data pertaining to the Permitted Facilities with Inspections / Enforcements sites tracked in Envirostor.

Date of Government Version: 02/19/2019
Date Data Arrived at EDR: 02/20/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 13

Source: Department of Toxic Subsances Control
Telephone: 877-786-9427
Last EDR Contact: 05/21/2019
Next Scheduled EDR Contact: 09/02/2019
Data Release Frequency: Quarterly

HIST CORTESE: Hazardous Waste & Substance Site List

The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

Date of Government Version: 04/01/2001
Date Data Arrived at EDR: 01/22/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/22/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

HWP: EnviroStor Permitted Facilities Listing

Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 02/19/2019
Date Data Arrived at EDR: 02/20/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 13

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/21/2019
Next Scheduled EDR Contact: 09/02/2019
Data Release Frequency: Quarterly

HWT: Registered Hazardous Waste Transporter Database

A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 04/08/2019
Date Data Arrived at EDR: 04/09/2019
Date Made Active in Reports: 05/30/2019
Number of Days to Update: 51

Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 04/09/2019
Next Scheduled EDR Contact: 07/22/2019
Data Release Frequency: Quarterly

MINES: Mines Site Location Listing
A listing of mine site locations from the Office of Mine Reclamation.

Date of Government Version: 12/10/2018
Date Data Arrived at EDR: 12/12/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 34
Source: Department of Conservation
Telephone: 916-322-1080
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 03/25/2019
Data Release Frequency: Quarterly

MWMP: Medical Waste Management Program Listing
The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

Date of Government Version: 02/20/2019
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 04/02/2019
Number of Days to Update: 28
Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 06/04/2019
Next Scheduled EDR Contact: 09/16/2019
Data Release Frequency: Varies

NPDES: NPDES Permits Listing
A listing of NPDES permits, including stormwater.

Date of Government Version: 02/11/2019
Date Data Arrived at EDR: 02/12/2019
Date Made Active in Reports: 03/07/2019
Number of Days to Update: 23
Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 05/14/2019
Next Scheduled EDR Contact: 08/26/2019
Data Release Frequency: Quarterly

PEST LIC: Pesticide Regulation Licenses Listing
A listing of licenses and certificates issued by the Department of Pesticide Regulation. The DPR issues licenses and/or certificates to: Persons and businesses that apply or sell pesticides; Pest control dealers and brokers; Persons who advise on agricultural pesticide applications.

Date of Government Version: 03/04/2019
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 04/05/2019
Number of Days to Update: 31
Source: Department of Pesticide Regulation
Telephone: 916-445-4038
Last EDR Contact: 06/04/2019
Next Scheduled EDR Contact: 09/16/2019
Data Release Frequency: Quarterly

PROC: Certified Processors Database
A listing of certified processors.

Date of Government Version: 03/11/2019
Date Data Arrived at EDR: 03/13/2019
Date Made Active in Reports: 04/29/2019
Number of Days to Update: 47
Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 03/13/2019
Next Scheduled EDR Contact: 06/24/2019
Data Release Frequency: Quarterly

NOTIFY 65: Proposition 65 Records
Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 03/18/2019
Date Data Arrived at EDR: 03/19/2019
Date Made Active in Reports: 04/29/2019
Number of Days to Update: 41
Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 03/18/2019
Next Scheduled EDR Contact: 07/01/2019
Data Release Frequency: No Update Planned

UIC: UIC Listing
A listing of wells identified as underground injection wells, in the California Oil and Gas Wells database.

Date of Government Version: 04/27/2018
Date Data Arrived at EDR: 06/13/2018
Date Made Active in Reports: 07/17/2018
Number of Days to Update: 34
Source: Deaprtment of Conservation
Telephone: 916-445-2408
Last EDR Contact: 03/13/2019
Next Scheduled EDR Contact: 06/24/2019
Data Release Frequency: Varies

UIC GEO: Underground Injection Control Sites (GEOTRACKER)
Underground control injection sites

Date of Government Version: 12/10/2018
Date Data Arrived at EDR: 12/11/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 35
Source: State Water Resource Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 03/25/2019
Data Release Frequency: Varies

WASTEWATER PITS: Oil Wastewater Pits Listing
Water officials discovered that oil producers have been dumping chemical-laden wastewater into hundreds of unlined pits that are operating without proper permits. Inspections completed by the Central Valley Regional Water Quality Control Board revealed the existence of previously unidentified waste sites. The water boards review found that more than one-third of the region's active disposal pits are operating without permission.

Date of Government Version: 05/08/2018
Date Data Arrived at EDR: 07/11/2018
Date Made Active in Reports: 09/13/2018
Number of Days to Update: 64
Source: RWQCB, Central Valley Region
Telephone: 559-445-5577
Last EDR Contact: 04/12/2019
Next Scheduled EDR Contact: 07/22/2019
Data Release Frequency: Varies

WDS: Waste Discharge System
Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9
Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 05/16/2019
Next Scheduled EDR Contact: 09/02/2019
Data Release Frequency: Quarterly

MILITARY PRIV SITES: Military Privatized Sites (GEOTRACKER)
Military privatized sites

Date of Government Version: 12/10/2018
Date Data Arrived at EDR: 12/11/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 35
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 03/25/2019
Data Release Frequency: Varies

PROJECT: Project Sites (GEOTRACKER)
Projects sites

Date of Government Version: 12/10/2018
Date Data Arrived at EDR: 12/11/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 35
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 03/25/2019
Data Release Frequency: Varies

WDR: Waste Discharge Requirements Listing
In general, the Waste Discharge Requirements (WDRs) Program (sometimes also referred to as the "Non Chapter 15 (Non 15) Program") regulates point discharges that are exempt pursuant to Subsection 20090 of Title 27 and not subject to the Federal Water Pollution Control Act. Exemptions from Title 27 may be granted for nine categories of discharges (e.g., sewage, wastewater, etc.) that meet, and continue to meet, the preconditions listed for each specific exemption. The scope of the WDRs Program also includes the discharge of wastes classified as inert, pursuant to section 20230 of Title 27.

Date of Government Version: 03/11/2019
Date Data Arrived at EDR: 03/13/2019
Date Made Active in Reports: 04/29/2019
Number of Days to Update: 47

Source: State Water Resources Control Board
Telephone: 916-341-5810
Last EDR Contact: 03/13/2019
Next Scheduled EDR Contact: 06/24/2019
Data Release Frequency: Quarterly

CIWQS: California Integrated Water Quality System

The California Integrated Water Quality System (CIWQS) is a computer system used by the State and Regional Water Quality Control Boards to track information about places of environmental interest, manage permits and other orders, track inspections, and manage violations and enforcement activities.

Date of Government Version: 03/05/2019
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 04/02/2019
Number of Days to Update: 28

Source: State Water Resources Control Board
Telephone: 866-794-4977
Last EDR Contact: 06/04/2019
Next Scheduled EDR Contact: 09/16/2019
Data Release Frequency: Varies

CERS: CalEPA Regulated Site Portal Data

The CalEPA Regulated Site Portal database combines data about environmentally regulated sites and facilities in California into a single database. It combines data from a variety of state and federal databases, and provides an overview of regulated activities across the spectrum of environmental programs for any given location in California. These activities include hazardous materials and waste, state and federal cleanups, impacted ground and surface waters, and toxic materials

Date of Government Version: 04/09/2019
Date Data Arrived at EDR: 04/11/2019
Date Made Active in Reports: 05/08/2019
Number of Days to Update: 27

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 04/11/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

NON-CASE INFO: Non-Case Information Sites (GEOTRACKER)

Non-Case Information sites

Date of Government Version: 12/10/2018
Date Data Arrived at EDR: 12/11/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 03/25/2019
Data Release Frequency: Varies

WIP: Well Investigation Program Case List

Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009
Date Data Arrived at EDR: 07/21/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 13

Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 03/25/2019
Next Scheduled EDR Contact: 07/08/2019
Data Release Frequency: Varies

OTHER OIL GAS: Other Oil & Gas Projects Sites (GEOTRACKER)

Other Oil & Gas Projects sites

Date of Government Version: 12/10/2018
Date Data Arrived at EDR: 12/11/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 03/25/2019
Data Release Frequency: Varies

PROD WATER PONDS: Produced Water Ponds Sites (GEOTRACKER)

Produced water ponds sites

Date of Government Version: 12/10/2018
Date Data Arrived at EDR: 12/11/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 03/25/2019
Data Release Frequency: Varies

SAMPLING POINT: Sampling Point ? Public Sites (GEOTRACKER)
Sampling point - public sites

Date of Government Version: 12/10/2018
Date Data Arrived at EDR: 12/11/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 03/25/2019
Data Release Frequency: Varies

WELL STIM PROJ: Well Stimulation Project (GEOTRACKER)
Includes areas of groundwater monitoring plans, a depiction of the monitoring network, and the facilities, boundaries, and subsurface characteristics of the oilfield and the features (oil and gas wells, produced water ponds, UIC wells, water supply wells, etc?) being monitored

Date of Government Version: 12/10/2018
Date Data Arrived at EDR: 12/11/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 03/25/2019
Data Release Frequency: Varies

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants
The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations
EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Resources Recycling and Recovery in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/13/2014
Number of Days to Update: 196

Source: Department of Resources Recycling and Recovery
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the State Water Resources Control Board in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/30/2013
Number of Days to Update: 182

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

COUNTY RECORDS

ALAMEDA COUNTY:

CS ALAMEDA: Contaminated Sites

A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 01/09/2019
Date Data Arrived at EDR: 01/11/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 53

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 04/22/2019
Next Scheduled EDR Contact: 07/22/2019
Data Release Frequency: Semi-Annually

UST ALAMEDA: Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 01/07/2019
Date Data Arrived at EDR: 01/08/2019
Date Made Active in Reports: 03/08/2019
Number of Days to Update: 59

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 04/08/2019
Next Scheduled EDR Contact: 04/24/2047
Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA AMADOR: CUPA Facility List
Cupa Facility List

Date of Government Version: 01/07/2019
Date Data Arrived at EDR: 01/08/2019
Date Made Active in Reports: 03/07/2019
Number of Days to Update: 58

Source: Amador County Environmental Health
Telephone: 209-223-6439
Last EDR Contact: 06/03/2019
Next Scheduled EDR Contact: 09/16/2019
Data Release Frequency: Varies

BUTTE COUNTY:

CUPA BUTTE: CUPA Facility Listing
Cupa facility list.

Date of Government Version: 04/21/2017
Date Data Arrived at EDR: 04/25/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 106

Source: Public Health Department
Telephone: 530-538-7149
Last EDR Contact: 04/08/2019
Next Scheduled EDR Contact: 07/22/2019
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA CALVERAS: CUPA Facility Listing
Cupa Facility Listing

Date of Government Version: 05/01/2019
Date Data Arrived at EDR: 05/02/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 27

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 03/25/2019
Next Scheduled EDR Contact: 07/08/2019
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA COLUSA: CUPA Facility List
Cupa facility list.

Date of Government Version: 02/27/2019
Date Data Arrived at EDR: 02/28/2019
Date Made Active in Reports: 04/01/2019
Number of Days to Update: 32

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 05/16/2019
Next Scheduled EDR Contact: 08/19/2019
Data Release Frequency: Semi-Annually

CONTRA COSTA COUNTY:

SL CONTRA COSTA: Site List
List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 02/14/2019
Date Data Arrived at EDR: 02/19/2019
Date Made Active in Reports: 03/08/2019
Number of Days to Update: 17

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 04/29/2019
Next Scheduled EDR Contact: 08/12/2019
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA DEL NORTE: CUPA Facility List
Cupa Facility list

Date of Government Version: 02/20/2019
Date Data Arrived at EDR: 05/01/2019
Date Made Active in Reports: 05/30/2019
Number of Days to Update: 29

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 04/25/2019
Next Scheduled EDR Contact: 08/12/2019
Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA EL DORADO: CUPA Facility List
CUPA facility list.

Date of Government Version: 02/27/2019
Date Data Arrived at EDR: 02/28/2019
Date Made Active in Reports: 04/01/2019
Number of Days to Update: 32

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 04/29/2019
Next Scheduled EDR Contact: 08/12/2019
Data Release Frequency: Varies

FRESNO COUNTY:

CUPA FRESNO: CUPA Resources List
Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 04/10/2019
Date Data Arrived at EDR: 04/11/2019
Date Made Active in Reports: 04/30/2019
Number of Days to Update: 19

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 03/29/2019
Next Scheduled EDR Contact: 07/15/2019
Data Release Frequency: Semi-Annually

GLENN COUNTY:

CUPA GLENN: CUPA Facility List
Cupa facility list

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 49

Source: Glenn County Air Pollution Control District
Telephone: 830-934-6500
Last EDR Contact: 04/22/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

HUMBOLDT COUNTY:

CUPA HUMBOLDT: CUPA Facility List
CUPA facility list.

Date of Government Version: 12/11/2018
Date Data Arrived at EDR: 12/13/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 33

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 05/20/2019
Next Scheduled EDR Contact: 09/02/2019
Data Release Frequency: Semi-Annually

IMPERIAL COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA IMPERIAL: CUPA Facility List
Cupa facility list.

Date of Government Version: 01/18/2019
Date Data Arrived at EDR: 01/23/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 41

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 04/22/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

INYO COUNTY:

CUPA INYO: CUPA Facility List
Cupa facility list.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/03/2018
Date Made Active in Reports: 06/14/2018
Number of Days to Update: 72

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 05/16/2019
Next Scheduled EDR Contact: 09/02/2019
Data Release Frequency: Varies

KERN COUNTY:

UST KERN: Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 01/28/2019
Date Data Arrived at EDR: 02/07/2019
Date Made Active in Reports: 03/08/2019
Number of Days to Update: 29

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 05/02/2019
Next Scheduled EDR Contact: 08/19/2019
Data Release Frequency: Quarterly

KINGS COUNTY:

CUPA KINGS: CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 05/16/2019
Date Data Arrived at EDR: 05/17/2019
Date Made Active in Reports: 05/30/2019
Number of Days to Update: 13

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 05/16/2019
Next Scheduled EDR Contact: 09/02/2019
Data Release Frequency: Varies

LAKE COUNTY:

CUPA LAKE: CUPA Facility List
Cupa facility list

Date of Government Version: 02/08/2019
Date Data Arrived at EDR: 02/12/2019
Date Made Active in Reports: 03/12/2019
Number of Days to Update: 28

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 04/15/2019
Next Scheduled EDR Contact: 07/29/2019
Data Release Frequency: Varies

LASSEN COUNTY:

CUPA LASSEN: CUPA Facility List
Cupa facility list

Date of Government Version: 01/17/2019
Date Data Arrived at EDR: 01/18/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 46

Source: Lassen County Environmental Health
Telephone: 530-251-8528
Last EDR Contact: 04/22/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

LOS ANGELES COUNTY:

AOCONCERN: Key Areas of Concerns in Los Angeles County
San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office. Date of Government Version: 3/30/2009 Exide Site area is a cleanup plan of lead-impacted soil surrounding the former Exide Facility as designated by the DTSC. Date of Government Version: 7/17/2017

Date of Government Version: 03/30/2009
Date Data Arrived at EDR: 03/31/2009
Date Made Active in Reports: 10/23/2009
Number of Days to Update: 206

Source: N/A
Telephone: N/A
Last EDR Contact: 03/18/2019
Next Scheduled EDR Contact: 07/01/2019
Data Release Frequency: No Update Planned

HMS LOS ANGELES: HMS: Street Number List
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 12/19/2018
Date Data Arrived at EDR: 01/10/2019
Date Made Active in Reports: 03/07/2019
Number of Days to Update: 56

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 05/02/2019
Next Scheduled EDR Contact: 07/22/2019
Data Release Frequency: Semi-Annually

LF LOS ANGELES: List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 01/14/2019
Date Data Arrived at EDR: 01/15/2019
Date Made Active in Reports: 03/07/2019
Number of Days to Update: 51

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 04/16/2019
Next Scheduled EDR Contact: 07/29/2019
Data Release Frequency: Varies

LF LOS ANGELES CITY: City of Los Angeles Landfills
Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 01/01/2019
Date Data Arrived at EDR: 01/15/2019
Date Made Active in Reports: 03/07/2019
Number of Days to Update: 51

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 04/15/2019
Next Scheduled EDR Contact: 07/29/2019
Data Release Frequency: Varies

LOS ANGELES AST: Active & Inactive AST Inventory
A listing of active & inactive above ground petroleum storage tank site locations, located in the City of Los Angeles.

Date of Government Version: 01/01/2019
Date Data Arrived at EDR: 04/05/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 54

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 04/05/2019
Next Scheduled EDR Contact: 07/08/2019
Data Release Frequency: Varies

LOS ANGELES CO LF METHANE: Methane Producing Landfills

This data was created on April 30, 2012 to represent known disposal sites in Los Angeles County that may produce and emanate methane gas. The shapefile contains disposal sites within Los Angeles County that once accepted degradable refuse material. Information used to create this data was extracted from a landfill survey performed by County Engineers (Major Waste System Map, 1973) as well as historical records from CalRecycle, Regional Water Quality Control Board, and Los Angeles County Department of Public Health

Date of Government Version: 04/30/2012
Date Data Arrived at EDR: 04/17/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 42

Source: Los Angeles County Department of Public Works
Telephone: 626-458-6973
Last EDR Contact: 04/17/2019
Next Scheduled EDR Contact: 07/29/2019
Data Release Frequency: No Update Planned

LOS ANGELES HM: Active & Inactive Hazardous Materials Inventory

A listing of active & inactive hazardous materials facility locations, located in the City of Los Angeles.

Date of Government Version: 01/01/2019
Date Data Arrived at EDR: 04/05/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 54

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 04/05/2019
Next Scheduled EDR Contact: 07/15/2019
Data Release Frequency: Varies

LOS ANGELES UST: Active & Inactive UST Inventory

A listing of active & inactive underground storage tank site locations and underground storage tank historical sites, located in the City of Los Angeles.

Date of Government Version: 01/01/2019
Date Data Arrived at EDR: 04/05/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 54

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 04/05/2019
Next Scheduled EDR Contact: 07/15/2019
Data Release Frequency: Varies

SITE MIT LOS ANGELES: Site Mitigation List

Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 01/30/2019
Date Data Arrived at EDR: 02/01/2019
Date Made Active in Reports: 03/07/2019
Number of Days to Update: 34

Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 04/16/2019
Next Scheduled EDR Contact: 07/29/2019
Data Release Frequency: Annually

UST EL SEGUNDO: City of El Segundo Underground Storage Tank

Underground storage tank sites located in El Segundo city.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 04/19/2017
Date Made Active in Reports: 05/10/2017
Number of Days to Update: 21

Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 04/15/2019
Next Scheduled EDR Contact: 07/29/2019
Data Release Frequency: Semi-Annually

UST LONG BEACH: City of Long Beach Underground Storage Tank

Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 03/09/2017
Date Data Arrived at EDR: 03/10/2017
Date Made Active in Reports: 05/03/2017
Number of Days to Update: 54

Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 04/22/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Annually

UST TORRANCE: City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 10/02/2018
Date Data Arrived at EDR: 10/05/2018
Date Made Active in Reports: 11/02/2018
Number of Days to Update: 28

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 04/22/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Semi-Annually

MADERA COUNTY:

CUPA MADERA: CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 02/20/2019
Date Data Arrived at EDR: 02/22/2019
Date Made Active in Reports: 03/07/2019
Number of Days to Update: 13

Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 05/16/2019
Next Scheduled EDR Contact: 09/02/2019
Data Release Frequency: Varies

MARIN COUNTY:

UST MARIN: Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 09/26/2018
Date Data Arrived at EDR: 10/04/2018
Date Made Active in Reports: 11/02/2018
Number of Days to Update: 29

Source: Public Works Department Waste Management
Telephone: 415-473-6647
Last EDR Contact: 03/29/2019
Next Scheduled EDR Contact: 07/15/2019
Data Release Frequency: Semi-Annually

MERCED COUNTY:

CUPA MERCED: CUPA Facility List
CUPA facility list.

Date of Government Version: 03/11/2019
Date Data Arrived at EDR: 03/19/2019
Date Made Active in Reports: 05/08/2019
Number of Days to Update: 50

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 05/16/2019
Next Scheduled EDR Contact: 09/02/2019
Data Release Frequency: Varies

MONO COUNTY:

CUPA MONO: CUPA Facility List
CUPA Facility List

Date of Government Version: 02/21/2019
Date Data Arrived at EDR: 02/26/2019
Date Made Active in Reports: 04/01/2019
Number of Days to Update: 34

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 05/23/2019
Next Scheduled EDR Contact: 09/09/2019
Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA MONTEREY: CUPA Facility Listing
CUPA Program listing from the Environmental Health Division.

Date of Government Version: 02/05/2019
Date Data Arrived at EDR: 02/07/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 26

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 04/01/2019
Next Scheduled EDR Contact: 07/15/2019
Data Release Frequency: Varies

NAPA COUNTY:

LUST NAPA: Sites With Reported Contamination
A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 01/09/2017
Date Data Arrived at EDR: 01/11/2017
Date Made Active in Reports: 03/02/2017
Number of Days to Update: 50

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 05/24/2019
Next Scheduled EDR Contact: 09/09/2019
Data Release Frequency: No Update Planned

UST NAPA: Closed and Operating Underground Storage Tank Sites
Underground storage tank sites located in Napa county.

Date of Government Version: 02/21/2019
Date Data Arrived at EDR: 02/22/2019
Date Made Active in Reports: 03/08/2019
Number of Days to Update: 14

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 05/24/2019
Next Scheduled EDR Contact: 09/09/2019
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA NEVADA: CUPA Facility List
CUPA facility list.

Date of Government Version: 05/20/2019
Date Data Arrived at EDR: 05/21/2019
Date Made Active in Reports: 05/30/2019
Number of Days to Update: 9

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 05/13/2019
Next Scheduled EDR Contact: 08/12/2019
Data Release Frequency: Varies

ORANGE COUNTY:

IND_SITE ORANGE: List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 05/01/2019
Date Data Arrived at EDR: 05/09/2019
Date Made Active in Reports: 05/30/2019
Number of Days to Update: 21

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 05/06/2019
Next Scheduled EDR Contact: 08/19/2019
Data Release Frequency: Annually

LUST ORANGE: List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 05/01/2019
Date Data Arrived at EDR: 05/09/2019
Date Made Active in Reports: 05/30/2019
Number of Days to Update: 21

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 05/06/2019
Next Scheduled EDR Contact: 08/19/2019
Data Release Frequency: Quarterly

UST ORANGE: List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 01/02/2019
Date Data Arrived at EDR: 02/05/2019
Date Made Active in Reports: 03/08/2019
Number of Days to Update: 31

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 05/07/2019
Next Scheduled EDR Contact: 08/19/2019
Data Release Frequency: Quarterly

PLACER COUNTY:

MS PLACER: Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 02/28/2019
Date Data Arrived at EDR: 03/01/2019
Date Made Active in Reports: 04/12/2019
Number of Days to Update: 42

Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 06/03/2019
Next Scheduled EDR Contact: 06/17/2019
Data Release Frequency: Semi-Annually

PLUMAS COUNTY:

CUPA PLUMAS: CUPA Facility List
Plumas County CUPA Program facilities.

Date of Government Version: 01/14/2019
Date Data Arrived at EDR: 01/18/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 46

Source: Plumas County Environmental Health
Telephone: 530-283-6355
Last EDR Contact: 04/22/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

RIVERSIDE COUNTY:

LUST RIVERSIDE: Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 04/11/2019
Date Data Arrived at EDR: 04/12/2019
Date Made Active in Reports: 04/30/2019
Number of Days to Update: 18

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 03/18/2019
Next Scheduled EDR Contact: 07/01/2019
Data Release Frequency: Quarterly

UST RIVERSIDE: Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 01/29/2019
Date Data Arrived at EDR: 01/31/2019
Date Made Active in Reports: 03/08/2019
Number of Days to Update: 36

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 03/18/2019
Next Scheduled EDR Contact: 07/01/2019
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

CS SACRAMENTO: Toxic Site Clean-Up List
List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 11/07/2018
Date Data Arrived at EDR: 01/04/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 60

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 04/02/2019
Next Scheduled EDR Contact: 07/15/2019
Data Release Frequency: Quarterly

ML SACRAMENTO: Master Hazardous Materials Facility List

Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 11/07/2018
Date Data Arrived at EDR: 12/28/2018
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 67

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 04/02/2019
Next Scheduled EDR Contact: 07/15/2019
Data Release Frequency: Quarterly

SAN BENITO COUNTY:

CUPA SAN BENITO: CUPA Facility List

Cupa facility list

Date of Government Version: 03/11/2019
Date Data Arrived at EDR: 03/13/2019
Date Made Active in Reports: 04/30/2019
Number of Days to Update: 48

Source: San Benito County Environmental Health
Telephone: N/A
Last EDR Contact: 05/02/2019
Next Scheduled EDR Contact: 08/19/2019
Data Release Frequency: Varies

SAN BERNARDINO COUNTY:

PERMITS SAN BERNARDINO: Hazardous Material Permits

This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 02/27/2019
Date Data Arrived at EDR: 02/28/2019
Date Made Active in Reports: 04/02/2019
Number of Days to Update: 33

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 05/06/2019
Next Scheduled EDR Contact: 08/19/2019
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

HMMD SAN DIEGO: Hazardous Materials Management Division Database

The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 03/04/2019
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 04/02/2019
Number of Days to Update: 28

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 06/04/2019
Next Scheduled EDR Contact: 09/16/2019
Data Release Frequency: Quarterly

LF SAN DIEGO: Solid Waste Facilities
San Diego County Solid Waste Facilities.

Date of Government Version: 04/18/2018
Date Data Arrived at EDR: 04/24/2018
Date Made Active in Reports: 06/19/2018
Number of Days to Update: 56
Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 04/22/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

SAN DIEGO CO LOP: Local Oversight Program Listing
A listing of all LOP release sites that are or were under the County of San Diego's jurisdiction. Included are closed or transferred cases, open cases, and cases that did not have a case type indicated. The cases without a case type are mostly complaints; however, some of them could be LOP cases.

Date of Government Version: 03/06/2019
Date Data Arrived at EDR: 03/06/2019
Date Made Active in Reports: 04/29/2019
Number of Days to Update: 54
Source: Department of Environmental Health
Telephone: 858-505-6874
Last EDR Contact: 04/22/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

SAN DIEGO CO. SAM: Environmental Case Listing
The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010
Date Data Arrived at EDR: 06/15/2010
Date Made Active in Reports: 07/09/2010
Number of Days to Update: 24
Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 06/03/2019
Next Scheduled EDR Contact: 09/16/2019
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

LUST SAN FRANCISCO: Local Oversite Facilities
A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10
Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 05/02/2019
Next Scheduled EDR Contact: 08/19/2019
Data Release Frequency: Quarterly

UST SAN FRANCISCO: Underground Storage Tank Information
Underground storage tank sites located in San Francisco county.

Date of Government Version: 11/05/2018
Date Data Arrived at EDR: 11/06/2018
Date Made Active in Reports: 12/14/2018
Number of Days to Update: 38
Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 05/02/2019
Next Scheduled EDR Contact: 08/19/2019
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

UST SAN JOAQUIN: San Joaquin Co. UST
A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 06/22/2018
Date Data Arrived at EDR: 06/26/2018
Date Made Active in Reports: 07/11/2018
Number of Days to Update: 15
Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 03/18/2019
Next Scheduled EDR Contact: 07/01/2019
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA SAN LUIS OBISPO: CUPA Facility List
Cupa Facility List.

Date of Government Version: 02/13/2019
Date Data Arrived at EDR: 02/15/2019
Date Made Active in Reports: 03/14/2019
Number of Days to Update: 27

Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 05/16/2019
Next Scheduled EDR Contact: 09/02/2019
Data Release Frequency: Varies

SAN MATEO COUNTY:

BI SAN MATEO: Business Inventory
List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 03/04/2019
Date Data Arrived at EDR: 03/13/2019
Date Made Active in Reports: 04/29/2019
Number of Days to Update: 47

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 03/13/2019
Next Scheduled EDR Contact: 06/24/2019
Data Release Frequency: Annually

LUST SAN MATEO: Fuel Leak List
A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 03/29/2019
Date Data Arrived at EDR: 03/29/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 61

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 03/25/2019
Next Scheduled EDR Contact: 06/24/2019
Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

CUPA SANTA BARBARA: CUPA Facility Listing
CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 09/08/2011
Date Data Arrived at EDR: 09/09/2011
Date Made Active in Reports: 10/07/2011
Number of Days to Update: 28

Source: Santa Barbara County Public Health Department
Telephone: 805-686-8167
Last EDR Contact: 05/16/2019
Next Scheduled EDR Contact: 09/02/2019
Data Release Frequency: Varies

SANTA CLARA COUNTY:

CUPA SANTA CLARA: Cupa Facility List
Cupa facility list

Date of Government Version: 02/13/2019
Date Data Arrived at EDR: 02/19/2019
Date Made Active in Reports: 03/06/2019
Number of Days to Update: 15

Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 05/16/2019
Next Scheduled EDR Contact: 09/02/2019
Data Release Frequency: Varies

HIST LUST SANTA CLARA: HIST LUST - Fuel Leak Site Activity Report
A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22

Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LUST SANTA CLARA: LOP Listing
A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 03/03/2014
Date Data Arrived at EDR: 03/05/2014
Date Made Active in Reports: 03/18/2014
Number of Days to Update: 13
Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 05/24/2019
Next Scheduled EDR Contact: 09/09/2019
Data Release Frequency: Annually

SAN JOSE HAZMAT: Hazardous Material Facilities
Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 01/30/2019
Date Data Arrived at EDR: 02/01/2019
Date Made Active in Reports: 03/07/2019
Number of Days to Update: 34
Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 05/16/2019
Next Scheduled EDR Contact: 08/19/2019
Data Release Frequency: Annually

SANTA CRUZ COUNTY:

CUPA SANTA CRUZ: CUPA Facility List
CUPA facility listing.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 05/23/2017
Number of Days to Update: 90
Source: Santa Cruz County Environmental Health
Telephone: 831-464-2761
Last EDR Contact: 05/16/2019
Next Scheduled EDR Contact: 09/02/2019
Data Release Frequency: Varies

SHASTA COUNTY:

CUPA SHASTA: CUPA Facility List
Cupa Facility List.

Date of Government Version: 06/15/2017
Date Data Arrived at EDR: 06/19/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 51
Source: Shasta County Department of Resource Management
Telephone: 530-225-5789
Last EDR Contact: 05/16/2019
Next Scheduled EDR Contact: 09/02/2019
Data Release Frequency: Varies

SOLANO COUNTY:

LUST SOLANO: Leaking Underground Storage Tanks
A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 03/05/2019
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 04/29/2019
Number of Days to Update: 53
Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 06/03/2019
Next Scheduled EDR Contact: 09/16/2019
Data Release Frequency: Quarterly

UST SOLANO: Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 03/05/2019
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 04/03/2019
Number of Days to Update: 27
Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 06/03/2019
Next Scheduled EDR Contact: 09/16/2019
Data Release Frequency: Quarterly

SONOMA COUNTY:

CUPA SONOMA: Cupa Facility List
Cupa Facility list

Date of Government Version: 03/18/2019
Date Data Arrived at EDR: 03/26/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 36

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 03/25/2019
Next Scheduled EDR Contact: 07/08/2019
Data Release Frequency: Varies

LUST SONOMA: Leaking Underground Storage Tank Sites
A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 04/03/2019
Date Data Arrived at EDR: 04/11/2019
Date Made Active in Reports: 04/30/2019
Number of Days to Update: 19

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 04/08/2019
Next Scheduled EDR Contact: 07/08/2019
Data Release Frequency: Quarterly

STANISLAUS COUNTY:

CUPA STANISLAUS: CUPA Facility List
Cupa facility list

Date of Government Version: 12/11/2018
Date Data Arrived at EDR: 12/13/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 33

Source: Stanislaus County Department of Ennvironmental Protection
Telephone: 209-525-6751
Last EDR Contact: 04/15/2019
Next Scheduled EDR Contact: 07/29/2019
Data Release Frequency: Varies

SUTTER COUNTY:

UST SUTTER: Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 02/28/2019
Date Data Arrived at EDR: 03/01/2019
Date Made Active in Reports: 04/03/2019
Number of Days to Update: 33

Source: Sutter County Environmental Health Services
Telephone: 530-822-7500
Last EDR Contact: 06/03/2019
Next Scheduled EDR Contact: 09/16/2019
Data Release Frequency: Semi-Annually

TEHAMA COUNTY:

CUPA TEHAMA: CUPA Facility List
Cupa facilities

Date of Government Version: 12/13/2018
Date Data Arrived at EDR: 12/18/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 28

Source: Tehama County Department of Environmental Health
Telephone: 530-527-8020
Last EDR Contact: 05/16/2019
Next Scheduled EDR Contact: 08/19/2019
Data Release Frequency: Varies

TRINITY COUNTY:

CUPA TRINITY: CUPA Facility List
Cupa facility list

Date of Government Version: 01/18/2019
Date Data Arrived at EDR: 01/23/2019
Date Made Active in Reports: 03/06/2019
Number of Days to Update: 42

Source: Department of Toxic Substances Control
Telephone: 760-352-0381
Last EDR Contact: 04/22/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

TULARE COUNTY:

CUPA TULARE: CUPA Facility List
Cupa program facilities

Date of Government Version: 12/26/2018
Date Data Arrived at EDR: 12/27/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 19

Source: Tulare County Environmental Health Services Division
Telephone: 559-624-7400
Last EDR Contact: 05/06/2019
Next Scheduled EDR Contact: 08/19/2019
Data Release Frequency: Varies

TUOLUMNE COUNTY:

CUPA TUOLUMNE: CUPA Facility List
Cupa facility list

Date of Government Version: 04/23/2018
Date Data Arrived at EDR: 04/25/2018
Date Made Active in Reports: 06/25/2018
Number of Days to Update: 61

Source: Divison of Environmental Health
Telephone: 209-533-5633
Last EDR Contact: 05/02/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

VENTURA COUNTY:

BWT VENTURA: Business Plan, Hazardous Waste Producers, and Operating Underground Tanks
The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 12/26/2018
Date Data Arrived at EDR: 01/24/2019
Date Made Active in Reports: 02/28/2019
Number of Days to Update: 35

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 04/23/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Quarterly

LF VENTURA: Inventory of Illegal Abandoned and Inactive Sites
Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 12/01/2011
Date Data Arrived at EDR: 12/01/2011
Date Made Active in Reports: 01/19/2012
Number of Days to Update: 49

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 03/29/2019
Next Scheduled EDR Contact: 07/15/2019
Data Release Frequency: Annually

LUST VENTURA: Listing of Underground Tank Cleanup Sites
Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008
Date Data Arrived at EDR: 06/24/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 37

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 05/09/2019
Next Scheduled EDR Contact: 08/26/2019
Data Release Frequency: Quarterly

MED WASTE VENTURA: Medical Waste Program List
To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 03/26/2019
Date Data Arrived at EDR: 04/25/2019
Date Made Active in Reports: 05/30/2019
Number of Days to Update: 35
Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 04/23/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Quarterly

UST VENTURA: Underground Tank Closed Sites List
Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 02/26/2019
Date Data Arrived at EDR: 03/13/2019
Date Made Active in Reports: 04/03/2019
Number of Days to Update: 21
Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 03/13/2019
Next Scheduled EDR Contact: 06/24/2019
Data Release Frequency: Quarterly

YOLO COUNTY:

UST YOLO: Underground Storage Tank Comprehensive Facility Report
Underground storage tank sites located in Yolo county.

Date of Government Version: 12/26/2018
Date Data Arrived at EDR: 01/03/2019
Date Made Active in Reports: 01/16/2019
Number of Days to Update: 13
Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 03/29/2019
Next Scheduled EDR Contact: 07/15/2019
Data Release Frequency: Annually

YUBA COUNTY:

CUPA YUBA: CUPA Facility List
CUPA facility listing for Yuba County.

Date of Government Version: 02/08/2019
Date Data Arrived at EDR: 02/12/2019
Date Made Active in Reports: 03/06/2019
Number of Days to Update: 22
Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 04/25/2019
Next Scheduled EDR Contact: 08/12/2019
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 02/11/2019
Date Data Arrived at EDR: 02/12/2019
Date Made Active in Reports: 03/04/2019
Number of Days to Update: 20
Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 05/14/2019
Next Scheduled EDR Contact: 08/26/2019
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 04/10/2019
Date Made Active in Reports: 05/16/2019
Number of Days to Update: 36

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 04/10/2019
Next Scheduled EDR Contact: 07/22/2019
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 01/01/2019
Date Data Arrived at EDR: 01/30/2019
Date Made Active in Reports: 02/14/2019
Number of Days to Update: 15

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 05/01/2019
Next Scheduled EDR Contact: 08/12/2019
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 10/23/2018
Date Made Active in Reports: 11/27/2018
Number of Days to Update: 35

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 04/15/2019
Next Scheduled EDR Contact: 07/29/2019
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 02/23/2018
Date Made Active in Reports: 04/09/2018
Number of Days to Update: 45

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 05/17/2019
Next Scheduled EDR Contact: 09/02/2019
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 06/15/2018
Date Made Active in Reports: 07/09/2018
Number of Days to Update: 24

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 03/11/2019
Next Scheduled EDR Contact: 06/24/2019
Data Release Frequency: Annually

Oil/Gas Pipelines
Source: PennWell Corporation
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Electric Power Transmission Line Data
Source: PennWell Corporation
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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish and Wildlife
Telephone: 916-445-0411

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

LAKE FOREST
20865 CANADA ROAD
LAKE FOREST, CA 92630

TARGET PROPERTY COORDINATES

Latitude (North):	33.660536 - 33° 39' 37.93''
Longitude (West):	117.675122 - 117° 40' 30.44''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	437405.1
UTM Y (Meters):	3724529.0
Elevation:	631 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	5636489 EL TORO, CA
Version Date:	2012

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

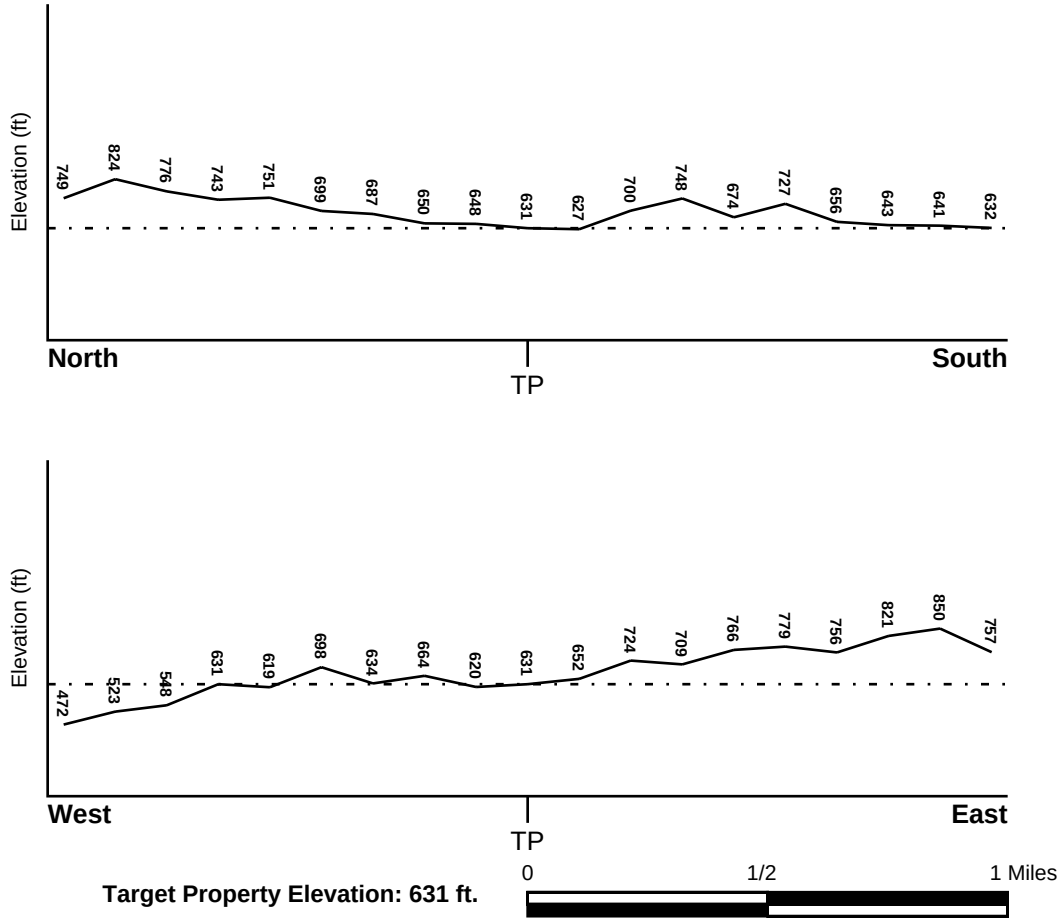
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General North

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
06059C0316J	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
06059C0315J	FEMA FIRM Flood data
06059C0314J	FEMA FIRM Flood data
06059C0318J	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
EL TORO	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

* ©1996 Site−specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

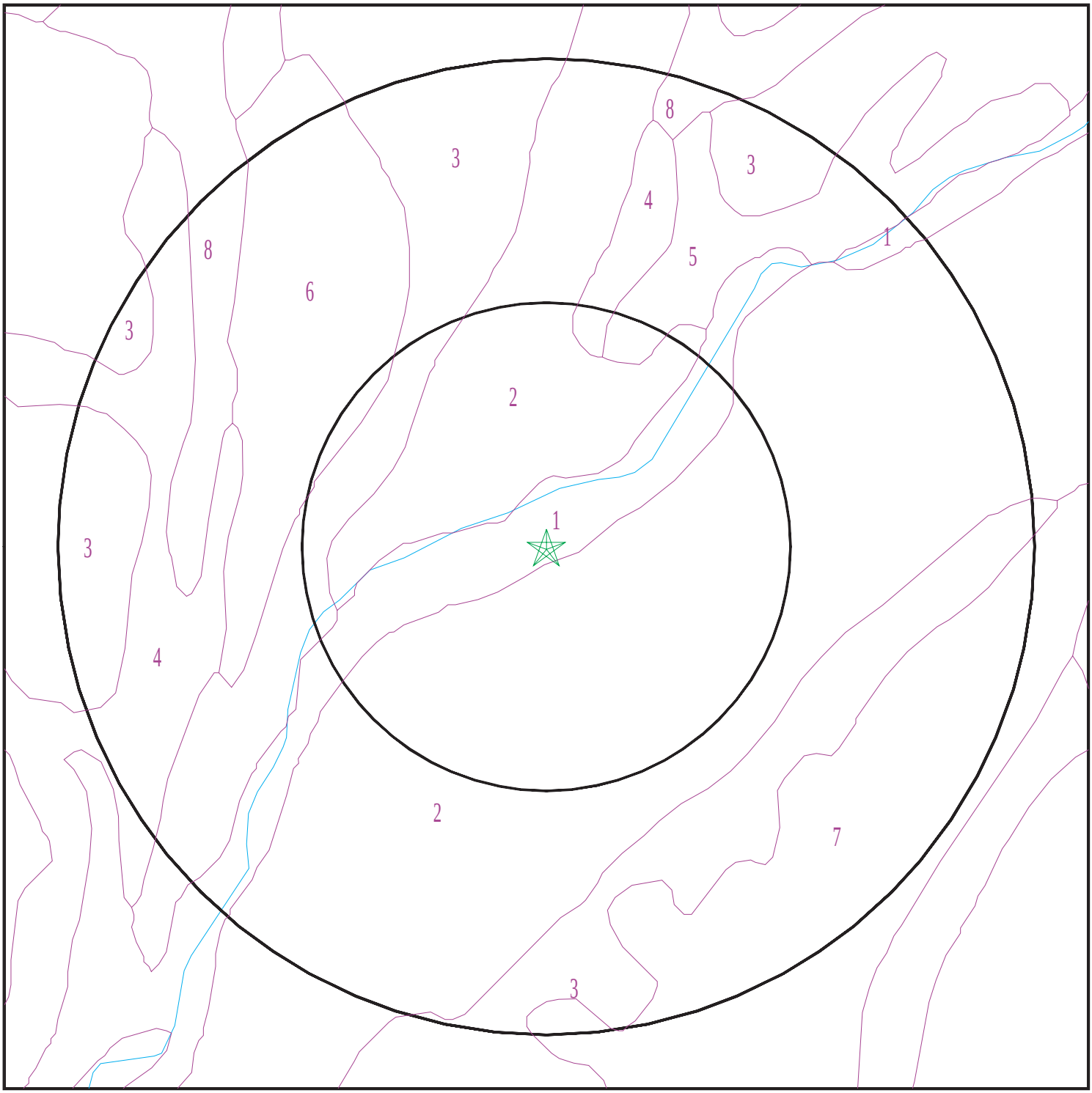
Era:	Cenozoic
System:	Tertiary
Series:	Miocene
Code:	Tm *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratified Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 05678687.2r



★ Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME:	Lake Forest	CLIENT:	Hillmann Environmental Co.
ADDRESS:	20865 Canada Road Lake Forest CA 92630	CONTACT:	Shilpa Sunil
LAT/LONG:	33.660536 / 117.675122	INQUIRY #:	05678687.2r
		DATE:	June 10, 2019 1:48 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: RIVERWASH

Soil Surface Texture: sand

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class:
Hydric Status: All hydric

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 31 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	5 inches	sand	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141 Min: 42	Max: Min:
2	5 inches	59 inches	stratified coarse sand to sandy loam	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141 Min: 42	Max: Min:

Soil Map ID: 2

Soil Component Name: SORRENTO

Soil Surface Texture: loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	11 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 8.4 Min: 7.9
2	11 inches	61 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 8.4 Min: 7.9
3	61 inches	72 inches	stratified loamy fine sand to silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 8.4 Min: 7.9

Soil Map ID: 3

Soil Component Name: CIENEBA

Soil Surface Texture: sandy loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Somewhat excessively drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 0.42 Min: 0	Max: Min:
2	7 inches	11 inches	weathered bedrock	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 0.42 Min: 0	Max: Min:

Soil Map ID: 4

Soil Component Name: CAPISTRANO

Soil Surface Texture: sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	27 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 7.3 Min: 5.6
2	27 inches	64 inches	fine sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 7.3 Min: 5.6

Soil Map ID: 5

Soil Component Name: MYFORD

Soil Surface Texture: sandy loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Moderately well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	11 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 6.5 Min: 6.1

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
2	11 inches	18 inches	sandy clay	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 6.5 Min: 6.1
3	18 inches	27 inches	sandy clay loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 6.5 Min: 6.1
4	27 inches	70 inches	sandy clay loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 6.5 Min: 6.1
5	70 inches	79 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 6.5 Min: 6.1

Soil Map ID: 6

Soil Component Name: CALLEGUAS

Soil Surface Texture: clay loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	14 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 1.4 Min: 0	Max: Min:
2	14 inches	18 inches	weathered bedrock	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 1.4 Min: 0	Max: Min:

Soil Map ID: 7

Soil Component Name: CIENEBA

Soil Surface Texture: sandy loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Somewhat excessively drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	16 inches	sandy loam	Not reported	Not reported	Max: Min:	Max: Min:
2	16 inches	20 inches	weathered bedrock	Not reported	Not reported	Max: Min:	Max: Min:

Soil Map ID: 8

Soil Component Name: CAPISTRANO

Soil Surface Texture: sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	27 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 7.3 Min: 5.6
2	27 inches	64 inches	fine sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 7.3 Min: 5.6

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 0.001 miles
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
B5	USGS40000136410	1/2 - 1 Mile East
7	USGS40000136558	1/2 - 1 Mile North

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

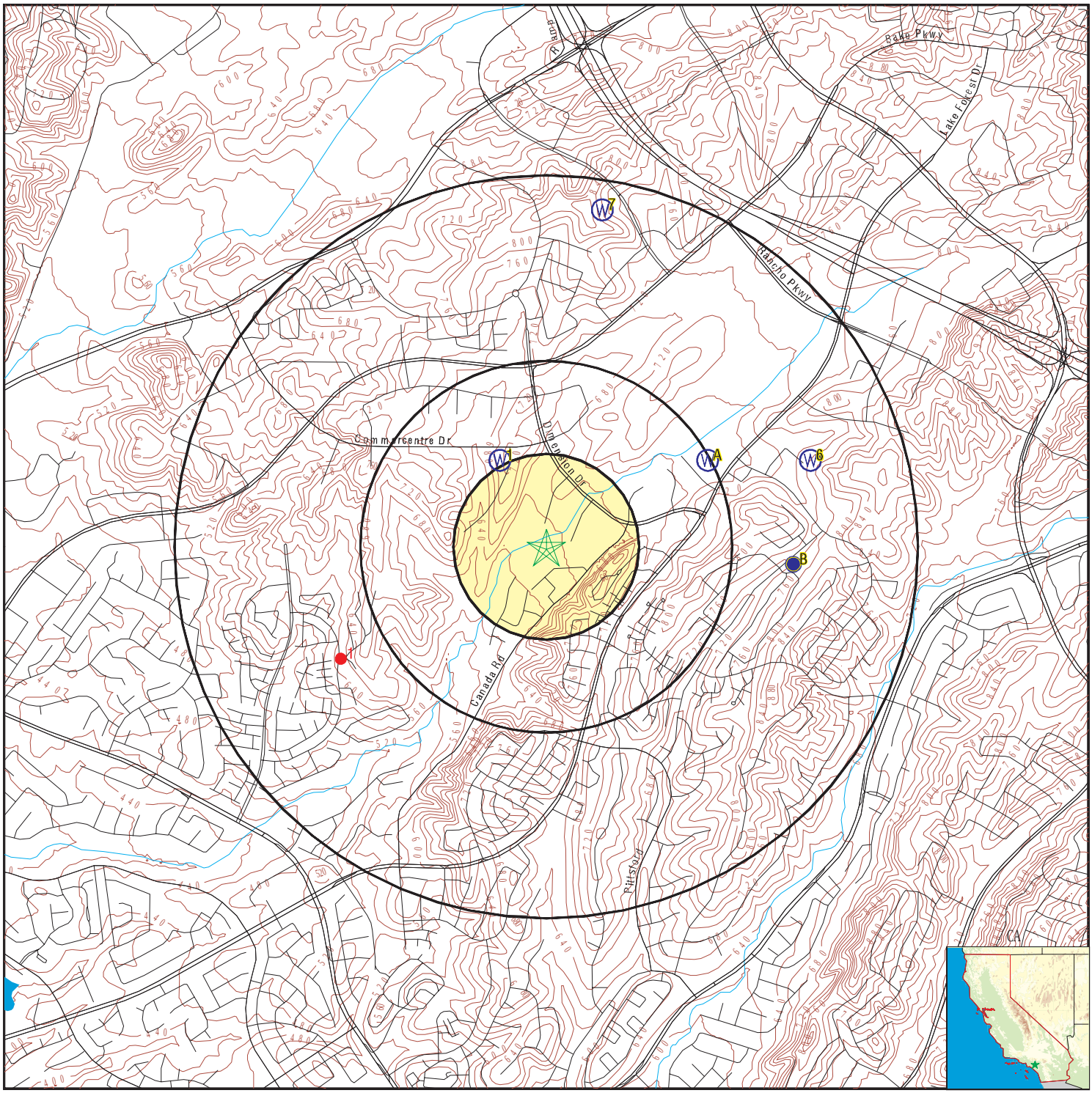
MAP ID	WELL ID	LOCATION FROM TP
1	6936	1/4 - 1/2 Mile NNW
A2	7045	1/4 - 1/2 Mile ENE
A3	7043	1/4 - 1/2 Mile ENE
B4	7046	1/2 - 1 Mile East
6	7044	1/2 - 1 Mile ENE

OTHER STATE DATABASE INFORMATION

STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	CAOG13000006089	1/2 - 1 Mile WSW

PHYSICAL SETTING SOURCE MAP - 05678687.2r



- County Boundary
- Major Roads
- Contour Lines
- Earthquake Fault Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- HD Closest Hydrogeological Data
- Oil, gas or related wells

SITE NAME:	Lake Forest	CLIENT:	Hillmann Environmental Co.
ADDRESS:	20865 Canada Road Lake Forest CA 92630	CONTACT:	Shilpa Sunil
LAT/LONG:	33.660536 / 117.675122	INQUIRY #:	05678687.2r
		DATE:	June 10, 2019 1:48 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

1
NNW
1/4 - 1/2 Mile
Higher

CA WELLS 6936

Seq:	6936	Prim sta c:	06S/04W-09L04 S
Frds no:	3310012015	County:	33
District:	14	User id:	WAT
System no:	3310012	Water type:	G
Source nam:	SAN JACINTO WELL - ABANDONED	Station ty:	WELL/AMBNT/MUN/INTAKE
Latitude:	333950.0	Longitude:	1174035.0
Precision:	2	Status:	AB
Comment 1:	Not Reported	Comment 2:	Not Reported
Comment 3:	Not Reported	Comment 4:	Not Reported
Comment 5:	Not Reported	Comment 6:	Not Reported
Comment 7:	Not Reported		

System no:	3310012	System nam:	ELSINORE VALLEY MWD
Hqname:	Not Reported	Address:	P.O. BOX 3000
City:	LAKE ELSINORE	State:	CA
Zip:	92531	Zip ext:	Not Reported
Pop serv:	59200	Connection:	21140
Area serve:	LAKE ELSINORE VICINITY		

A2
ENE
1/4 - 1/2 Mile
Higher

CA WELLS 7045

Seq:	7045	Prim sta c:	06S/08W-12L02 S
Frds no:	3010091004	County:	30
District:	08	User id:	TEE
System no:	3010091	Water type:	G
Source nam:	WELL 04	Station ty:	WELL/AMBNT/MUN/INTAKE
Latitude:	333950.0	Longitude:	1174000.0
Precision:	1	Status:	AU
Comment 1:	~ 1000’ NW OF THE INTERSECTION OF LAKE FOREST DR & DIMENSION DR.		
Comment 2:	Not Reported	Comment 3:	Not Reported
Comment 4:	Not Reported	Comment 5:	Not Reported
Comment 6:	Not Reported	Comment 7:	Not Reported

System no:	3010091	System nam:	LOS ALISOS WD
Hqname:	Not Reported	Address:	P O BOX 699
City:	EL TORO	State:	Not Reported
Zip:	92630	Zip ext:	Not Reported
Pop serv:	38000	Connection:	11645
Area serve:	EL TORO		

A3
ENE
1/4 - 1/2 Mile
Higher

CA WELLS 7043

Seq:	7043	Prim sta c:	06S/08W-01N01 S
Frds no:	3010091005	County:	30
District:	08	User id:	TEE
System no:	3010091	Water type:	G
Source nam:	WELL 07	Station ty:	WELL/AMBNT/MUN/INTAKE/SUPPLY

Latitude:	333950.0	Longitude:	1174000.0
Precision:	4	Status:	AU
Comment 1:	Not Reported	Comment 2:	Not Reported
Comment 3:	Not Reported	Comment 4:	Not Reported
Comment 5:	Not Reported	Comment 6:	Not Reported
Comment 7:	Not Reported		
System no:	3010091	System nam:	LOS ALISOS WD
Hqname:	Not Reported	Address:	P O BOX 699
City:	EL TORO	State:	Not Reported
Zip:	92630	Zip ext:	Not Reported
Pop serv:	38000	Connection:	11645
Area serve:	EL TORO		

B4
East
1/2 - 1 Mile
Higher

CA WELLS **7046**

Seq:	7046	Prim sta c:	06S/08W-12Q01 S
Frds no:	3010091002	County:	30
District:	08	User id:	TEE
System no:	3010091	Water type:	G
Source nam:	WELL 02	Station ty:	WELL/AMBNT/MUN/INTAKE
Latitude:	333936.0	Longitude:	1173946.0
Precision:	1	Status:	AU
Comment 1:	Not Reported		
Comment 2:	150'SE OF CANADA RD. & 1500' SW OF INTERSECTION OF CANADA RD & REGENCY		
Comment 3:	LN.	Comment 4:	Not Reported
Comment 5:	Not Reported	Comment 6:	Not Reported
Comment 7:	Not Reported		
System no:	3010091	System nam:	LOS ALISOS WD
Hqname:	Not Reported	Address:	P O BOX 699
City:	EL TORO	State:	Not Reported
Zip:	92630	Zip ext:	Not Reported
Pop serv:	38000	Connection:	11645
Area serve:	EL TORO		

B5
East
1/2 - 1 Mile
Higher

FED USGS **USGS40000136410**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	006S008W12Q001S	Type:	Well
Description:	Not Reported	HUC:	Not Reported
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Other aquifers	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1957
Well Depth:	740	Well Depth Units:	ft
Well Hole Depth:	800	Well Hole Depth Units:	ft

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

6
ENE
1/2 - 1 Mile
Higher

CA WELLS **7044**

Seq:	7044	Prim sta c:	06S/08W-12J01 S
Frds no:	3010091003	County:	30
District:	08	User id:	TEE
System no:	3010091	Water type:	G
Source nam:	WELL 03	Station ty:	WELL/AMBNT/MUN/INTAKE
Latitude:	333950.0	Longitude:	1173943.0
Precision:	1	Status:	AU
Comment 1:	75’ NW OF THE PROPERTY AT 26778 SIMPATICA CIRCLE.		
Comment 2:	Not Reported	Comment 3:	Not Reported
Comment 4:	Not Reported	Comment 5:	Not Reported
Comment 6:	Not Reported	Comment 7:	Not Reported
System no:	3010091	System nam:	LOS ALISOS WD
Hqname:	Not Reported	Address:	P O BOX 699
City:	EL TORO	State:	Not Reported
Zip:	92630	Zip ext:	Not Reported
Pop serv:	38000	Connection:	11645
Area serve:	EL TORO		

7
North
1/2 - 1 Mile
Higher

FED USGS **USGS40000136558**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	006S008W01N001S	Type:	Well
Description:	Not Reported	HUC:	Not Reported
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Other aquifers	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	Not Reported
Well Depth:	1000	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

1
WSW
1/2 - 1 Mile

OIL_GAS **CAOG13000006089**

API #:	0405901074	Well #:	14-1
Well Status:	Plugged	Well Type:	DH
Operator Name:	Morton and Sons	Lease Name:	El Toro Co.
Field Name:	Any Field	Area Name:	Any Area
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
92630	90	0

Federal EPA Radon Zone for ORANGE County: 3

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 92630

Number of sites tested: 2

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.400 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	Not Reported	Not Reported	Not Reported	Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish and Wildlife
Telephone: 916-445-0411

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Water Well Database
Source: Department of Water Resources
Telephone: 916-651-9648

California Drinking Water Quality Database
Source: Department of Public Health
Telephone: 916-324-2319
The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

OTHER STATE DATABASE INFORMATION

California Oil and Gas Well Locations
Source: Department of Conservation
Telephone: 916-323-1779
Oil and Gas well locations in the state.

California Earthquake Fault Lines
Source: California Division of Mines and Geology
The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

RADON

State Database: CA Radon
Source: Department of Public Health
Telephone: 916-210-8558
Radon Database for California

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

STREET AND ADDRESS INFORMATION

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APPENDIX F

OTHER DOCUMENTS
(where applicable)

Department of Toxic Substances Control

Jared Blumenfeld
Secretary for
Environmental Protection

Meredith Williams, Ph.D.
Acting Director
1001 "I" Street
P.O. Box 806
Sacramento, California 95812-0806

Gavin Newsom
Governor

December 2, 2019

Shilpa Sunil
Hillmann Consulting, LLC
ssunil@hillmannconsulting.com

Public Records Request Number:
Location: 20865 Canada Road, Lake Forest CA 92630

Dear Requestor:

We have received your Public Records Act Request for records from the Department of Toxic Substances Control.

Our vendor has processed and uploaded TSDF manifest data with a generation date on or before June 29, 2018. Any TSDF copies with a generation date on or after June 30, 2018 are submitted to the e-Manifest system or processed by the federal EPA. Data processed by the federal EPA is not available in HWTS at this time.

After a thorough review of our files we have found that no EPA ID Number in HWTS records exist at this office pertaining to the sites/facilities referenced above.

If you have any questions, or would like further information regarding your request, please contact me at hwtsreports@dtsc.ca.gov.

Sincerely,

Bridget Fitzsenry
HWTS Reports

Printed on Recycled Paper

Shilpa Sunil

From: PublicRecordsRequests@aqmd.gov
Sent: Tuesday, June 11, 2019 12:07 PM
To: Shilpa Sunil
Subject: SCAQMD Public Records Request Submittal Acknowledgement

Shilpa
Hillmann Consulting Llc
1745 W Orangewood Ave, Suite 201
Orange, California 92868

RE: Request for Records
Request: Dear Sir/Madam:

Property address: 20865 Canada Road, Lake Forest Ca

Hillmann Consulting, LLC is conducting an environmental investigation of the above referenced property. Under the Freedom of Information Act, we would like to request any information your office has regarding this property-Permits to Operate, Equipment Lists, Notices of Violation, Notices to Comply, and Emissions Summaries. If any records are located, we would like to obtain copies or schedule a file review. If no records are available, please contact me to confirm. Thank you for your assistance.

Sincerely,

Your request for records has been received by the Public Records Unit and will be assigned for processing. A Control Number will be issued for your request and should be referenced in all future communications and correspondence.

Should you have any questions or need additional information, please do not hesitate to contact me at (909) 396-3700, Tuesday through Friday, between the hours of 8:00 a.m. 4:30 p.m.

Sincerely,

COLLEEN PAINE

For Colleen Paine
Public Records Coordinator

102771

Information Management
Public Records Unit

Direct Dial (909) 396-3700
Fax:(909) 396-3330

COMPLETION LETTER

June 14, 2019

SHILPA SUNIL
HILLMANN CONSULTING
1745W. ORANGEWOOD AVE.# SUITE 201
ORANGE, CA 92868

Ref.: CONTROL NO. 100143
Received 6/11/2019

Re: P/O'S, EQL'S, NOV'S, N/C'S, & AER'S FOR 20865 CANADA RD, LAKE FOREST, CA.

After a thorough search of this agency's records:

NO REQUESTED RECORDS WERE FOUND FOR THE ABOVE-REFERENCED FACILITY OR FACILITY SITE.

If you have any questions, please do not hesitate to contact me, Tuesday through Friday, **8:00 a.m**. to **4:30 p.m.**

Sincerely,

MERIAM STANIZAI x
For COLLEEN PAINE
Public Records Coordinator

:ms

SOUTH COAST AQMD

PUBLIC RECORDS REQUEST FORM

Request Information

Date Stored

Time Stored

Public Record Request Nbr

Public Record Request Tracking Nbr
102771

Attention Requestor

Please fill out this form completely. You may include an attachment to the form, if necessary.

Requestor Information

Requestor Name
shilpa

Requestor Address
1745 W Orangewood Ave, suite 201

Requestor Company
Hillmann Consulting LLC

Requestor City
Orange

Requestor Email *
SSUNIL@HILLMANNCONSULTING.COM

Requestor State
California

Requestor Phone
(714)313-2840

Requestor Zip Code
92868

Type of Requested Record(s).

REQUESTED RECORDS. **Please be as specific as possible in describing the records you are seeking.** The more specific you are, the easier it will be to determine if such records exist in District files. Please contact the Public Records Unit if you need assistance in identifying District records.

Note: Permits to Operate, Equipment Lists, Notices of Violation, Notices to Comply, and Emissions Summaries are available through SCAQMD's FIND page at http://www3.aqmd.gov/webappl/fim/prog/search.aspx (you need to copy and paste this link into your browser).

Please Enter a description of the records you are requesting here: *

Dear Sir/Madam:

Property address: 20865 Canada Road, Lake Forest Ca

Hillmann Consulting, LLC is conducting an environmental investigation of the above referenced property. Under the Freedom of Information Act, we would like to request any information your office has regarding this property-Permits to Operate, Equipment Lists, Notices of Violation, Notices to Comply, and Emissions Summaries. If any records are located, we would like to obtain copies or schedule a file review. If no records are available, please contact me to confirm. Thank you for your assistance.

Sincerely,

Time Period of Documents Requested

Start Date *
6/11/1940

End Date *
6/11/2019

Requested Facility or Site Information (if applicable)

Note: You may only include one Facility or Site per Form.

Facility ID (if known)

Address
1745 W Orangewood Ave, suite 201

Facility Name (if known)

City
Orange

Zip Code

Requested Application or Permit List. (if applicable)

Please click the Add Button to the right to enter a Application/Permit Number

Authorization Letter Attachment

Authorization Letter

Note: Please use the above button for attaching an Authorization Letter from the facility to release confidential information for your public records request.

Supplemental Attachments

Supplemental Documents

Note: Please use the above button for attaching additional documents that will help define your public records request.

INSTRUCTIONS FOR REQUESTING RECORDS

(California Public Records Act, Govt. Code Sections 6250-6276.48)

1. In order to expedite your request, please fill out the form completely. Requests may also be submitted by phone at (909) 396-3700, by facsimile to (909) 396-3330, or by email to PublicRecordsRequests@aqmd.gov.

2. Requests must be for records prepared, owned, used, or retained by the District (Gov. Code Sec. 6252(e)). Requests should be for clearly identifiable records. The District is not required to create a new record in response to a request. The District will assist the requestor in making a request that describes reasonably identifiable records (Gov. Code Sec. 6253.1). Documents will not be provided if disclosure would infringe upon a copyright, trade secret, or is otherwise exempt in accordance with state law.

3. A search for facility records can only be conducted by one or all of the following:

-- a) Facility Name, Address, or Identification Number

-- b) Facility Application Number, or Permit to Operate Number; or

-- c) Facility Notice of Violation/Notice to Comply Number.

4. You will be notified within ten (10) days whether your request seeks copies of disclosable public records prepared, owned, used, or retained by this agency. In some cases, the District may need an additional 14 days to respond. If so, you will be notified in writing. You will also be provided an estimated date of when the records will be made available.

5. Communications regarding your request, and any records, will be provided by email, unless specified otherwise.

6. If the search for records finds the records voluminous, you will be notified of the approximate number of pages and/or length of time it will take to process your request.

7. If the records you requested have been marked confidential by the source of the record, you will be notified and given the option of continuing with the District's Trade Secret process.

8. If your request is to review records, rather than receive copies, the District will notify you once the records are gathered, and arrangements will be made for your review.

9. The charge for the direct cost of duplication is as follows: Paper Copies, $0.15/page each over 10 pages (first 10 pages are free); Copied CD's or flash drives, no charge; and Copied Audio Tapes, $5.00 each. After a preliminary estimate, advance payment may be required.

10. If the request is for information in an electronic format, the requestor shall bear the cost of producing a copy of the record, including the cost to construct the record and the cost of programming and computer services necessary to produce a copy of the record, when either of the following applies: (1) the District would be required to produce a copy of an electronic record and the record is one that is produced only at otherwise regularly scheduled intervals, or (2) the request would require data compilation, extraction, or programming to produce the record. (Gov. Code Sec. 6253.9(b)). The transfer of gathered electronic records onto CD, DVD or flash drive typically costs $10.00 each. An invoice will accompany your records when completed.

Note: For further information, please refer to the District's Guidelines for Implementing the California Public Records Act. The Guidelines are available in the lobby of the District Headquarters or on the District's web site at www.aqmd.gov.

Note: If you have questions pertaining to the submittal of a Public Records Act request, you may contact the Public Records Unit, (909) 396-3700, Tuesday through Friday, 7:00 a.m. to 5:30 p.m. Our Fax number is (909) 396-3330. Our email address is PublicRecordsRequests@aqmd.gov.

Shilpa Sunil

From: PublicRecordsRequests@aqmd.gov
Sent: Tuesday, June 11, 2019 12:07 PM
To: Shilpa Sunil
Subject: SCAQMD Public Records Request Submittal Acknowledgement

Shilpa
Hillmann Consulting Llc
1745 W Orangewood Ave, Suite 201
Orange, California 92868

RE: Request for Records
Request: Dear Sir/Madam:

Property address: 20865 Canada Road, Lake Forest Ca

Hillmann Consulting, LLC is conducting an environmental investigation of the above referenced property. Under the Freedom of Information Act, we would like to request any information your office has regarding this property-Permits to Operate, Equipment Lists, Notices of Violation, Notices to Comply, and Emissions Summaries. If any records are located, we would like to obtain copies or schedule a file review. If no records are available, please contact me to confirm. Thank you for your assistance.

Sincerely,

Your request for records has been received by the Public Records Unit and will be assigned for processing. A Control Number will be issued for your request and should be referenced in all future communications and correspondence.

Should you have any questions or need additional information, please do not hesitate to contact me at (909) 396-3700, Tuesday through Friday, between the hours of 8:00 a.m. 4:30 p.m.

Sincerely,

COLLEEN PAINE

For Colleen Paine
Public Records Coordinator

102771

COUNTY OF ORANGE
HEALTH CARE AGENCY

ENVIRONMENTAL HEALTH
www.ochealthinfo.com/regulatory/environ.htm

MAILING ADDRESS:
1241 E. DYER ROAD STE 120
SANTA ANA, CA 92702

TELEPHONE: (714) 433-6000
FAX: (714) 433-6424

REQUEST FOR ENVIRONMENTAL HEALTH RECORDS INSTRUCTION SHEET

1. Complete the "Request for Environmental Health Records" form

- ✓ Please **Print** all information on request forms.
- ✓ Describe the reason the records are being requested so that our staff may be able to narrow your search.
- ✓ If you require site-specific information, give the exact address of the site.
- ✓ If you are asking for information on multiple sites (for example, all sites on a street) you must give an address for each location (for example, 1001, 1003, 1009, etc.).
- ✓ Note that we cannot enter a "range" of addresses as search criteria.

2. Complete the appropriate "Information Checklist" form

- ✓ Check only the desired records associated with the site you have submitted.
- ✓ Remember that you will be charged for each page of copied records, so be sure to specify which records you want.
- ✓ Please note that lists of information can be very lengthy and therefore costly. You can ask about the length of the list before completing the request form to ensure a list is what you desire.

3. Return the completed forms to the Custodian of Records Representative at 1241 E. Dyer Road, Ste. 120, Santa Ana, CA 92705.

- ✓ Blank Records Request forms can be downloaded from the Records page on the Environmental Health website at *www.ochealthinfo.com/regulatory/environ/records.htm*.
- ✓ Please note that you can ask for an appointment to review multiple records.

4. Most requests take approximately ten (10) days to process. However, if your request requires more processing time, we will notify you of the extension and the estimated date.

5. Upon completion of the search, we will notify you by phone or by mail. You may return to the Environmental Health office to pick up the requested records, or arrange to have them mailed to your address.

6. RECORDS THAT HAVE NOT BEEN PICKED UP WITHIN 60 DAYS OF NOTIFICATION WILL BE DESTROYED.

COUNTY OF ORANGE
HEALTH CARE AGENCY

ENVIRONMENTAL HEALTH
www.ochealthinfo.com/regulatory/environ.htm

MAILING ADDRESS:
1241 E. DYER ROAD STE. 120
SANTA ANA, CA 92702

TELEPHONE: (714) 433-6000
FAX: (714) 433-6424

REQUEST FOR ENVIRONMENTAL HEALTH RECORDS

The undersigned hereby requests a copy of the records prepared and maintained by the Health Care Agency in the ordinary course of business, at or near the time of the act, condition, or event which they depict.

The records requested are maintained under the Public Records Act Government Code § 6250 – 6276.48. Some information held in the documents may be exempt from release pursuant to the Public Records Act.

The undersigned understands that the Health Care Agency will charge $0.15 per page copied. In the case of a request for a large number of copies, the Health Care Agency may provide the requestor an estimate of copy costs prior to making said copies. If any request is to be canceled, this office must be notified at the above number within ten (10) days of receipt of request, otherwise cost incurred will be charged to the undersigned.

In order to assist you, please describe the reason for your request:

Any documents pertaining to violations or concerns with regard to the property(s) listed

Please list addresses here (no more than 10 addresses per request):

20621 Lake Forest Drive
Lake Forest, CA 92630

Check here if you would like a review only or to review before copies are made ☐

SIGNATURE of Requester

Kristine Savona, Hillmann Consulting, LLC
PRINT Name of Requester (and Company Name - if applicable)

1745 W. Orangewood Ave., STE. 110
PRINT Street Address

714 634-9500
Area Code and Phone Number

Orange, CA 92868
PRINT City, State and Zip Code

7/10/18
Date

RECORDS THAT HAVE NOT BEEN PICKED UP WITHIN 60 DAYS OF NOTIFICATION WILL BE DESTROYED

COUNTY OF ORANGE
HEALTH CARE AGENCY

ENVIRONMENTAL HEALTH
www.ochealthinfo.com/regulatory/environ.htm

MAILING ADDRESS:
1241 E. DYER ROAD STE. 120
SANTA ANA, CA 92702

TELEPHONE: (714) 433-6000
FAX: (714) 433-6424

HAZARDOUS WASTE / OTHER PROGRAM INFORMATION CHECKLIST

Please check only the records you need. This will enable us to search only the actual files that pertain to your request, cutting down time spent on searching for records that you may not want.

Site Specific Information	
☒	Above Ground Petroleum Storage Tank File
☒	California Accidental Release Prevention Program File
☒	Certified Unified Program Agency (CUPA) records
☐	City of Brea Hazardous Materials Business Plan File
☐	Complaints regarding Hazardous Waste or Underground Storage Tank Facility
☒	Hazardous Waste Generator Facility File
☒	Hazardous Waste Industrial Cleanup Site File
☒	Hazardous Waste Spill Response Log (Emergency Incidents Log)
☒	Leaking Underground Storage Tank Cleanup Site File
☐	Medical Waste Facility Record
☐	Proposition 65 Notification
☐	Recycling Program
☐	Solid Waste Facility File (large files – need to be specific)
☐	Spill Prevention, Control and Countermeasure (SPCC) File
☐	Tiered Permit Facility File
☒	Underground Storage Tank File
☐	Water Quality Information

Available on Environmental Health Website (See www.ochealthinfo.com/regulatory/downloads/reports.htm)
List of Hazardous Waste Generator Facilities (HWFACILITIES.SRW)
List of Industrial Cleanup Sites (IC PROGRAM CASES BY CITY.SRW)
List of Underground Storage Tank Cleanup Sites
List of Underground Storage Tank Facilities (USTFACILITIES.SRW)
A list of Solid Waste landfills (which includes closed landfills) can be obtained through the California website: www.ciwmb.ca.gov/SWIS/

Other information:_____

Shilpa Sunil

From: PubReqAct@DTSC <PubReqAct@dtsc.ca.gov>
Sent: Wednesday, June 12, 2019 9:18 AM
To: Shilpa Sunil
Subject: DTSC Public Records Request 1-06119-05 Lake Forest
Attachments: PR1-061119-05 REQUEST RESPONSE NRL.pdf

Hello,

Please see the attachment for a response to your Public Records Act request. A hard copy will not follow but may be available upon request.

If you have any questions, please feel free to send an email to pubreqact@dtsc.ca.gov or call the DTSC Cal Center File Room at (916) 255-3758.

Thank you,

Andrea Drushell
Regional Records Coordinator
Department of Toxic Substances Control
8800 Cal Center File Room
Sacramento, California 95826
(916) 255-3571

From: Shilpa Sunil <ssunil@hillmannconsulting.com>
Sent: Tuesday, June 11, 2019 11:53 AM
To: PubReqAct@DTSC <PubReqAct@dtsc.ca.gov>
Subject: Records Request -C37594

Dear Sir/Madam:

Property address: 20865 Canada Road, Lake Forest Ca

Hillmann Consulting, LLC is conducting an environmental investigation of the above referenced property. Under the Freedom of Information Act, we would like to request any information your office has regarding this property. If any records are located, we would like to obtain copies or schedule a file review. If no records are available, please contact me to confirm. Thank you for your assistance.

Sincerely,

Shilpa Sunil
Environmental Project Manager

Hillmann Consulting, LLC
1745 Orangewood Avenue, Suite# 201
Orange, CA 92868
Office (714) 634-9500
Cell (714) 313-2840

ssunil@hillmannconsulting.com
www.HillmannConsulting.com

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HILLMANN
CONSULTING

July 10, 2018

State of California
Department of Toxic Substances Control
Region 4 – Cypress Office
5796 Corporate Avenue
Cypress, CA 90630-4732
Phone (714) 484-5337
Fax (714) 484-5318
PubReqAct@dtsc.ca.gov

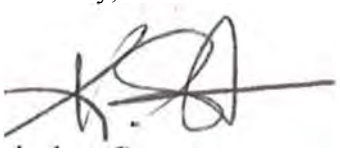
RE: DTSC Files:

20621 Lake Forest Drive
Lake Forest, CA 92630

Dear Sir/Madam:

Hillmann Consulting, LLC is conducting an environmental investigation of the above referenced property. Under the Freedom of Information Act, we would like to request any information your office has regarding this property. If any records are located, we would like to obtain copies or schedule a file review. If no records are available, please contact me to confirm. Thank you for your assistance.

Sincerely,



Kristine Savona
Office Manager
Hillmann Consulting, LLC
ksavona@hillmanngroup.com

Department of Toxic Substances Control

Jared Blumenfeld
Secretary for
Environmental Protection

Meredith Williams, Ph.D.
Acting Director
8800 Cal Center Drive
Sacramento, California 95826-3200

Gavin Newsom
Governor

June 12, 2019

Shilpa Sunil
Hillmann Consulting, LLC
ssunil@hillmannconsulting.com

Public Records Request Number: 1-061119-05
Location(s): 20865 Canada Road, Lake Forest, CA

Dear Requestor:

We have received your Public Records Act Request for records from the Department of Toxic Substances Control (DTSC).

After a thorough review of our files, no records were found at our Sacramento office pertaining to the sites/facilities referenced above.

We would like to inform you about EnviroStor (www.envirostor.dtsc.ca.gov) which provides non-confidential, public access to DTSC's data management system and may assist with your future research. The system tracks our cleanup, permitting, enforcement, and investigation efforts at hazardous waste facilities and sites with known or potential contamination, providing data and documentation of over 13,000 cleanup and hazardous waste facilities across California.

If you have any questions or would like further information regarding your request, please contact us at (916) 255-3758.

Sincerely,

Andrea Drushell
Regional Records Coordinator

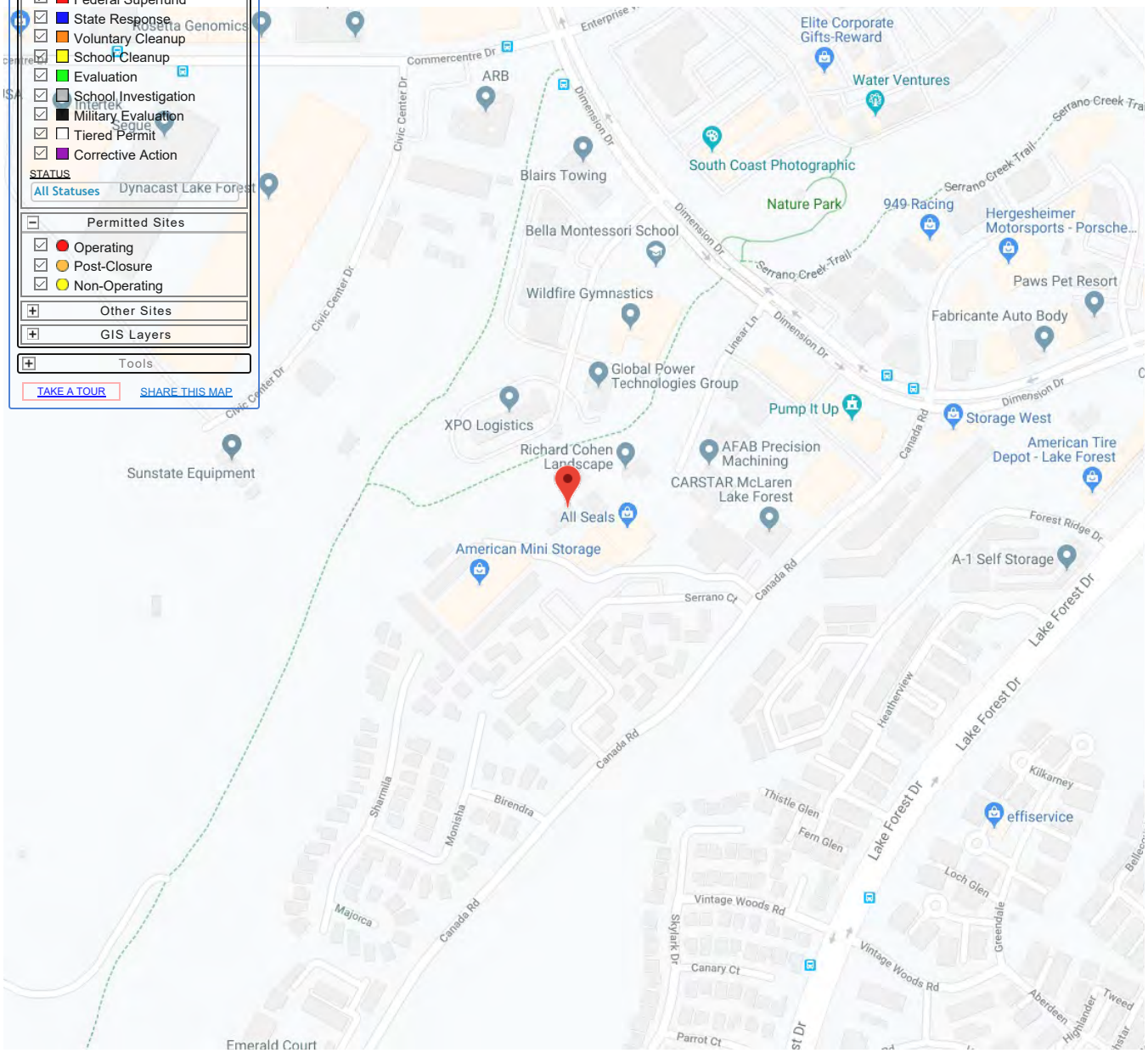
ENVIROSTOR

20865 Canada road lake forest ca

Map Address

- Sites and Facilities
  - Cleanup Sites
    - Federal Superfund
    - State Response
    - Voluntary Cleanup
    - School Cleanup
    - Evaluation
    - School Investigation
    - Military Evaluation
    - Tiered Permit
    - Corrective Action
    - STATUS: All Statuses
  - Permitted Sites
    - Operating
    - Post-Closure
    - Non-Operating
  - Other Sites
  - GIS Layers
- Tools

TAKE A TOUR | SHARE THIS MAP



Google 50 m Map data ©2019 Google

SITES CURRENTLY VISIBLE ON MAP — 0 SITES LISTED — EXPORT THIS LIST TO EXCEL

PROJECT NAME	STATUS	PROJECT TYPE	ADDRESS	CITY

U.S. Environmental Protection Agency

MyProperty

Environmental Databases Search

The search of EPA's Facility Registry System did not locate any records for the search criteria provided below:

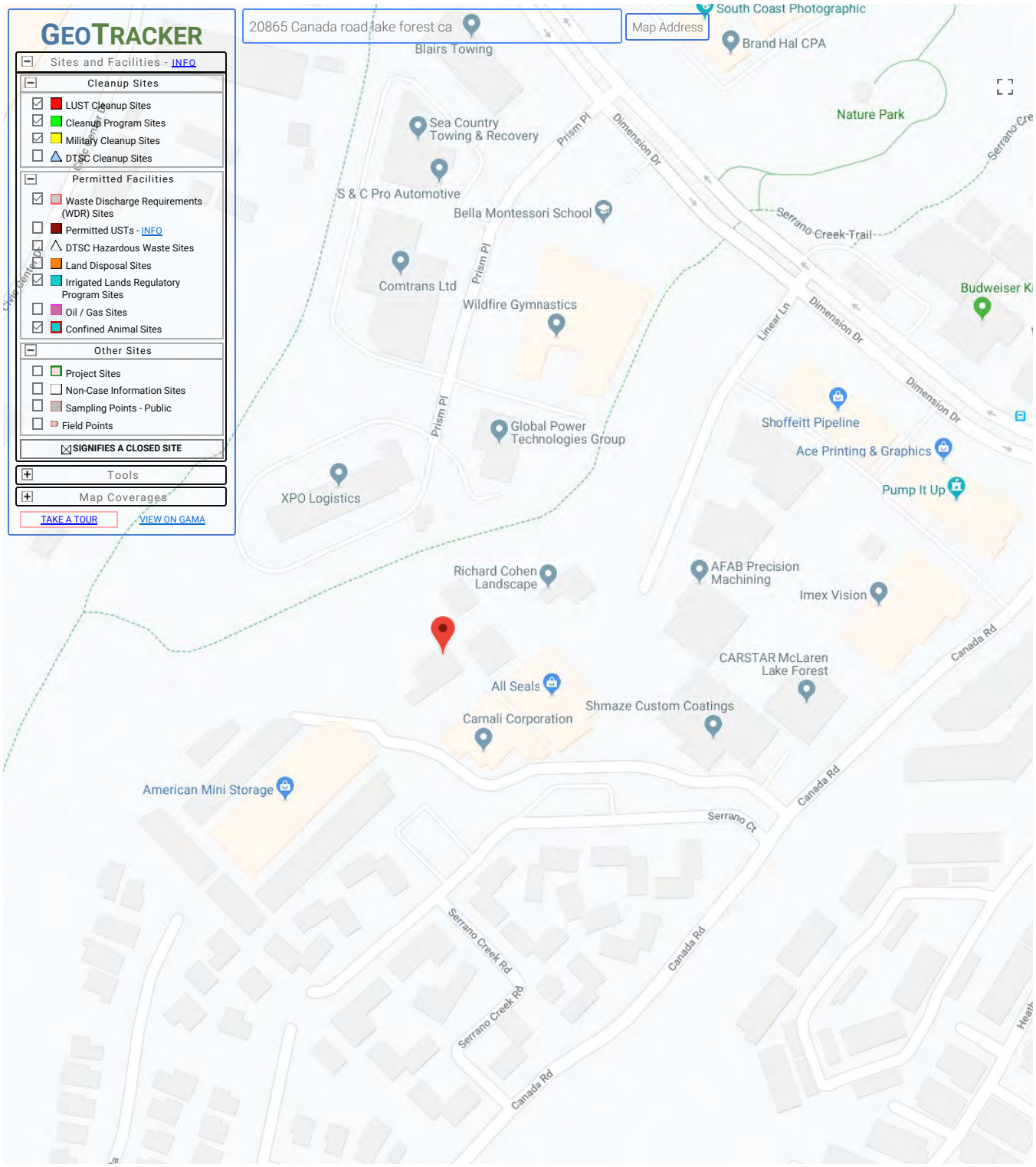
Search Criteria:

Street Address:	20865 canada road
City, State:	lake forest , CA
Query executed on:	06/11/2019 02:56 PM **EST**

Contact the appropriate state, tribal or local agencies if you seek additional information.

Disclaimer

The MyProperty reports are provided solely for informational purposes. They do not provide legal advice, have legally binding effect, or expressly or implicitly create, expand, or limit any legal rights, obligations, responsibilities, expectations, or benefits in regard to any person. EPA maintains the application to enhance public access to environmental information. This service has continual data updates, and we will correct errors brought to our attention, as appropriate.



SITES CURRENTLY VISIBLE ON MAP

Shilpa Sunil

From: hwtsreports@DTSC <hwtsreports@dtsc.ca.gov>
Sent: Tuesday, June 11, 2019 1:40 PM
To: Shilpa Sunil; hwtsreports@DTSC
Subject: RE: Records Request -C37524 - Request 2019_0019 No Records Found
Attachments: 2019_0019_Shilpa_Sunil_No records found.doc

Hello Shilpa,

Please see attached, information related to your PRA request for:

20865 Canada Road, Lake Forest Ca

In this case after a thorough review of our files we have found that no EPA ID Number in HWTS records exist at this office pertaining to the sites/facilities referenced above.

Please let me know if you have any questions.

Enjoy your day!
Bridget

Bridget Fitzsenry
Office of Environmental Information Management
1001 I Street, 11th Floor
Sacramento, CA 95814
Office: (916) 323-3391
E-mail: HWTSREPORTS@dtsc.ca.gov

California Department of Toxic Substances Control

Please send all report request to: hwtsreports@dtsc.ca.gov. *Please be aware depending amount of requests at any given time, the wait could be up to two weeks before we can start on yours. Thank you, and enjoy your day ☺*

From: Shilpa Sunil [mailto:ssunil@hillmannconsulting.com]
Sent: Tuesday, June 11, 2019 11:53 AM
To: hwtsreports@DTSC <hwtsreports@dtsc.ca.gov>
Subject: Records Request -C37524
Importance: High

Dear Sir/Madam:

Property address: 20865 Canada Road, Lake Forest Ca

Hillmann Consulting, LLC is conducting an environmental investigation of the above referenced property. Under the Freedom of Information Act, we would like to request any information your office has regarding this property. If any records are located, we would like to obtain copies or schedule a file review. If no records are available, please contact me to confirm. Thank you for your assistance.

Sincerely,

Shilpa Sunil
Environmental Project Manager

Hillmann Consulting, LLC
1745 Orangewood Avenue, Suite# 201
Orange, CA 92868
Office (714) 634-9500
Cell (714) 313-2840

ssunil@hillmannconsulting.com
www.HillmannConsulting.com

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Shilpa Sunil

From: Leslie Bonkowski <BONKOWSL@irwd.com>
Sent: Thursday, June 20, 2019 3:17 PM
To: Shilpa Sunil
Subject: Environmental Files - 20865 Canada Road in Lake Forest
Attachments: Bonkowski, Leslie.vcf

Hello Shilpa,

In response to your Public Records Act request dated June 13, 2019, the Irvine Ranch Water District (District) doe not have any records responsive to your request (as the District does not maintain records for septic tanks).

The referenced property at 20865 Canada Road in Lake Forest receives domestic water service from the District; however, does not have sewer service which is a good indication that the property maintains a septic system.

Please note that the District does not have any records of a well at this site, which is most likely why this address is being serviced with domestic water. Since the District consolidated with the Los Alisos Water District in 2000, and historic documentation provided to the District is very limited.

Please confirm receipt of my email, so I may file your request.

Thank you,
Leslie

Irvine Ranch WATER DISTRICT
Leslie Bonkowski, District Secretary
949/453-5312

>>>>>>>>>>>>>>> Shilpa Sunil <ssunil@hillmannconsulting.com> 6/13/2019 9:22 AM >>>

Dear Sir/Madam:

Property address: **20865 Canada Road, Lake Forest Ca**

Hillmann Consulting, LLC is conducting an environmental investigation of the above referenced

property. Under the Freedom of Information Act, We would like to request any information your office has regarding this property such as environmental files (UST, groundwater, wells, etc.). The property appears to have septic system based on the age of the residential home and barn developed at the Property. Is there any way to find out further details about the septic system location if it's still in place or capped? If capped are there any records we could reference.

If any records are located, we would like to obtain copies or schedule a file review. If no records are available, please contact me to confirm. Thank you for your assistance.

Sincerely,

Thank You,

Shilpa Sunil

Environmental Project Manager

Hillmann Consulting, LLC

1745 Orangewood Avenue, Suite# 201

Orange, CA 92868

Office (714) 634-9500

Cell (714) 313-2840

ssunil@hillmannconsulting.com

www.HillmannConsulting.com

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Shilpa Sunil

From: WB-RB8-FileReview8 <FileReview8@waterboards.ca.gov>
Sent: Tuesday, June 11, 2019 11:55 AM
To: Shilpa Sunil
Subject: RE: Environment Files - C37524

Thank you for your email. We will begin processing your file review request.

Shilpa Sunil

From: WB-RB8-FileReview8 <FileReview8@waterboards.ca.gov>
Sent: Monday, June 17, 2019 1:17 PM
To: Shilpa Sunil
Subject: RE: Environment Files - C37524

Good morning,

After careful review of our records, we show we have no files for the following site:
20865 Canada Road, Lake Forest Ca

If we can be of further assistance, please do not hesitate to contact us again.

Thank you,
File Review Desk
3737 Main St. Suite 500
Riverside, CA 92501

From: Shilpa Sunil <ssunil@hillmannconsulting.com>
Sent: Tuesday, June 11, 2019 11:55 AM
To: WB-RB8-FileReview8 <FileReview8@waterboards.ca.gov>
Subject: Environment Files - C37524
Importance: High

Dear Sir/Madam:

Property address: 20865 Canada Road, Lake Forest Ca

Hillmann Consulting, LLC is conducting an environmental investigation of the above referenced property. Under the Freedom of Information Act, we would like to request any information your office has regarding this property. If any records are located, we would like to obtain copies or schedule a file review. If no records are available, please contact me to confirm. Thank you for your assistance.

Sincerely,

Shilpa Sunil
Environmental Project Manager

Hillmann Consulting, LLC
1745 Orangewood Avenue, Suite# 201
Orange, CA 92868
Office (714) 634-9500
Cell (714) 313-2840

ssunil@hillmannconsulting.com
www.HillmannConsulting.com

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APPENDIX G

PROJECT PERSONNEL QUALIFICATIONS

J. Ryan Terwilliger

Operations Director, West Coast

EDUCATION:

B.S. Environmental Science, University of Southern California, Los Angeles, CA -2006

CERTIFICATION:

Cal-OSHA Certified Asbestos Consultant
CDPH Accredited Lead Inspector/Assessor/ Project Monitor

CA Certified Site Surveillance Technician

OSHA 40 - Hr HAZWOPER

YEARS OF EXPERIENCE:

With Hillmann: 6 years

Total: 12 years

PROFESSIONAL EXPERIENCE:

Mr. Terwilliger is responsible for business operations, fiscal management and field staff management for Hillmann's California Office. He also performs asbestos surveys and investigations to identify asbestos and lead materials associated with occupational hazards. He supervises work practices and controls in accordance with job specifications, current EPA, OSHA and State Regulations for Asbestos remediation projects in commercial, industrial and multi-family residential buildings. Mr. Terwilliger performs IAQ, mold and moisture investigations in commercial, industrial and residential facilities nationwide. He also performs awareness training for asbestos, lead and microbial agents. Mr. Terwilliger provides litigation support consultation.

Representative Experience Includes:

Tishman Speyer Properties, Various locations: Hillmann has provided the complete environmental program for Tishman Speyer's properties since 1987. Our services include environmental health and safety, industrial hygiene, phase I environmental site assessments, asbestos surveys, air monitoring, bid administration, O&M programs and indoor air quality programs on various commercial, industrial and multi-family residential properties. Mr. Terwilliger is an Environmental Scientist on this contract, conducting on-site environmental services including phase I site assessments and NPDES water quality testing.

Westfield – Environmental Program, Various locations: Since 2000, Hillmann has been providing an environmental program encompassing environmental health and safety, Phase I environmental site assessments, asbestos and lead surveys, air monitoring, bid administration and O&M programs, industrial hygiene and indoor air quality programs, and hazardous materials assessments on their mall properties throughout the county. Mr. Terwilliger is an Environmental Scientist on this contract performing industrial hygiene services that include indoor air quality monitoring, Phase I environmental site assessments, asbestos and lead surveys.

Brookfield Office Properties, Various sites, CA: Hillmann has been providing hazardous materials surveys, development abatement specifications, and managing the oversight activities during the abatement at various Brookfield owned sites throughout California. Mr. Terwilliger functions as a Project Manager for this contract.

California Department of Transportation, Central Valley and Northern CA: Hillmann has been performing asbestos and Lead-based Paint Surveys for the California Department of Transportation. Performed comprehensive asbestos containing materials and lead-based paint surveys of residential and commercial buildings that were slated for demolition and generated report of findings in order to aid the Department of Transportation (DOT) in facilitating the road improvement programs and building renovations throughout the

HILLMANN CONSULTING

Central Valley area. Also during the abatement of asbestos from DOT owned buildings, provided contractor oversight and air monitoring services for regulatory compliance.

Verizon, Various Sites, CA. Hillmann conducted hazardous materials surveys, development abatement specifications, and project monitoring during abatement at various Verizon owned sites throughout California. Mr. Terwilliger functioned as the Project Manager.

Public Storage, Los Angeles, CA: Hillman preformed comprehensive asbestos, lead-based paint and universal waste materials survey of commercial and industrial buildings throughout Southern California. Hazardous materials surveys were conducted prior to renovation for the storage units. Mr. Terwilliger developed abatement specifications and managed the abatement activities during the renovations of the buildings. He functioned as the Project Manager on this contract.

APPENDIX D

HISTORICAL RECORDS DOCUMENTATION

Lake Forest

20865 Canada Road

Lake Forest, CA 92630

Inquiry Number: 5678687.8

June 11, 2019

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

06/11/19

Site Name:

Lake Forest
20865 Canada Road
Lake Forest, CA 92630
EDR Inquiry # 5678687.8

Client Name:

Hillmann Environmental Co.
1745 W Orangewood Avenue
Orange, CA 92868-0000
Contact: Shilpa Sunil

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

Year	Scale	Details	Source
2016	1"=500'	Flight Year: 2016	USDA/NAIP
2012	1"=500'	Flight Year: 2012	USDA/NAIP
2009	1"=500'	Flight Year: 2009	USDA/NAIP
2005	1"=500'	Flight Year: 2005	USDA/NAIP
1994	1"=500'	Acquisition Date: June 01, 1994	USGS/DOQQ
1990	1"=500'	Flight Date: August 29, 1990	USDA
1989	1"=500'	Flight Date: August 03, 1989	USDA
1980	1"=500'	Flight Date: November 21, 1980	USGS
1974	1"=500'	Flight Date: November 06, 1974	USGS
1972	1"=500'	Flight Date: October 30, 1972	USGS
1967	1"=500'	Flight Date: May 07, 1967	USGS
1963	1"=500'	Flight Date: February 28, 1963	USGS
1952	1"=500'	Flight Date: December 12, 1952	USDA
1949	1"=500'	Flight Date: May 05, 1949	USDA
1946	1"=500'	Flight Date: December 29, 1946	USGS
1938	1"=500'	Flight Date: June 21, 1938	USDA

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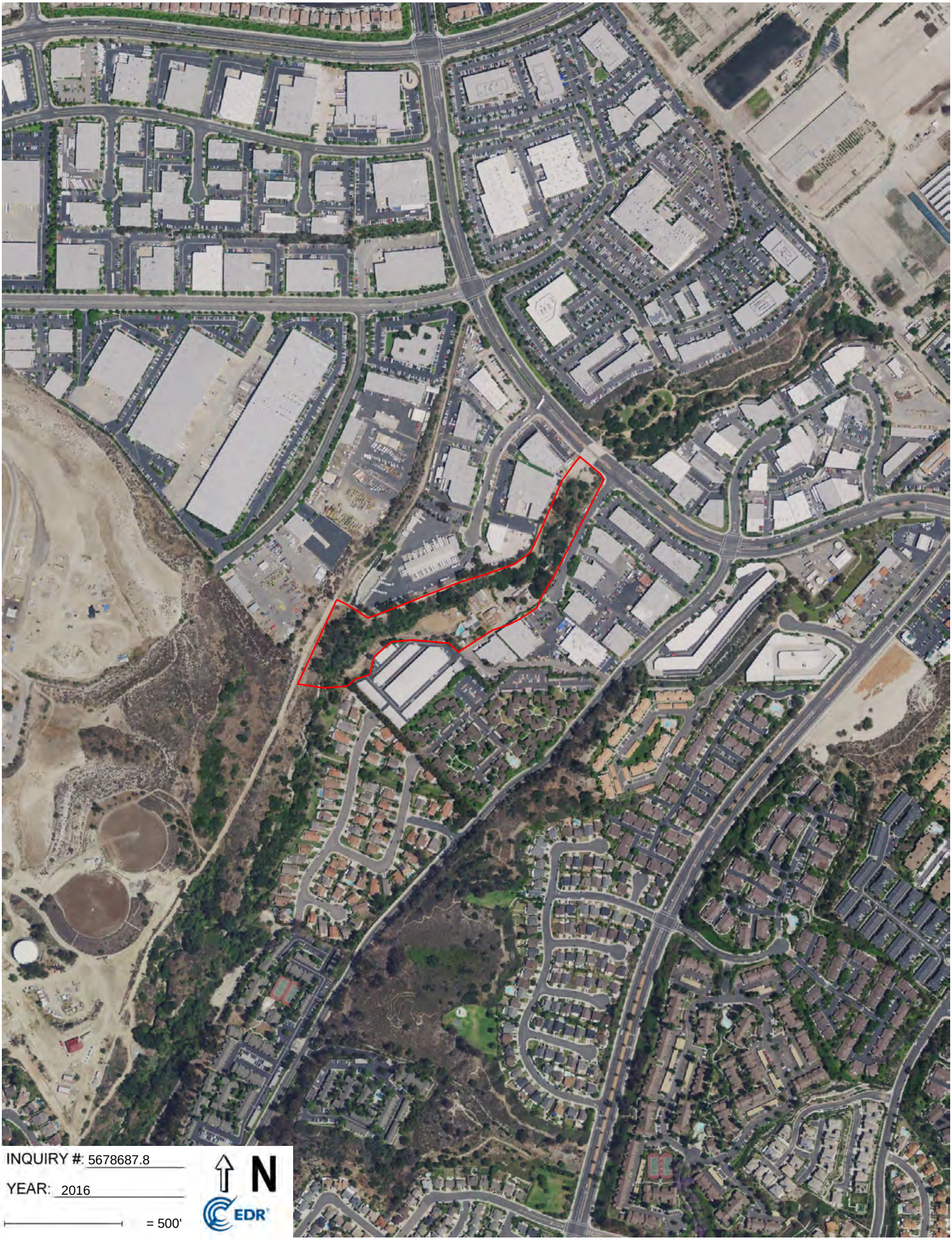
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= 500'
N
EDR

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YEAR: 2012
= 500'
N
EDR

INQUIRY #: 5678687.8
YEAR: 2009
= 500'
N
EDR

INQUIRY #: 5678687.8
YEAR: 2005
= 500'
N
EDR

INQUIRY #: 5678687.8
YEAR: 1994
= 500'
N
EDR

INQUIRY #: 5678687.8
YEAR: 1990
= 500'
N
EDR

INQUIRY #: 5678687.8

YEAR: 1989

= 500'

N

EDR

Subject boundary not shown because it exceeds image extent or image is not georeferenced.

INQUIRY #: 5678687.8
YEAR: 1980
= 500'
N
EDR

INQUIRY #: 5678687.8
YEAR: 1974
= 500'
N
EDR

INQUIRY #: 5678687.8

YEAR: 1972

= 500'

N

EDR

Subject boundary not shown because it exceeds image extent or image is not georeferenced.

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YEAR: 1967
= 500'
N
EDR

INQUIRY #: 5678687.8
YEAR: 1963
= 500'
N
EDR

INQUIRY #: 5678687.8
YEAR: 1952
= 500'
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EDR

INQUIRY #: 5678687.8

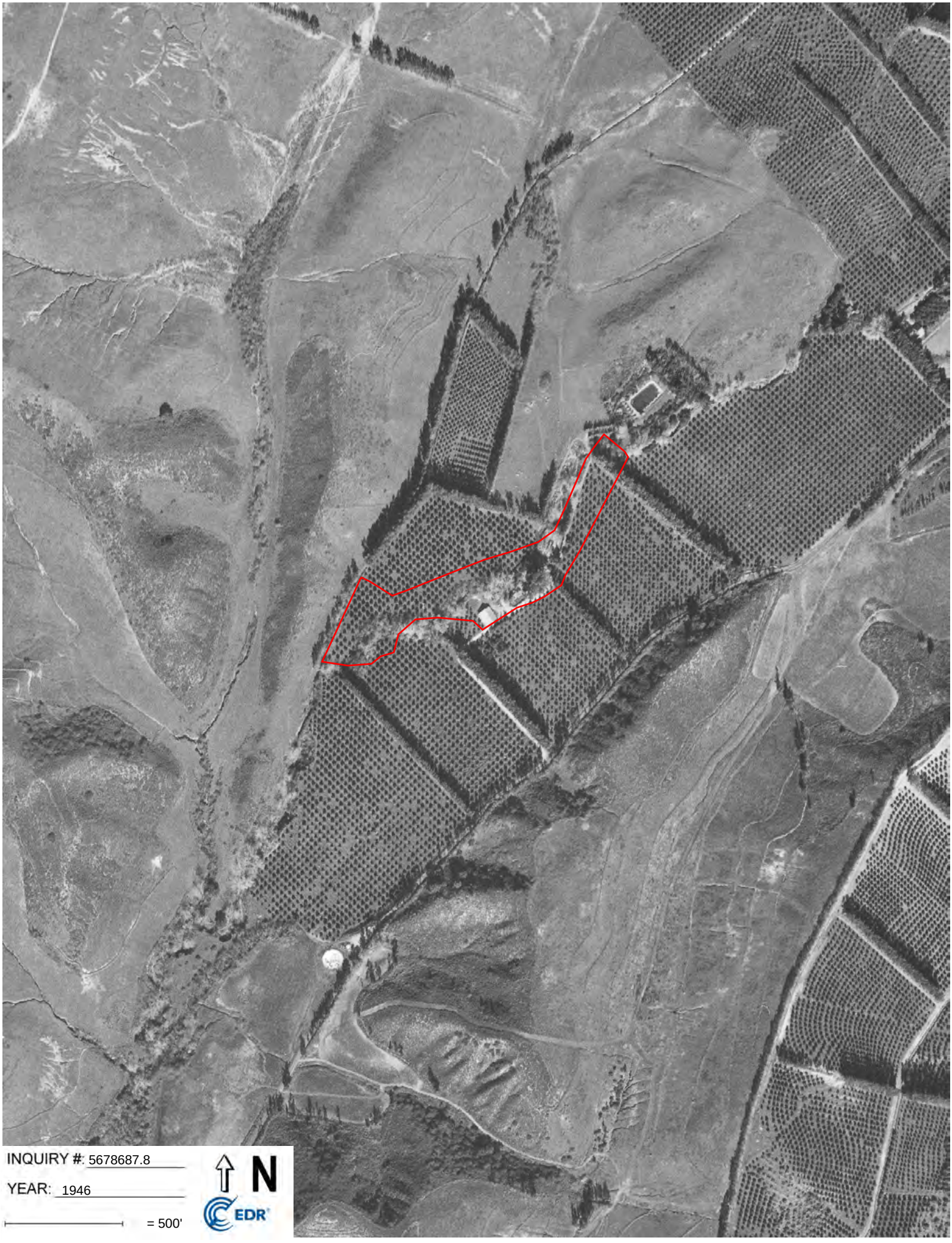
YEAR: 1949

= 500'

N

EDR

Subject boundary not shown because it exceeds image extent or image is not georeferenced.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YEAR: 1946
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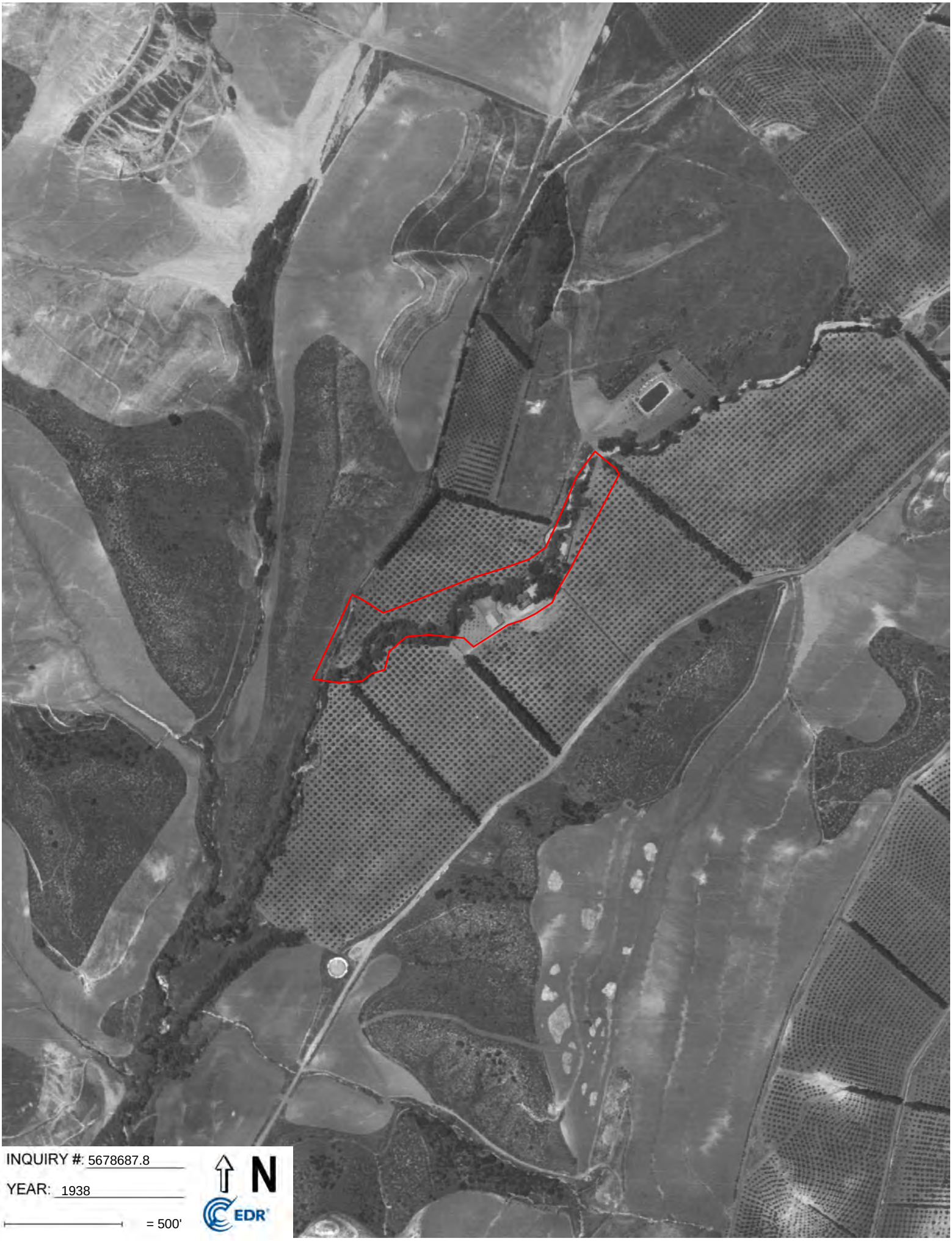
EDR



INQUIRY #: 5678687.8

YEAR: 1938

= 500'

N

EDR

Lake Forest
20865 Canada Road
Lake Forest, CA 92630

Inquiry Number: 5678687.5
June 12, 2019

The EDR-City Directory Image Report

Environmental Data Resources Inc
6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available city directory data at 5 year intervals.

RECORD SOURCES

EDR's Digital Archive combines historical directory listings from sources such as Cole Information and Dun & Bradstreet. These standard sources of property information complement and enhance each other to provide a more comprehensive report.

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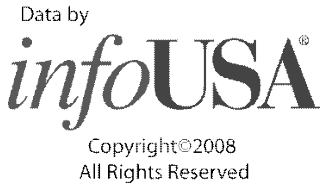

RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

Year	Target Street	Cross Street	Source
2014	☑	☐	EDR Digital Archive
2010	☑	☐	EDR Digital Archive
2005	☑	☐	EDR Digital Archive
2000	☑	☐	EDR Digital Archive
1995	☑	☐	EDR Digital Archive
1992	☑	☐	EDR Digital Archive
1985	☑	☐	Haines Criss-Cross Directory
1980	☑	☐	Haines Criss-Cross Directory
1975	☑	☐	Haines Criss-Cross Directory
1972	☑	☐	Haines Criss-Cross Directory

FINDINGS

TARGET PROPERTY STREET

20865 Canada Road
Lake Forest, CA 92630

Year	*CD Image*	*Source*
CANADA RD		
2014	pg A2	EDR Digital Archive
2010	pg A8	EDR Digital Archive
2005	pg A14	EDR Digital Archive
2000	pg A21	EDR Digital Archive
1995	pg A28	EDR Digital Archive
1992	pg A33	EDR Digital Archive
1985	pg A36	Haines Criss-Cross Directory
1980	pg A37	Haines Criss-Cross Directory
1975	pg A38	Haines Criss-Cross Directory
1975	pg A39	Haines Criss-Cross Directory
1972	pg A40	Haines Criss-Cross Directory

FINDINGS

CROSS STREETS

No Cross Streets Identified

City Directory Images

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

CANADA RD 2014

20747 ESQUIVEL, MARIA
20761 IMEX VISION LLC
LULYBOO LLC
20781 IRVINE AUTO REPAIRCOM
MCLAREN UNIBODY INC
20792 SHMAZE INDUSTRIES INC
20795 COHEN RICHARD LDSCP & CNSTR
20845 CAMALI CORPORATION
ENERGY SUPPORT PRODUCTS
20941 AMERICAN MINI STORAGE
21140 NAVA, STEPHANIE
21141 A-WESTGIFTSCOM LLC
AMAYA, ANA O
ANDERSON, TERRA
ASSOIAN, SILVA
BARACALDO, JORGE
BAYOTLAMIREZ, MAEMAE
BEARDEN, ARTHUR L
BERUMEN-MEZA, LUIS
BOWERS, CHERYL L
BRADY, BARBARA
BUBOI, REBEKAH L
BUKHARI, ALI S
BUNCH, SHERVIN S
BUTATZ, WILLIAM A
CALDERON, HECTOR L
CARLOS, IRESA M
CARTER, DARRYL
CASTANEDA, ESTEFANY
CASTRILLON, OSCAR A
CHATONEY, GERALD D
CHAVEZ, OLELDA
CHERDOUD, ZINO
CHRENOW, CHRIS
CLARK, GEORGE W
CLEVELAND, LORENA V
COATS-PARIS, PATRICIA A
COPPOLA, MARSHA
COTTERELL, MICHAEL W
CRANE, MARK A
DAHLKE, DELORES
DANH, DANNY
DASHTESTANI, AREZOU
DELANO, DOUGLAS H
DELATORRE, IMELDA
DEPPE, RANDALL I
DEROSA, FRANCO
DESROSIERS, DANA L
DUNN, KARI J
EKHTIAR, ALEN

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

CANADA RD 2014 (Cont'd)

21141 EMENS, ROBERT R
FAZIO, SUSANA S
FERNANDEZ, CARMEN
FISHER, CURTIS R
FLINT, PEARL
FOSTER, GERALD
GALVEZ, EDWARD G
GARCIA, MARIO A
GONZALES, GEMMA G
GUEVARA, ADA
GURON, AJAY P
HAMILTON, JASON H
HARDY, DENISE S
HERNANDEZ, OSCAR E
HIGGINS, DUSTIN
HILL, EDGAR J
HUERTA, LUCY
ISKANDER, SARWAT A
JEON, THERESA
JOHN, WENDY
JOHNSON, DAVE B
JONES, DANIEL A
KEZMOH, JUSTIN M
KHAN, AMIR
KIRK, BRANNON
KUCHINSKY, DAVID W
LAMBA, ROHIT
LARA, MARISOL
LECOMPTE, JEFFREY L
LEE, GEORGE
LIBEJAS, GABRIELA E
LIESENFELT, ANNA M
MARIOTTI, FERESHTEH
MARTINEZ, GUSTAVO
MEYERS, JOHN A
MOGHANI, KAMBIZ
MORADO, HELEN
MORALES, RUFINO
MORENO, BERNARDITTA G
MUHTAR, HIDAYAT
MULLINS, SHIRLEY A
NAVIDI, MOE H
OLIN, JOSHUA
PANTHI, SUNIL
PASSMORE, RANDY N
PEREZ, ALMA
PETTY, FELICIA
PIKALOV, PAVEL A
PINTO, JASMINE
PISTEY, JOSEPH V

CANADA RD 2014 (Cont'd)

21141	POLANCO, RAYMUND
	RECTO, HEIDI R
	REYES, CIRO
	REYES, MICHAEL F
	RIVERS, CYNTHIA A
	ROBERTS, MARTHA B
	RODRIGUEZ, VICTOR R
	ROMERO, RALPH M
	RORMAN, LAURIE A
	SOMMERS, ADAM
	SRIKANTAIAH, NAVEEN A
	STEINFELD, TAMISHA
	STOPYRO, EDWARD J
	SUNIL, JAYA
	SUTTON, JEANETTE
	TREBLE, CHRISTOPHER D
	TRIPATHI, KAMYA
	VALADEZ, OLGA
	VALDOVINOS, RAMIRO L
	WALKER, MONA
	WESTPHAL, SARAH
	WOLFE, DANIEL A
	WORHMAN, RICHARD R
	YOUS, KIMBERLY
21142	AFSHAR, FARHAD I
	ARTUZ, CHRISTEL
	BARBACANO, RAYMOND T
	BENZINGER, BARBARA J
	CATON, BRITTNEY
	CHATONEY, CHRISTOPHER A
	CHRSITIAN BOOKS CHEAP
	CLINTON, MICHAEL
	CRUZ, ROBERT
	DELA, CRUZ
	DINESH, KUMAR M
	EISELE, AMANDA
	FALK, BELINDA D
	FOSTER, CHRIS B
	FROST, NATHAN T
	GILLESPI, NICOL N
	HALLMAN, JOHN E
	HAMIDI, FARNOUSH
	HERNANDEZ, EDILBERTO
	HULTBURG, KIMBERLY A
	IMANI, VANDAUD
	JOHNSON, RONALD L
	KEEGAN, MICHAEL
	KONIECZKA, KELLI L
	LUNA, ELIZABETH A
	MEYER, TRACY

CANADA RD 2014 (Cont'd)

21142	MOCHIZUKI, JON A
	MORSE, TEENA M
	MOSICH, RACHEL L
	NESTOROVA, LILYANA
	OAKLEY, STEPHEN
	OPANASIK, EVGENIYA
	PADLAVAN, MARGIE
	PEREZ, FERNANDO G
	PETERS, SAPPHIRE X
	PLEASANT, ERIC
	ROJAS, MIRIAM M
	SAMIMI, VARGHA
	SANCHEZ, JORGE
	SCIOLINI, VANINA M
	SIKKA, PANKAJ
	SMITH, HARRY
	SMITH, LAURA
	TARZJANI, PAYAM D
	TEPATZI, JAMES
	THOMAS, DUANE
	VALENCIA, GUSTAVO
	WAY, WILLIAM A
	WETENKAMP, HERB D
	WRIGHT, JOSEPH J
	YEE, DARREN
	ZUNINO, MARIO R
21631	RICHARDSON, MARYANN
21641	ALLEN, MARGARET A
	ALSAYIL, TAHANI
	ANDERSON, MELBA L
	ANDREW, WILLIAM M
	BANG, ESMAT
	BONN, LEACY E
	BREESE, BONNIE L
	BREISCH, CHRISTINE A
	BUKACEK, ROXANE D
	BURCHELL, LAUREL D
	BYKOVSKY, IRINA
	CARNEY, MIA
	CASTILLO, JOSE
	CHANCHANI, RAVIN
	CLEMENTS, GEOFFREY S
	CONWAY, SHAR E
	CROOK, BRANDON N
	CUERVO, JORGE A
	DADDIO, MARIA
	DEFLORA, MAUKALI W
	DEMAREE, MARCEL H
	DIMALANTA, JILLIAN M
	DUPONT, ROGER A

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

CANADA RD 2014 (Cont'd)

21641 EGGEN, MARK R
ELIAS, DEREK
ELIAS, JACQUELIN E
ENAYATI, REZA
ENG, HO
FAJARDO, JOSE M
FIANDACH, SANDRA G
FIELDS, JENNIFER L
FITZ, TIMOTHY M
FLORES, VICTOR M
FREGOSO, TRAVIS
GALICIA, ANDRES
GAMEZ, KEIKO Y
GARCIA, ARACELI
GARCIA, JUDY A
GARFIAS, PAULO
GILBERT, JAMES R
GUTSCHE, DIANE E
GUTSCHE, MARY C
HEIZER, BRETT E
HENN, SHELLY
HENNING, CHRISTOPHER R
HILL, JULIE C
HUANG, ALEX C
HUERTA, ARGELIA
JENNINGS, THOMAS
JUAREZ, JUAN
KALLAO, ALEXANDER
KEENAN, HUNTER A
KENNEN, W U
KOZICK, MARGARET
LAVARDENZ, DOUGLAS
LE, KENNY B
LOPEZ, ISAAC
LUDOLPH, CHRISTOPHER
MARTIN, RAY J
MATA, KRISTINE D
MAYS, KHRISTINE
MEADOWS, JULIE M
MILLER, KRISTI D
MOERAD, IRMA I
MOFIDI, SHAMSI
NANI, ELVERA
NECULAU, NADIA E
NELSON, WILLIAM E
PADDEN, LISA A
PARTIN, MARCI L
PAYKOV, SERGEY L
PELIYAGODA, PRA
PENA, AIDA

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

CANADA RD 2014 (Cont'd)

21641
PHILLIPS, JOSHUA
PHILLIPS, M
ROBINSON, MICHAEL D
RODRIGUEZ, CELIA
RODRIGUEZ, FIDEL R
ROTH, JINA J
RUIZ, MARY
RUNGTHIRAKUL, SHAUNA
RUSSELL, CHUCK D
RYNSBURGER, JASON
SALCEDO, JOSELUIS C
SANCHEZ, BRIAN A
SANCHEZ, ROSA E
SAVLOV, MELISSA Z
SCHWARTZ, NAILA E
SCOTT, DORAN L
SMITH, KEISHA M
SMITH, RUTH G
STANTON, VICTORIA
STATLER, NOREEN
SULEK, ZENON
TAMASHIRO, HIROKAZU
TAYLOR, KALEE D
VANN, JACOB M
VARGAS, LUCINA
VIVAS, FELIPE
WATI, HARMA
WATT, MARY
WEERASURIYA, ENOKA D
WESTERN NATIONAL SECURITIES
WHALEN, MAUREEN T
WHITLEY, BRANDON
WILLIAMS, CRAIG
WOOD, HARLA J
ZHENG, ANGELA L

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

CANADA RD 2010

20747 ESQUIBEL, MARIA
20749 GUZMAN, MIKE J
20761 FLAME & WAX INC
ICP
20781 MCLAREN UNIBODY INC
20792 SHMAZE INDUSTRIES INC
20795 COHEN RICHARD LDSCP & CNSTR
20845 CAMALI CORPORATION
ENERGY SUPPORT PRODUCTS
20865 CANADA RANCH STABLES
HESS RONALD CONSTRUCTION
20941 AMERICAN MINI STORAGE
21141 A-WESTGIFTSCOM LLC
ABDULLA, FARHAD
ADAMS, KELLY
ALIJAFARI, PARVIZ
ARATOUNIANS, ARSINEH
BABCOCK, PHIL
BEJEREA, MIHAI
BRADY, BARBARA
BUNCH, SHERVIN S
BUTATZ, WILLIAM A
CARRACO, DANIEL
CASTELLANOS, LEON
CHATONEY, GERALD D
CLAVER, DAVID J
CLEMENS, JOE
COLLINS, GENE C
CORRAL, TERESA
COTTERELL, MICHAEL W
CRECELIUS, RYAN
CRUZATE, SUSANA S
DAM, WILLIAM A
DANH, ROSE T
DANIELS, MARK A
DELANO, DOUGLAS H
DESROSIERS, DANA L
DRIGGERS, JUSTIN B
ELIASON, DONALD
ESPOSITO, MARY V
FAHANDEZ-SADI, SHAGHAYEGH
FREYDOONI, MIKE
FRIED, ROBERT J
GAO, HONGXIA
GARNER, ANGELIQUE M
GERAMI, MENOOSH E
GIFFORD, S
GONZALEZ, ANA
GRAY, KATHLEEN A
GRUENER DREW

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

CANADA RD 2010 (Cont'd)

21141 GUTIERREZ, ISAIAS M
HAMILTON, JASON H
HARDY, DENISE S
HENTON, CHANDRA L
HERNANDEZ, JOSEPH
HERNANDEZ, OSCAR
HERNANDEZ, PEDRO
HOANG, EVA D
HONGXIA, GAO
HUERTA, LUCY
ISKANDER, SARWAT
JABR, SAED
JOHNSON, DAVE B
KANNAN, KRISHNAN
KAUPERT, KEVIN
KAZIMI, MOHAMMAD
KEITH, HOWARD R
KEZMOH, JUSTIN
KUDTARKAR, PRAVI
KUMAR, ARUN
KVAERNER, SUNHWA
LEE, GRACE
LICEDA, FEDERICO
LINE, REBECCA
LUNARIA, ROGELIO
MACIEL, EUGENE
MACKLIN, KYLA L
MADAR, PATRICIA S
MARTINEZ, GUSTAVO
MCKEMMA, TIFFANY S
MERITT, GEORGE
MOGHANI, AAMBIZ
MORENO, BERNARDITTA G
MOSICH, RACHEL L
MULLINS, SHIRLEY A
MUNSHOWER, CHRISTINE
MURADYAN, ARMAN
NAIR, SANDEEP
NANCE, KAREEM
NARAPUREDDY, SARATH
OCONNOR, DAVE L
PASCHKE, RAYMOND N
PATTON, STEVE W
PENG, JAYSON B
PERONA, MAE
POWELL, NICHOLAS J
PRISCO, GERALD J
PROGRESSIVE SOFT TECH INC
RAMIREZ, JESSICA
RAMSDEN, SHAULA V

CANADA RD 2010 (Cont'd)

21141 REVELL, SHIRLEY A
ROBERTS, MARTHA B
ROBINSON, HEIDI M
ROBLES, MARIANA
RODRIGUEZ, JAIME
ROJAS, ISAAC
SANTOS, RUBEN V
SCHLICHT, JEANNE S
SEGUI, HECTOR
SEXTON, NICOLE
SHAH, ANSUYA
SHENOY, SHARATH
SHRIVER, JUDY M
SOMMERS, ADAM
STAMBAUGH, LISA L
SUAREZ, MIRYAM P
SWANSON, DARLENE K
TABASSO, JASON T
TAJONAR, HORACIO
TAMEZ, RONALD
TJIAUW, YULIA
TOLMICH, RICHARD F
TOM, JAMES E
TRAMBLAY, MATTHEW
URRUTIA, ASHLEY
URRUTIA, MARIA A
VAHDAT, NONA
VOS, WHITNEY L
WADE, MELLISSA
WAREH, BEVERLY
WINEMAN, MICHAEL L
WINSLOW, SCOTT C
WOLFE, DANIEL
WOOSLEY, KELLY J
ZANANIAN, ALI
ZUNINO, KORI

21142 AFSHAR, FARHAD I
AGUIAR, ANTHONY
ALL THE RAVE ENTERTAINMENT
AMANTE, PAUL L
BAUTISTA, NATHANIEL S
BLAKE, PHILLIP
BOLOURIRAD, BLAKE
BORZONI, KELLY
CATON, BRITTNEY
CHRSITIAN BOOKS CHEAP
COOMBS, KELLY
COTTEN, JENNIFER C
DE, CINTORA E
DRENNEN, ROGER

CANADA RD 2010 (Cont'd)

21142 GILLESPIE, NICOL
GONZALEZ, CATALI
GONZALEZ, MARLENE
GOPINATH, BIJU
GUERRA, E
HERNANDEZ, EDILBERTO
HILL, EDGAR J
HOUSER, LAVALLE
HULL, JENNIFER
HULTBURG, KIMBERLY
JACOBS, KIMBERLY A
JACSEN, JAMAL
JOHNSON, TERESA A
KELKA, MICHELLE
KONIECZKA, KELLI L
MANNI, CABBY
MARTINEZ, JUAN
MOCHIZUKI, JON
MORALES, SAMUEL
MOSICH, RACHEL
NGUYEN, TIFFANY N
ORTIZ, FERNANDO R
PARKER, CHRISTOPHER
PASSARELLA, RACHEL
PEREZ, FERNANDO G
PLANTE, ALLISON
POWELL, ROGER A
RAHIM, ALI M
ROACH, KATLIN
ROBIN, FENY
RODRIGUEZ, MIGUEL J
RUIZ-SILVA, JESICA
RUSSO, DANIEL
SAHEB, MINA
SILVA WOOD FINISHING
SWAIM, BENJAMIN
TEPATZI, JAMES
THOMAS, DALIA
TORRES, EDUARDO L
TUAZON, RUEL Q
VALENCIA, GUSTAVO
WAY, WILLIAM
WELLS, R
WRIGHT, JOSEPH J

21641 ALVARADO, RENE A
ANDERSON, GARRETT
ANDREW, WILLIAM M
ARNOSIO, FRANCO
AROUZA, KEVIN J
ARTESANI, MARY

CANADA RD 2010 (Cont'd)

21641 BAILEN, MARTY
BAKER, CELESTE E
BARAY, LIELA
BAYOTAS, HENRI B
BILOW, JOSEPH
BINGHAM, TAMMIE L
BONHAM, JASON P
BRADLEY, JOSE F
BREISCH, CHRISTINE A
BROWN, JAMES C
BURCHELL, LAUREL D
CALDWELL, KAREN A
CHAIREZ, CONSUELO
CHINO, YURIKO
CHOI, JOO S
CHRENOW, CHRIS
CLEMENTS, GEOFF S
COLLIER, DANIEL
COONEY, CHRISTOPHER
CROWE, JODI A
DEHIPOLA, ERANPHI
DELEON, JORGE
DEZOYSA, HEMAMALI
DMARIE LAND AND SEA TRAVEL
DOAN, DIRISSY D
DONDAPATI, RAVI
ELIAS, DEREK
ENG, HO
ESPINOZA, RAFAEL
FALK, BELINDA D
FARFAN, DORA
FIELDS, RYAN M
FLORES, ANGELICA
GALICIA, ANDRES
GALLAGHER, MARK A
GARCIA, ABEL
GARCIA, ARACELI
GARFIAS, PAULO
GIL, ANGELICA
GRANADOS, ANTONIA
GUNARATNE, OBERIYAGE
HAWKINS, RON G
HERNANDEZ, DAMARIS
HOCKERSMITH, MATTHEW T
HOPKINS, LEO
HUERTA, ARGELIA
JENNINGS, THOMAS
JUAN, CARMELA
JUAREZ, MARTINA
KNIGHT, PATRICIA A

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

CANADA RD 2010 (Cont'd)

21641 LAMAR, FREDERICK
LITTLE, SCOTT A
LUK, LINCOLN
MAGALLANES, JOSE L
MALDINI, AXEL C
MARTIN, RAY J
MEJIA, JUANITA
MILLWARD, ADAM
MOAYEDGHIASI, REZA
MOUTUNES, MANSOL
NECULAU, NADIA E
NGUYEN, HIEU
OHARE, NICHOLAS
PELAYO, DANIEL
PHILLIPS, M
PHOENIX, GLENN
RAMIREZ, CARMEN
REEDER, JODY S
RICHARDSON, PAUL H
ROBINSON, MICHAEL D
ROBLES, SIRIA
RODRIGUE, VICTOR
RODRIGUEZ, GREGORIO
ROTH, ASHTON
RUSSELL, CHUCK D
SANCHEZ, BRIAN
SATHEES, THANABALASINGAM
SCOTT, SARAH
SERRANO, GILBERTO
SHAH, MAULIK D
SOLOMON, ZENON
STOPNIK, ERIC C
SULEK, ZENON
TAMASHIRO, HIROKAZU
TAYLOR, KALEE D
TSHCHUDY, JERRY
URCIA, REGINALD I
VICTORIANO, QUIRINO
VIDAL, FERNANDO
WATSON, LYNDA L
WEERASURIYA, SARATH
WESTERN NATIONAL SECURITIES
WHALEN, MAUREEN T
WILLIAMS, CRAIG
WILSON, COLLEEN
WILSON, MICHELLE B
ZHENG, ANGELA L
ZHOU, YOUWEI

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

CANADA RD 2005

20683	BAKER RANCH
	SHAE PROPERTIES BAKER RANCH CO
20749	GUZMAN, MIKE
20761	GRAPHIC ACQUISITION INC
20781	MCLAREN UNIBODY INC
20792	SHMAZE INDUSTRIES INC
20795	COHEN RICHARD LDSCP & CNSTR
20849	CAMALI CORPORATION
20865	CANADA RANCH STABLES
	HESS RONALD CONSTRUCTION
20941	AMERICAN MINI STORAGE
21141	ANDERSON, ERIC C
	AZIZ, ZAHRA
	BAKHTJOU, RITA
	BARBAZON, RYAN P
	BARKER, MELISSA
	BETHEA, DAVID
	BLOOM, CHRISTOPHER
	BLUME, JENNIFER
	BUNCH, SHERVIN S
	CALDERON, LUIS A
	CANTOLA, SHAYNE A
	CARPENTER, STEVEN W
	CARTER, JASON
	CESPITES, THOMAS
	CHOI, ANDREW
	CIPRES, JESUS J
	CLEARWATER, LINDA
	COOLS, EUGENE L
	CORNING, SUE C
	COTTERELL, MICHAEL W
	COWAN, KEITH
	COX, SALLY A
	DELANO, DOUGLAS H
	DEMATEO, VICKY
	DESROSIERS, DANA L
	DOHERTY, KEVIN
	DOMINGUEZ, JOHN A
	ELLIOTT, ROBERT M
	EMERALD COURT APTS
	ESPARZA, EYOWYNE
	FANNYAM, DEHROUZ
	FELDKAMP, THOMAS R
	FISHER, CARLY
	FLINT, TIM R
	FLOWERS, NATANIEL
	FORBES, J
	GAINOR, RICHARD H
	GAN, JIM
	GHABIMIAN, VAHIK

CANADA RD 2005 (Cont'd)

21141 GLAZE, LORI
GOVINDARAJU, SOM
GRAU, NEIL R
GRAY, BILL O
GUBBRUD, ALLYSON
GUNTAKA, P
GUPTA, POONAM
HAMILTON, JASON
HASS, DAVID G
HENTON, CHANDRA L
HERRERA, ALMA D
HOANG, EVA D
HYMEL, KATHRYN
ISKANDER, HABIB M
JOHNSON, DAVE B
JONES, EMMA
KAMAL, GAD
KAMALI, SHAHED
KENNEDY, ANGELA
KEZMOH, JUSTIN
KHAN, REHAN
KIM, UNA A
KING, REGINA M
KINNAL, PRAKASH S
KIRK, DEBORAH A
KOSMIS, JAN
KUDTARKAR, PRAVI
LACY, RAESHAUNTA S
LADNIER, KELLIE W
LAMBA, ROHIT
LEA, SANDRA
LINDSAY, JON B
MAGANA, PATRICIA L
MAKARESHIAN-HAMEDANI, R
MAKSOUD, KARIM A
MANDUJANO, MARTHA
MCCONNELL, MEGAN
MCCOY, MICHAEL
MCKEMMA, TIFFANY
MILLER, FRANK
MORENO, ALMA D
MUELLER, PAUL N
MURPHY, ANDREW D
NGHIEM, TONY
ONEIL, COREY S
ORTIZ, DARREN
PARHAM, BILL
PAVICH, ELVIRA E
PETERSON, TROY F
PIFER, NICK

Target Street	Cross Street	Source
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CANADA RD 2005 (Cont'd)

21141	PIKALOV, PAVEL A
	PONG, JOHNNY
	POUIAN, FRED
	PREZIOSI, MARK C
	RABINOWITZ, DENISE M
	RECHDAN, RAESHAUNTA
	RECHDEN, RAESCHAUNT
	REVELL, SHIRLEY A
	RIVERA, DAVID L
	ROCHELEAU, BRUCE
	RODRIQUE, KENNY
	ROZANCE, RICHARD J
	RUNION, TAMARA
	SACKS, NANCY
	SANTOS, RUBEM V
	SENYO, DENISE
	SHINTSUBO, ICHIRO
	SIMON, JANENE
	SMITH, TAYLOR A
	SPEAKMAN, KATHY T
	STAIMER, NORBERT
	STAMBAUGH, LISA L
	STEWART, GINA F
	STRAWN, MICHAEL S
	SULLIVAN, CINDY
	TA, HUONG
	TEEL, TRACI
	TELLEZ, RAFAEL C
	THOMAS, PATRICIA A
	TO, THONG L
	UHL, JEFF S
	URBANSKI, LAWRENCE
	VILLA, MIRIANNA
	VIOLETTE, SUSAN R
	VOSS, GORDON B
	WAITMAN, JOE
	WALDE, AL G
	WALKER, SUSAN B
	WALL, BRIAN
	WEAVER, CURTIS G
	WESTERN NATIONAL PROPERTIES
	WHITAKER, THOMAS E
	YELLETI, SRINIVASA
	YOUNGS, ROY
21142	AMANTE, PAUL L
	BEHMANESH, PARVIN
	BRADARICH, DANA
	CAIN, DAVEE
	CONTREAS, B
	CONTRERAS, BELEN R

CANADA RD 2005 (Cont'd)

21142 COX, TROY D
DREW, KIRK
DYESS, PATRICIA J
EPPINGER, EDWARD J
ESPINOZA, ROSA
FLETCHER, JASON
GARCIA-GOMEZ, DAVE
GAY, CARRIE
GEULD, RUI
GILLESPIE, NICOLE
GOULD, LYNDA M
HENSON, PEGGY
HERNANDEZ, PEDRO
HILL, EDGAR J
HOEHN, ED C
HOUPT, JOE E
JOHNSON, BRIAN D
JOHNSON, TERESA A
KELLEY, BRIAN W
KIMBER, H
LAM, VINCENT
LOPEZ, R D
MILES, JASMINE
MYERS, STACEY
NEIDERMAYER, LYLIA
NOENICKX, EDWARD
OROZCO, ARTURO
PATHAK, AMISH
PETERS, JERI
PETERSON, KENNETH R
POE, SHANNA S
RAVINDRANATH, ANIL K
READY, RON E
RIFKIN, LINDA M
ROSANELLI, LOUIS L
SABILLON, ALICIA
SHIFT CONSULTING
SIDDIQUI, FORHAN
SUPER, DAVID
TOWNLEY, ASHLEY
TRAN, LIEM
TREXLER, SHARON
TRIEU, HUY G
VALENCIA, JESSICA
VEJAS, PAULINE
VICTORIANO, QUIRINO
VIDAURE, MAGDALENA S
VIRAMONTES, JONATHAN
WHITE, TERRY A
WHITNEY, HEATHER

CANADA RD 2005 (Cont'd)

21142 WICKLUND, WALTER J
WONG, ALONSO
WORDEN, ALIX E
WRIGHT, JOSEPH J
ZHANG, WEMGFANG
21143 MALDANODO, CARLOS
21641 ADLPARVAR, PAYAM U
ANDERSON, PAUL A
ARAGON, ANGIE L
ARDITO, MARGARET A
ARTESANI, MARY
BARAY, LIELA
BARRIOS, MARICELA
BEAL, ALEXIS
BISHOP, FREDRIC L
BOAG, WILLIAM
BRANT, GABRIEL
BREISCH, CHRISTINE
BROWN, ASHLEY
BRUNO, SHARI D
BURCH, CHRIS
CARMONA, HERIBERTO
CASTELLANOS, CESAR
CASTRO, REMIGIO R
CHANCHANI, RAVIN
CHAVEZ, MARINO
CHIVUKULA, KALPANA
CORTES, LOUIS
DAOANG, ROBIN A
DEALMEIDA, ROBERT
ENG, HO
ENRIQUEZ, STEPHEN
ENTEZAM, MAJID
ETEMADI, HOSSEIN
FABULA, NEIL W
FALK, BELINDA
FINELL, MARLENE C
GALLAGHER, MARK G
GARCIA, BENEDICTO
GEEVARGHESE, SAJU
GENOVENE, L
GERAMI, BEHNAM
GIRAS, RANDALL
GOMEZ, WALTER G
GONZALEZ, GRACIELLA
GOOD, ROBERT
GREEN, GREGORY P
GUALBERTO, VIRGINIA N
GUNATILAKE, SHAN
HAWKINS, RON G

CANADA RD 2005 (Cont'd)

21641 HERNANDEZ, GRACIELA
HERSCHBERGER, T
HILL, MELBA L
HUNTER, GAYLE L
JANG, OSCAR
JENNINGS, THOMAS
KANCHERLA, VENKAT
KAYVON, SABRINA W
KAZEMINY, NASSER S
KHOGYANI, RONA
KRISHUAPPANAIDU, VASEDEVAN
LALJEE, FAISAL
LAUER, WAYNE S
LAUREL, RICARDO P
LOGASUNDARAM, KARTHIK
MACE, TODD
MANION, MIMI
MARTIN, RAY J
MAZZO, JOSEPH
MCCASOLN, JILLIAN
MCLAY, SUZANNE
METLAPALLI, RAMANA V
MEYER, ROBERT D
MILLER, ADAM
MIRANDA, A F
MISAGHI, ALI
MOAYEDGHIASI, REZA
MONTOYA, CARLOS E
MORENO, MARTHA
NECULAU, NADIA E
NURTANTO, YANTI
OJEDA, MARIBEL
ONG, PAULA
ORTEGA, CARLOS
PADALIKAR, RAHUL
PARK, EUI Y
PARRA, JAVIER
PECK, LUCAS
PEREZ, GARCIA F
PERUSINGHE, AMIT
PETERSON, JAMES S
PETRINO, RICHARD
PHAM, YUEN
PINEDA, KENIA
PURVIS, NANCY A
RIGGLE, STEVEN L
RILEY, SUZANNE
ROBINSON, JANET L
ROLLINS, THOMAS J
RORACA, GABRIEL

CANADA RD 2005 (Cont'd)

21641 RUIZ, M
SADEK, AHMRAD
SAEIDI, KHOSROW
SAMARANAYAKE, PADMA
SANCHEZ, ADRIAN
SCHIFF, JOHN E
SCHRENZEL, EDWARD
SHAH, MAULIK D
SPEARS, ANN
SPENCE, CARRIE
STARLING, JENNIFER
STRATTON, VALERI
SWOAGER, JAMES M
SYEDMOHAMMED, HARISH
TAMASHIRO, HIROKAZU
TOLOSA, DANIEL
TRACY, ERIC J
UPPALAPATI, SARAT
VALENTIN, ORLANDO L
VILLEDA, MA R
VISWANATHAN, MURUGAN V
WANG, JOYCE
WATSON, LYNDA
WATSON, STEPHANIE
WEERASINHA, HARIN
WEERASURIYA, ENOKA D
WLCO, L F
YOSHIOKA, RANDY J
ZHENG, ANGELA L

Target Street	Cross Street	Source
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CANADA RD 2000

20683 BAKER V P ET AL
20749 GUZMAN, MIKE
20761 GRAPHIC ACQUISITION INC
GUERINEAU, CLAIRE A
INTERNATIONAL COLOR POSTERS
20781 MCLAREN UNIBODY INC
20792 SHMAZE INDUSTRIES INC
20795 COHEN RICHARD LDSCP & CNSTR
OCCUPANT UNKNOWN,
20865 CANADA RANCH STABLES
GAHN, ALICIA C
HESS RONALD CONSTRUCTION
HESS, DON
20941 AMERICAN MINI STORAGE LTD
21124 LEESEBERG, DARCY E
21141 1ST CALL PRODUCE BROKERAG
ABDUL, SOHEILA
ADL, MAZIAR
AHMAD, M
ALEXANDRA GROUP
ALONZO, OLIVIA R
ALVAREZ, ALMA F
AMIN, ADEL
ANNESI, PETER T
ARRIOLA, SUDELE B
ASLAMI, FAROOK M
BARNES, JUSTIN
BAUER, MARK D
BELL, JOHN N
BERNARD, DANIEL J
BLUME, J
BOOTH, DAVID
BOWMAN, C
BROOKS, S A
BURT, TIMOTHY
CALDWELL, BRANDON L
CALLAHAN, C J
CANNON, G
CARREON, ANGELA
CASTILLO, K
CHANG, KENNETH
CHUNG, SANG W
CORTINO, RUDY L
COSTELLO, DANIEL
CROCKETT, DAVID
CRONIN, SARAH E
DELL, A
DEMATEO, VICKY
DESROSIERS, D L
DUBOVOY, DMITRY

CANADA RD 2000 (Cont'd)

21141 ELIA, VICTOR A
ERICKSON, LAURIE A
FARMER, KENNETH D
FREISTROFFER, TAM M
FULTZ, JOHN
GARCIA-GARCIA, JUAN C
GARNER, A L
GARRISON, LLOYD
GAUDETTE, STEPHEN M
GOMEZ, RAUL
GONZALES, J
GREGG, S A
GRIMSHAW, JACK D
HAMILTON, JASON
HASAN, SYED S
HAYDEN, BEBORAH
HEDRICK, JEFFREY V
HERNANDEZ, RAUL D
HOVEN, PIPER V
INTEGRATED NETWORK CONSUL
JAGANNATHAN, S
JANCZAK, JASON M
JAVID, ANIS
JAVIER, ELISEO A
JENKINS, DEBORAH L
JHANG, MIRRA
JOHNSON, M
JOHNSTON, THOMAS
JORDAN, CHRIS J
KATZMARK, LYNN
KEENER, RAYMOND B
KEITH, JEFFREY
KHAN, REHAN
KINGSBURY, MELISSA L
KISNER, BRUCE D
KOSITARUT, J L
LALISBURY, ELENA
LAMOTTE, JOY
LAY, CHARLES
LAYTEN, BRYAN D
LEWICKE, ROSA I
LICHTL, MATEI I
LITTLETON, JANET
LIU, FIONA
LOWE, DANIEL C
LOYO, RICHARD
LUTTER, JOEL
MAPLES, LISA
MENDEZ, PETER S
MERRILL, DIANE M

CANADA RD 2000 (Cont'd)

21141 METZ, LISA I
MILLER, A J
MOSHER, SANDRA
MUELLER, PAUL N
NAPOLI, R
OCONNOR, DAVE
OGDEN, ART
ORR, RUSSELL E
OVERTURF, JOHN
PADILLA, K R
PANAGGIO, KEITH J
PARHAM, MARTHA M
PASSWATER, MILDRED R
PAUL, LORENA
PAVICH, ELVIRA E
PAYNTER, EDWIN
POURHASSANI, MOSTAFA
POWELL, MARIA E
PRIGMORE, CHRIS Y
PURSLEY, JOHN T
RAZO, FREDY
REAGAN, ROBERT
REICHERT, S
ROCHELEAU, BRUCE
ROMO, JESSE
SALISBURY, LESLIE A
SATORRES, MARCELO A
SCHAFER, PETER
SIMMONS, EILEEN S
SMITH, JOSHUA A
SOLTANI, MELODY
SPENCER, MIKE
STANGO, GLENN
STANKAVICH, MATTHEW E
STROHMEIER, F
THOMPSON, MATTHEW
TRI STATE CONSULTING
URBANSKI, L
VANCE, WALTON C
VAZQUEZ, MONICA A
VENCES, P
VOGT, ANDREW T
WAHID, SOHEILA A
WALDE, AL G
WERT JEFFERY MR
WERT, JEFFERY
WESTERN NATIONAL PROPERTIES
WILLIAMS, EDITH
WOLTER, ROBERT
WONDERLIE, JOHN

CANADA RD 2000 (Cont'd)

21141 WONG, C H
WONG, M J
21142 AA, WENDY S
ADAMS, TEDD
AMIRGHAHARI, SEPEHR
ANDERSON, C
ANGELES, M
ANTONE, STACY M
BANNING, J
BASS, DAVID M
BHATT, NALIN V
BOHLEN, DANIEL
BREWER, C
CAIN, DAVEE
CHANG, PERRY
CHATONEY, GERALD D
CHOI, GENE
COLF, VINCE P
DALTON, ANDREW
DIDENHOVER, J D
DRAGOYEVICH, STACEY
ENOCHS, B
FOUNTAIN, JANET L
GRANADOS, ENRIQUE
HINSON, JOLENE C
HODES, JESSICA L
HOEHN, EDWARD G
HUTTON, WILLIAM
ISAACS, ROBERT J
JENSEN, BRAD
JOHNSON, GLENN C
JONES, TIM W
JUST GIFTS
KOLOSS, SEAN K
KURTZ, VICKI
LAY, CARL
LEBLANC, JAMES
LEESEBERG, DARCY E
LEVY, VALERIE A
LOPEZ, RUBEN L
MACK, BARRY
MARSH, MONIQUE
MOORE, STEPHEN L
MORROW, MARK
MUDGE, PETER
OKEEFE, DAVID G
PATHAK, ANISH
PAVLAK, CYNTHIA L
PENG, MARCUS
PETERSON, K R

CANADA RD 2000 (Cont'd)

21142 PETERSON, KEN
POJAR, BOND
POLLEY, JEFFREY C
READY, RON
REYES, RICARDO M
RIVERA, JOSE M
ROBERTS, J S
SCHANKERELI, KEMAL
STEBBINS, CAREY
TAYLOR, MICHAEL A
VALENCIA, JESSICA
VEJAR, PAULINE
WALKINGSTICK, APRIL M
WICKLUND, PAULINE V
WILSON, STEPHEN
WU, CHIA H
21192 WRIGGLE, MARK D
21641 ADAMS, SANDRA
ANDREWS, SCOTT V
ATALIWALA, KETAN N
BEALL, THOMAS L
BENNETT, ROBERT
BIGLARI, SAHLA Z
BOROUGHF, MARK S
BOWE, SHANE E
BURKE, STACY A
BURMESTER, EVELYN
CABRAL, RUAY J
CHANCHANI, ANITA
CONRAD, JAMES
CONTRERAS, JULIE A
COSTIGAN, KEVIN
COUBALL, JUSTIN P
COWIE, DANA L
DANG, THUONG D
DELA, R
DELEON, FREDY E
DRAGO, MARIA N
DURAISINGH, JOHN
EICHMANN, ADAM J
ELIAS, J
ELLIOTT, JEREMY A
ELLIS, ROBERT L
ENG, HO
FISHEL, GARY A
FROOME, MARK
GERAMI, BEHNAM
GORDON, SEAN M
GREEN, GREGORY P
GUEST, JAMES M

CANADA RD 2000 (Cont'd)

21641 GUYMON, JOHN J
HAMLIN, EUGENE C
HARRIS, PATRICK A
HATEFI, ALI
HAWKINS, RON
HEDLEY, RICHARD
HEGDE, ASHOK J
HTIDECHARCHOT, SAWI
HUH, JANICE H
HULETT, PHYLLIS R
HUNTER, GREGORY
INGRAM, DOROTHY
INTERNATIONAL NETWORK TECH
ISHIDA, M
ITTIDECHARCHOTI, SAWI
JOUPARI, MARYAM M
JURASIN, A
KANCHERLA, VENKAT
KAYLOR, MARK
KIMBER, MARY E
KLOTH, PHANNA
KULKARNI, PRADEEP
LAROSA, AURORA D
LEE, SANG
MALOOF, RACHAEL
MARTIN, RAY
MASTERSON, KAREN L
MCDERMOTT, DAVID A
MELIN, JOHN A
MIRZAI, MARY
MITCHELL, JIM S
MOLINA, Y
MONAGLE, DANIEL
MONTIEL, EDWIN
NARAYAN, GOPAL
NELSON, RUTH
NGO, TRINA H
ODDONE, F
OLVERA, TERESO
PERUSINGHE, AMITHA
PHILLIPS, KEVIN T
PITA, ANA L
PODLETE, R D
RAHNI, A T
RAMACHANDRUNI, S
RICHNER, C R
RODRIGO, PATRICK
ROMERO, CECILIA
SADIGH, KHOSROW
SAEIDI, KHOSROW

CANADA RD 2000 (Cont'd)

21641 SAJOR, M M
SCHRAMM, NATALIE J
SELMANAGIC, SELMA
SHERMAN, BRENT J
SHIMMONS, LAURIE A
SMITH, TASHA
SOPER, CLARA E
SOTO, ERNESTO
SPRING LAKES APARTMENTS
STEWART, MARC
SUNWOO, NICK Y
SVEEN, CHRIS
SWETT, BOB
TERRY, JANETTE
THAPA, SUMAN
TORABBAGI, M
VICK, ROBERT W
VU, PETER V
WARREN, LINDA
WEERATUNGA, GAMINI
WELCH, ARNOLD R
WESTERN NATIONAL PROPERTIES
WILSON, LUCILLE
WIMALASIRI, PRASAD S
WINNINGHOFF, TOM
WINSTON, KAY A
WYSE, BRENT J
XIAO, DI
YOO, JIN K
YOON, ADRIAN H

Target Street	Cross Street	Source
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CANADA RD 1995

20631	YERGLER CORPORATION
	YERGLER DONNA M
20745	GAYTAN, JUAN
20749	GUZMAN, MIKE
20761	OCCUPANT UNKNOWNN
	VALLEY GLASS & MIRROR
20781	MCLAREN UNIBODY INC
20795	COHEN RICHARD LDSCP & CNSTR
	OCCUPANT UNKNOWNN
20865	HESS, DON
20941	AMERICAN MINI STORAGE LTD
	OCCUPANT UNKNOWNN
21011	ATKINSON, RICHARD
	BLANCHARD, DAVID
	COOLS, CARRIE
	CURRY, K
	HAWKINS, BRYANT
	MAYFIELD, DEBRA
	MORRISON, EDWINA B
21041	OCCUPANT UNKNOWNN
21101	OCCUPANT UNKNOWNN
21141	ADHAM, M B
	ANDERSON, DEAN
	ARATA, YOKU
	BAUER, MARK D
	BEIFUSS, BILL
	BLAKE, JOHN
	BLEAKLEY, SUN Y
	BLUMHORST, PAUL
	BOTELLO, GEORGE
	BOULTON, MYRTLE M
	BROUGHTON, WILLIAM
	BROWN, LOIS
	BRUST, MATTHEW
	BURGOON, PAUL
	CAMARGO, M
	CASTILLO, CAROL
	CHANG, K C
	CHAVARRIA, TOMMY
	CHESTNEY, JEFF
	CHUNG, SANG W
	COTA, MARIO
	CRUZATE, SUSANA
	ELMER, MARVIN
	EMERALD COURT APARTMENTS
	ESSEX, MARK
	FANG, JUNPING
	FEDORCHAK, DONALD M
	FEINGERTS, GLENN A
	FLETCHER, DAVID R

Target Street	Cross Street	Source
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CANADA RD 1995 (Cont'd)

21141	FOLTZ, JAMES
	FRITTS, TRAVIS
	GOVINDARAJAN, SRINIVA
	GUYETT, ERIC S
	HAWK, PAMELA
	HICKEY, JOHN M
	HIRAMAN, SURENDR
	HORAK, RONALD
	HUMPHREYS, LISA
	JAINE, DIANE
	JAVID, ANIS
	JOHNSON, DAVE
	KIPHEN, C
	LAI, M
	LAYTEN, BRYAN
	LEANDERS, JOHN E
	LEE, JONG H
	MAGANA, L
	MASON, DAN
	MEHVER, AGHDAS
	MOHAMED, RAFI
	NATARAJAN, RAM
	NOENICKX, EDWARD
	OCONNOR, DAVE
	ODIJK, H
	ORTEGON, JUAN
	OVERTURF, JOHN
	PARKER, C L
	PERKINS, STEVE
	POMERLEAU, DAVID
	POURHASSANI, MOSTAFA
	REA, VERNON
	REESE, J
	RICHNER, K
	RING, F
	RIZZO, DAVID
	RUFF, OREN R
	SAUCEDO, DARRELL
	SCHMIDT, DEBBIE
	SIMON, JANENE
	SMITH, GENE
	SNYDER, KYM
	SUMIOOKA, MONA
	THERIAULT, TINA
	TICHENOR, JOHN
	WEISELBERG, MELVIN F
	WILLIAMS, JOY
	YATES, JERRY
21142	ADAMS, KEITH L
	BAKER, MARIE L

CANADA RD 1995 (Cont'd)

21142 BELANGER, S
BENEVENTI, D
DUNN, BRETT
ENNS, BRUCE E
FLORES, WALTER
GERKEN, DANIEL P
GIRARD, O
HEPPY, GARY M
HOVENDEN, TODD D
HUTCHINSON, KIM M
KAPLAN, CAROLE
KAZARIAN, JOHN D
KELLER, S
KIM, TAEYONG
KLIPKA, DOUG
LETHER, ERIC
MAKALUAS, HUSIN
MCMURTRY, MARK
MILANI, RAANA
MILLER, ALLAN S
MOORE, AMY
MUNDA, LEO T
PITTMAN, BEN W
POSADA, D
RAMIREZ, DAVID
SLAWSON, SCOTT
STOKES, MELANIE
TAHERI, ALIREZA
WALKER, KYLE

21641 AGLER, DAVID
ALAIRE, JENNA
ATLES, ROBIN
BAILEY, KEN
BARRA, MARIA
BARRY, D J
BASSETT, GUADALU
BEAVERS, L
BHARADWAJ, ASHIM
BLOOM, ELISA R
BOND, SCOTT
BOSCO, K
BREED, MARK
DELEON, FREDY
DEVAPATLA, ANITA
DUNBAR, Z K
ESKINDE, ODESSA
ESSEX, MARK
FASMIRE, CHARLES T
FERNANDEZ, ARNOLD
FORNEY, JULIE

CANADA RD 1995 (Cont'd)

21641 GARCIA, JOSE
GREEN, D C
GUEST, JAMES M
HALE, MARY
HARPER, TERRY M
HERSCHMAN, WENDY
HICE, TOM D
JOHNSON, D
JOLLIE, BILL
KARP, ADAM
KHAN, ATIF M
KLING, TIMOTHY
KOENIG, FRED
LIEN, TERESA J
LOPEZ, LORENA
LOZANO, FELICIA
LYNCH, JAMES
MARTIN, RAY
MCCOY, GREG
MCNEILL, C
MEJIA, ESCALAN R
MITTELHOLTZ, ROBERT
MOLANO, JULIO
MOORE, SAMUEL
MRAZ, THOMAS
MUNOZ, ARTURO
NUNEZ, VICTOR S
OLIPHANT, YUNNACA
OROPALLO, JOHN
PADEN, G
PAJER, BRIAN L
PERRY, OLIVER A
PETERSON, L
PLATA, EDUARDO
PRITCHARD, MICHAEL
RAHNI, A T
RASHIDI, FATEMEH
REYES, HUGO
RODRIGUEZ, WILLIAM
ROST, M J
SHIN, SANGIK
SIKORSKI, ROBERT
SIMON, E M
SPRING LAKES APARTMENTS
STANO, GLENN
STEWART, DARCY
TILDEN, HELEN
VARGAS, JOSE L
VEIT, TRACY
WILSON, MARY A

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

CANADA RD 1995 (Cont'd)

21641 WOODS, HELEN E
YOO, JIN K

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

CANADA RD 1992

20631	DIXIE ICE CREAM INC
20683	BAKER, V P
	MCFADDEN FARMS
20745	GAYTAN, JUAN
20749	GUZMAN, MIKE
20761	AMERICAN FABRICATED GLASS
	VALLEY GLASS & MIRROR
20781	MCLAREN UNIBODY INC
20795	COHEN RICHARD LDSCP & CNSTR
20865	HESS, DON
20904	SANTA ANA MOUNTAINS
20941	LAWSON, ROBERT
21011	ALEXIS, SHIRENE
	BAIK, MIYOUNG
	BALL, JOHN
	ERK, RICHARD P JR
	FLORES, DAMIAN
	GREEN, THERESA A
	NETTLES, MELANIE
	POOL, THERESA
	VANVO, EM
21141	ABRAMOV, YUSHVA
	AMATO, A M
	ARATA, YOKU
	BEIFUSS, BILL
	BERG, M
	BORMANN, KEN
	CHAVARRIA, TOMMY
	CHIJIWA, T
	COFFEY, P
	COLIN, D H
	DAHLKE, STANLEY
	EMERALD COURT APARTMENTS
	FLETCHER, DAVID R
	GEHMAN, TOM
	GHAFFARIAN, MEHRDAD
	GUYETT, ERIC S
	HALE, JEFFREY
	HEBLER, PAUL E
	HUBER, L H
	KERKELA, TODD
	KERZEE, ROBERT
	KUMAR, PAUL
	KWAK, KELLY K
	LARSEN, RICHARD S
	MOORE, ALVIN B
	NAGASHIMA, K
	NEGORO, GEN
	OARAZAVI, JALIL S
	OCONNOR, DAVE

CANADA RD 1992 (Cont'd)

21141	ONAKA, MIKEL
	PAKJOU, AMIR
	PERKINS, STEVE
	RYERSON, N
	SANDERSON, TOM
	SERRANIA, DAVID
	SWANSON, SCOTT
	TEVIS, GREG C
21142	BULMAN, ALFRED
	CAVALLO, J G
	CONDEY, CARLOS
	FARIVAR, K
	GOWELL, S T
	KEARNEY, JOHN
	MAKALUAS, HUSIN
	MONROE, WILLIAM
	NADERI, KHALIL
	RICHARDSON, WALTER C
	SATO, S
	SATORIUS, LAURA
	SPRINGSTEEN, B R
	VANDERWENDE, J
	WHITE, FRANK
	YAO, M
21641	ABRAR, SYED
	ALTMAN, TAMMY
	ANDERSON, LARRY E
	ANDREWS, JACKIE
	BATISTE, FELTON
	CASTANEDA, M
	CHAVEZ, ISIDRO
	COBBS, BARRY
	FONTES, ROBERT
	FOSMIRE, CHARLES
	GADDIS, MARK E
	GRADY, MIKE
	GUELLO, JASON
	HARMON, TROY
	HASSETT, PAUL
	HUGHES, SEAN
	HUYNH, NIEN
	JOHNSON, BRIAN
	LEGARRETA, RUDY
	MALMGREN, KEVIN
	MCCREARY, RALPH V
	OKEEFE, ROBERT
	PIKULA, NANCY
	RASHIDI, FATEMEH
	ROST, M J
	SMITH, OWEN

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

CANADA RD 1992 (Cont'd)

21641 SPRING LAKES APARTMENTS
SUSICH, D
VARGAS, JOSE L
WEED, MARTIN
YOUNG, KELVIN

Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

CANADA RD 1985

CANADA RD 92630
EL TORO

20571	**NAKASE WHSL NURSERY**	**855-4388**	1
20683	BAKER V P	830-0595	2
20714	XXXX	00	
20741	XXXX	00	
20743	USTARIZ JOS L	837-0650	7
20745	XXXX	00	
20747	LARIOS ANGEL	830-4145	
20749	GUZMAN MIKE	770-5035	4
20795	XXXX	00	
20865	HESS DON	859-5731	4
	PARADIGM CONSTRUCTN	**859-5731**	4
20904	**SANTA ANA MTNS WTR**	**837-2195**	
20931	WALLACE DAN	859-2048	+5
20941	BROOKS MICHAEL	581-5398	2
21041	STUTSMAN ALLEN W	837-0820	
21473	XXXX	00	

★ 3 BUS 13 RES 1 NEW

Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

CANADA RD 1980

CANADA RD 92630 EL TORO

20571	NAKASE BROTHERS	768-5208	9
20714	XXXX	00	
20741	BAKER V P ET AL	830-0595	2
20743	USTARIZ JOS L	837-0650	7
20745	MCFADDEN ED	951-7294	+0
20747	LARIOS ANGEL	830-4145	
20749	GUZMAN MIKE	837-9358	
20795	FISHER E KENNEN	768-1892	+0
	NUTTER DENNIA A	581-6554	9
20865	ANDERSON RALSTON	837-0312	
20901	ANDERSON BEN G	586-9547	5
20904	SANTA ANA MT CO WTR	837-2195	3
20931	SALATA GEO	830-8615	2
20941	NUTTER DENNY	837-0709	
	RANCHO ALEGRE STBLS	768-9848	7
	ROGERS MARK	770-9873	+0
21041	STUTSMAN ALLEN W	837-0820	2
21473	WHISLER ALISA	830-8954	+0

* 4 BUS 14 RES 4 NEW

Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

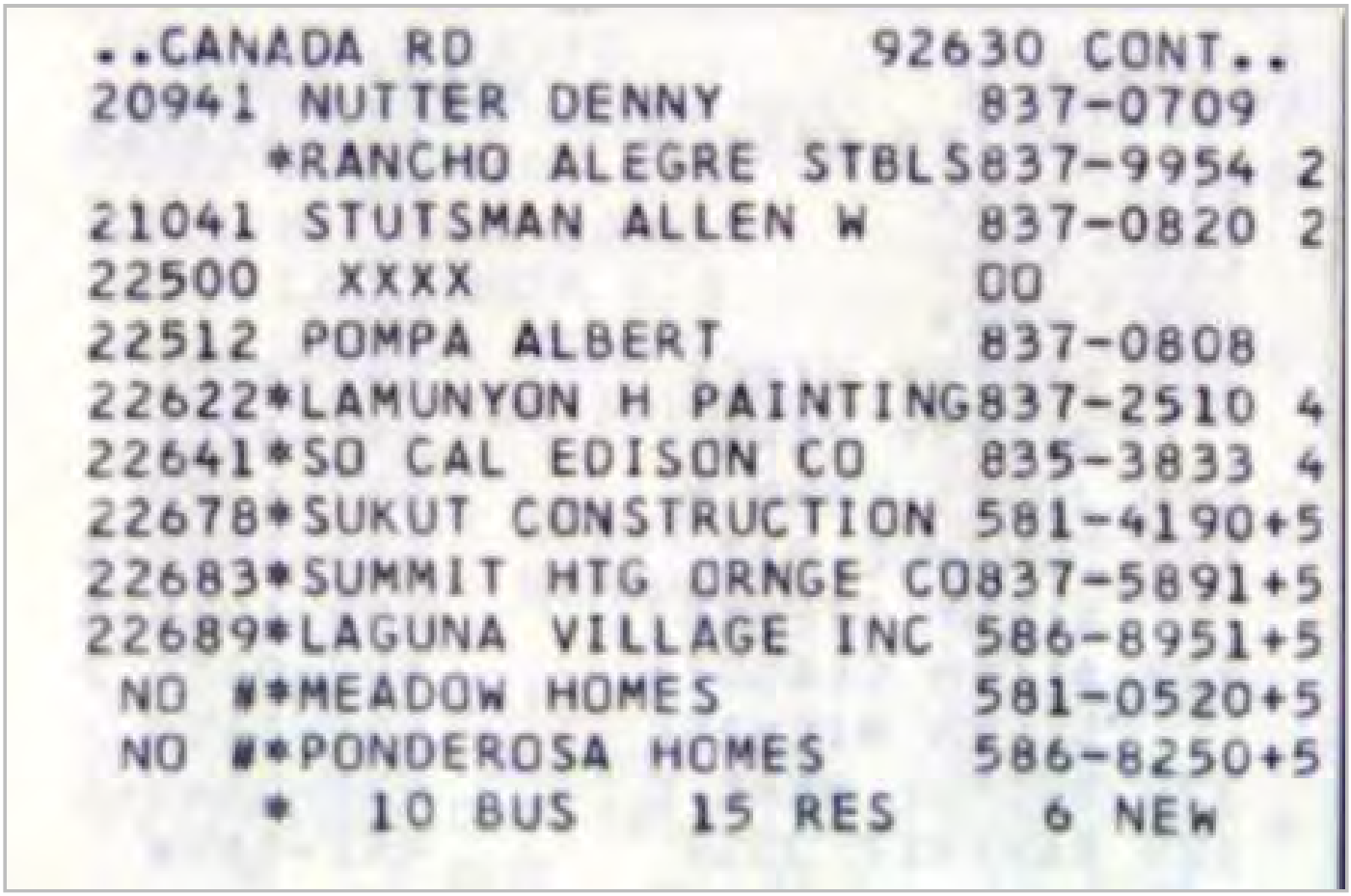
CANADA RD 1975

CANADA RD 92630 EL TORO

20571	MCFADDEN E T	837-0521	
20714	XXXX	OO	
20741*	BAKER V P ET AL	830-0595	2
20743	HEAVENER CHAS E	830-1301	4
20745	XXXX	OO	
20747	LARIOS ANGEL	830-4145	
20749	GUZMAN MIKE	837-9358	
20795	CHANGALA ANTHONY J	830-5580	3
	MERGELER RONALD	837-6490	
20865	ANDERSON RALSTON	837-0312	
20901	ANDERSON BEN G	586-9547	+5
20904*	STA ANA MNTN CO WTR	837-2195	3
20931	SALATA GEO	830-8615	2

Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

CANADA RD 1975



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..CANADA RD                    92630 CONT..
20941 NUTTER DENNY               837-0709
     *RANCHO ALEGRE STBLS        837-9954 2
21041 STUTSMAN ALLEN W           837-0820 2
22500  XXXX                      OO
22512 POMPA ALBERT               837-0808
22622*LAMUNYON H PAINTING        837-2510 4
22641*SO CAL EDISON CO           835-3833 4
22678*SUKUT CONSTRUCTION         581-4190+5
22683*SUMMIT HTG ORNGE CO        837-5891+5
22689*LAGUNA VILLAGE INC         586-8951+5
 NO  #*MEADOW HOMES              581-0520+5
 NO  #*PONDEROSA HOMES           586-8250+5
      *  10 BUS   15 RES    6 NEW
```

Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

CANADA RD 1972

CANADA RD 92630 EL TORO

20571	MCFADDEN E T	837-0521
20714	XXXX	OO
20741	*BAKER V P ET AL	830-0595+2
20743	RAMOS JOSE	837-9477
20745	SANCHEZ DOMINGO	837-5627
20747	LARIOS ANGEL	830-4145
20749	GUZMAN MIKE	837-9358
20795	CHANGALA ANTHONY J	830-5580+2
	MERGELER RONALD	837-6490
20865	ANDERSON RALSTON	837-0312
20904	*SANTA ANA MTN WATER	837-2195
20931	SALATA GEO	830-8615+2
20941	NUTTER DENNY	837-0709
	*RANCHO ALEGRE STBLS	837-9954+2
21041	STUTSMAN ALLEN W	837-0820+2
22500	NOUTARY JOE	837-0429
22512	POMPA ALBERT	837-0808
NO #	*ALVARADO BUILDERS	830-4790+2
NO #	*SWARTZ STANLEY C CO	830-4790+2

* 5 BUS 14 RES 7 NEW

Lake Forest
20865 Canada Road
Lake Forest, CA 92630

Inquiry Number: 5678687.3
June 10, 2019

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

06/10/19

Site Name:

Lake Forest
20865 Canada Road
Lake Forest, CA 92630
EDR Inquiry # 5678687.3

Client Name:

Hillmann Environmental Co.
1745 W Orangewood Avenue
Orange, CA 92868-0000
Contact: Shilpa Sunil

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The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # A9E3-49F7-8156

PO # C3-7524

Project C3-7524

UNMAPPED PROPERTY

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Sanborn® Library search results

Certification #: A9E3-49F7-8156

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- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

The Sanborn Library LLC Since 1866™

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Lake Forest
20865 Canada Road
Lake Forest, CA 92630

Inquiry Number: 5678687.4
June 10, 2019

EDR Historical Topo Map Report

with QuadMatch™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Historical Topo Map Report

06/10/19

Site Name:

Lake Forest
20865 Canada Road
Lake Forest, CA 92630
EDR Inquiry # 5678687.4

Client Name:

Hillmann Environmental Co.
1745 W Orangewood Avenue
Orange, CA 92868-0000
Contact: Shilpa Sunil

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Search Results:

P.O.# C3-7524

Project: C3-7524

Coordinates:

Latitude:	33.660536 33° 39' 38" North
Longitude:	-117.675122 -117° 40' 30" West
UTM Zone:	Zone 11 North
UTM X Meters:	437406.48
UTM Y Meters:	3724722.33
Elevation:	631.89' above sea level

Maps Provided:

2012	1942
1997	1935
1982	1902
1981	
1978	
1968	
1950	
1949	

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Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2012 Source Sheets

Lake Forest
2012
7.5-minute, 24000

1997 Source Sheets

El Toro
1997
7.5-minute, 24000
Aerial Photo Revised 1994

1982 Source Sheets

El Toro
1982
7.5-minute, 24000
Aerial Photo Revised 1980

1981 Source Sheets

El Toro
1981
7.5-minute, 24000
Aerial Photo Revised 1978

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1978 Source Sheets

El Toro
1978
7.5-minute, 24000
Aerial Photo Revised 1974

1968 Source Sheets

El Toro
1968
7.5-minute, 24000
Aerial Photo Revised 1967

1950 Source Sheets

El Toro
1950
7.5-minute, 24000
Aerial Photo Revised 1946

1949 Source Sheets

El Toro
1949
7.5-minute, 24000
Aerial Photo Revised 1946

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1942 Source Sheets

SANTIAGO PEAK
1942
15-minute, 50000

1935 Source Sheets

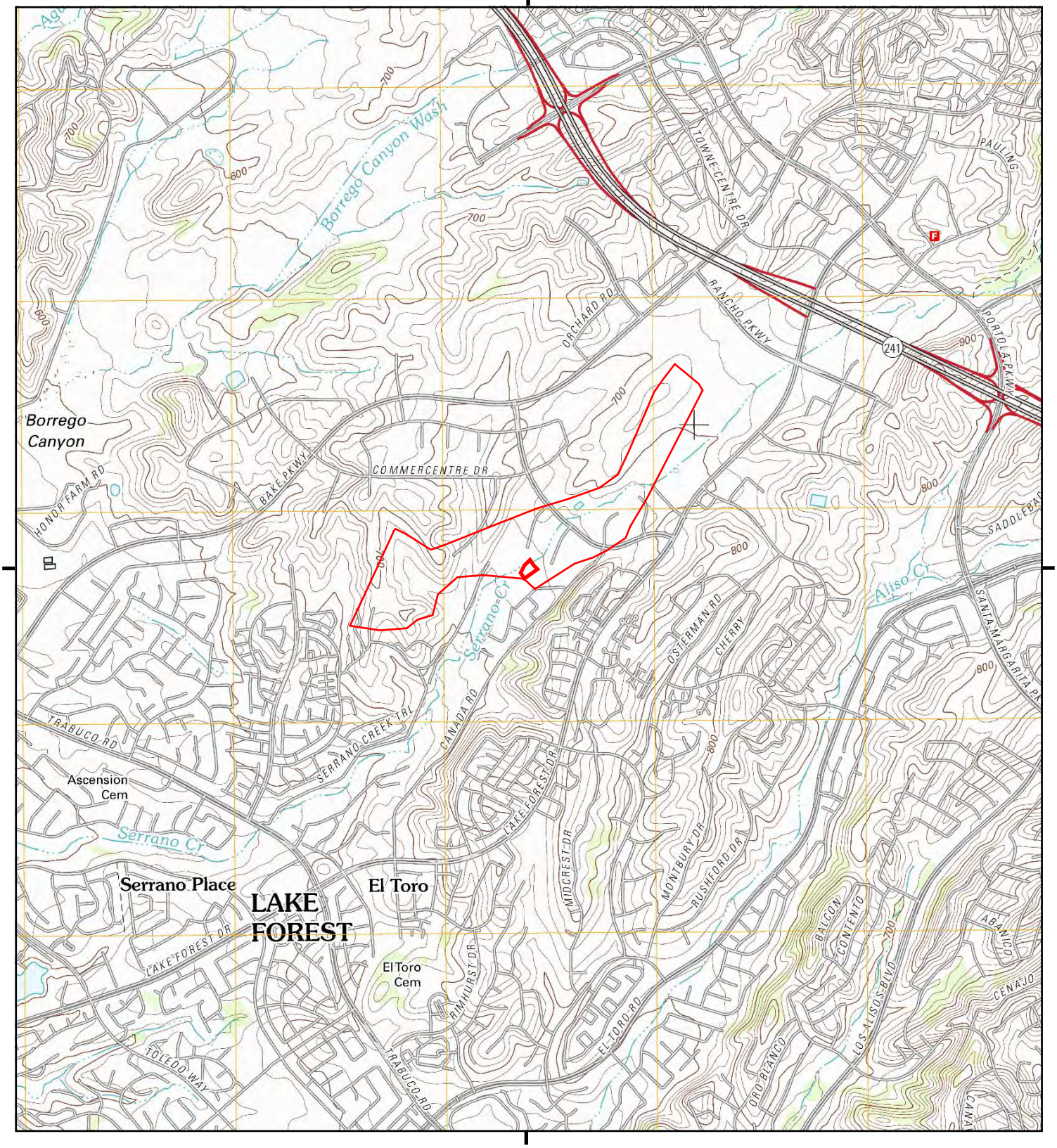
El Toro
1935
7.5-minute, 31680

1902 Source Sheets

Corona
1902
30-minute, 125000

Historical Topo Map

2012



This report includes information from the following map sheet(s).

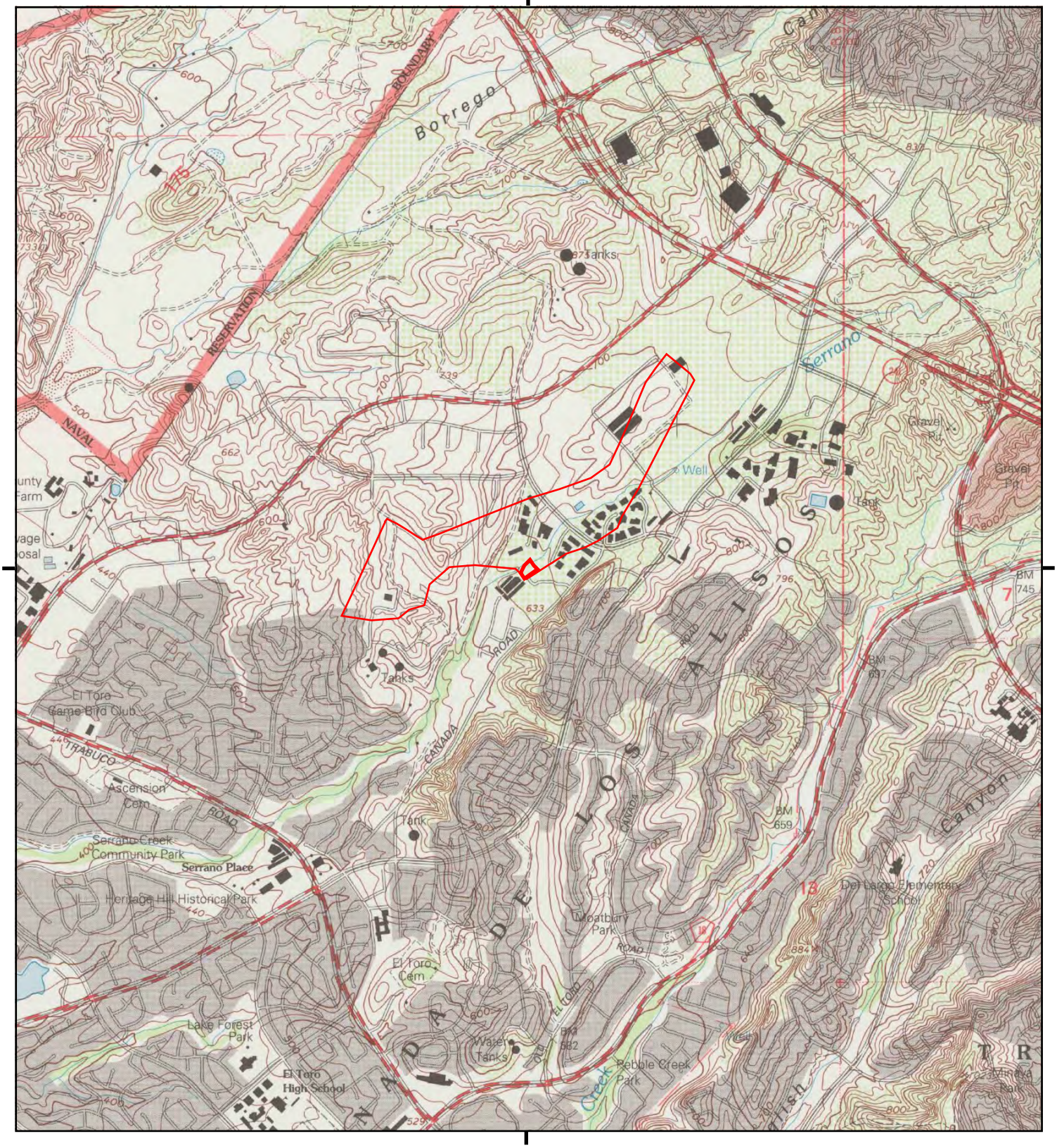
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Lake Forest, 2012, 7.5-minute

SITE NAME: Lake Forest
ADDRESS: 20865 Canada Road
Lake Forest, CA 92630
CLIENT: Hillmann Environmental Co.

N



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W E
SW S SE

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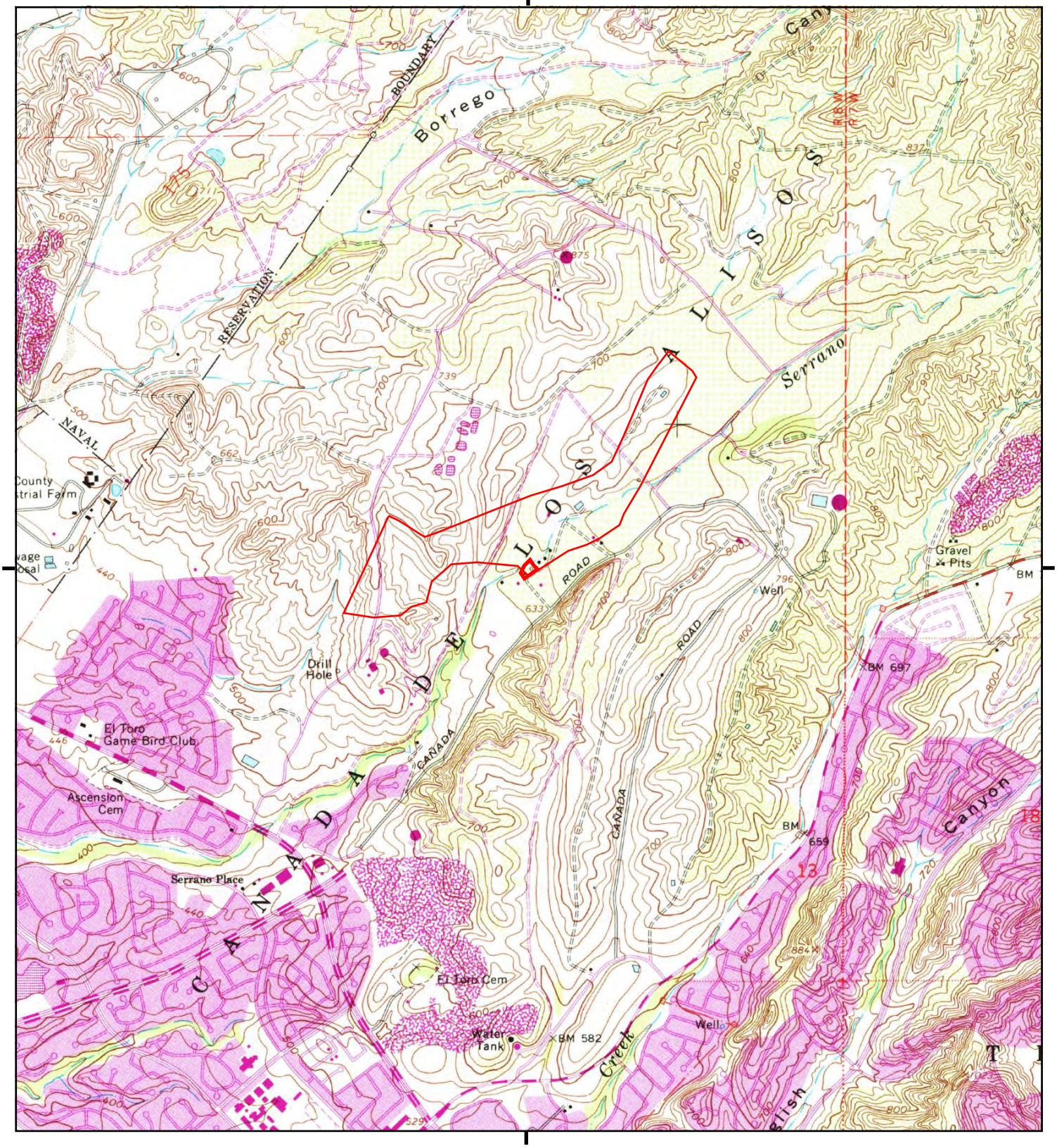
ADDRESS: 20865 Canada Road
Lake Forest, CA 92630
CLIENT: Hillmann Environmental Co.

N



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NW N NE
W E
SW S SE

TP, El Toro, 1982, 7.5-minute

SITE NAME: Lake Forest
ADDRESS: 20865 Canada Road
Lake Forest, CA 92630
CLIENT: Hillmann Environmental Co.

N

This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, El Toro, 1981, 7.5-minute

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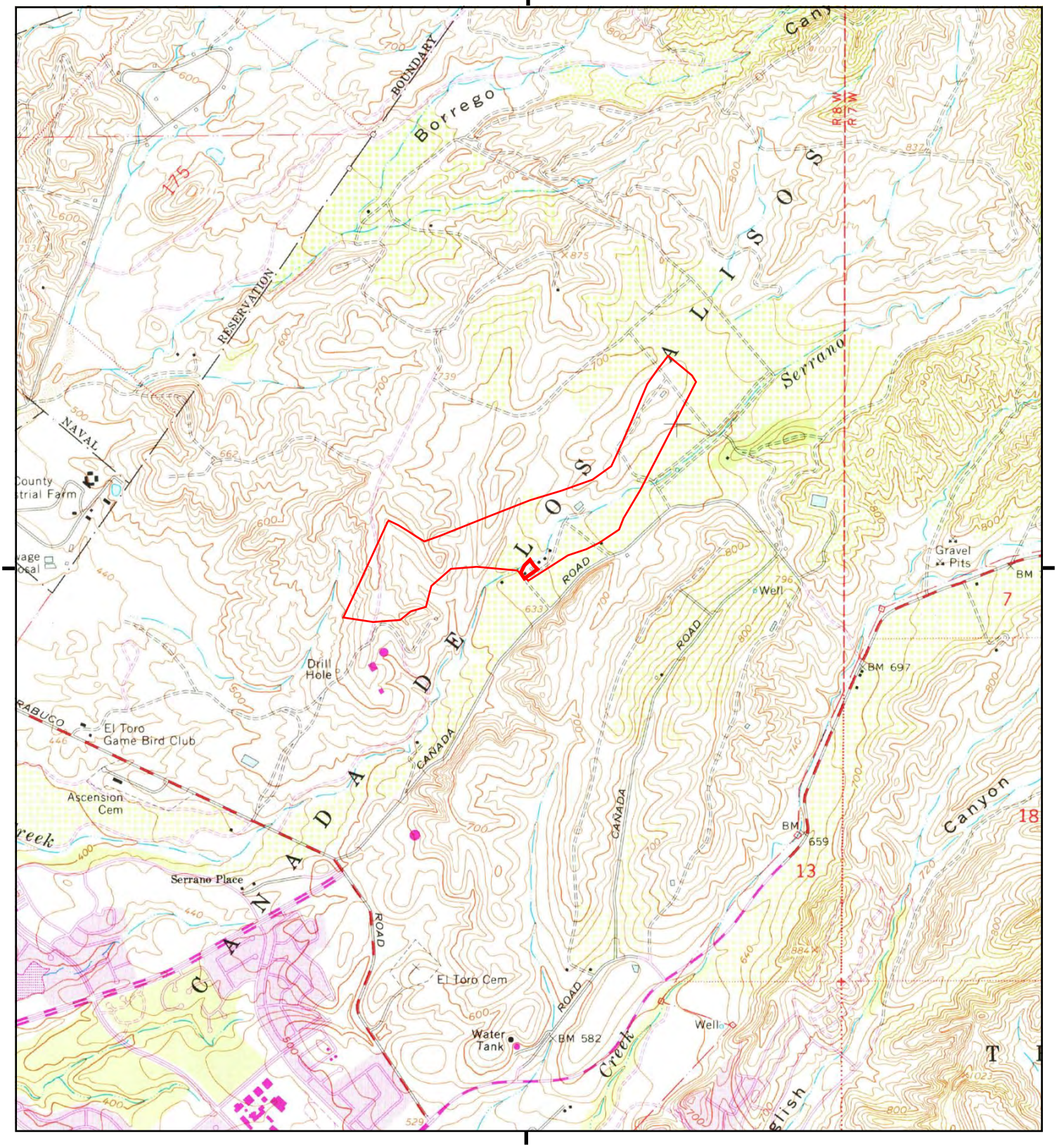
ADDRESS: 20865 Canada Road
Lake Forest, CA 92630
CLIENT: Hillmann Environmental Co.

N



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NW N NE
W E
SW S SE

TP, El Toro, 1978, 7.5-minute

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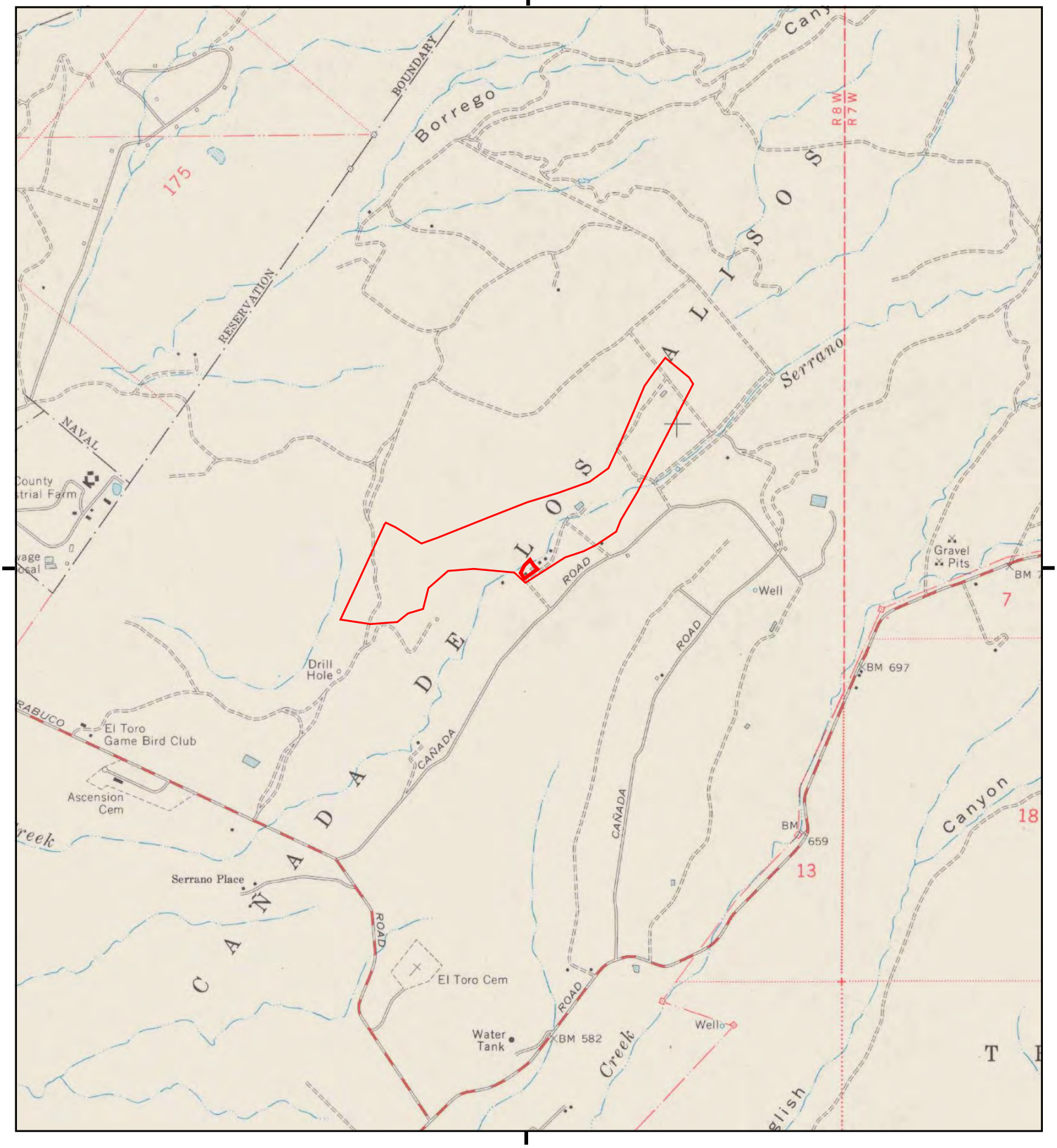
ADDRESS: 20865 Canada Road
Lake Forest, CA 92630
CLIENT: Hillmann Environmental Co.

N



This report includes information from the following map sheet(s).

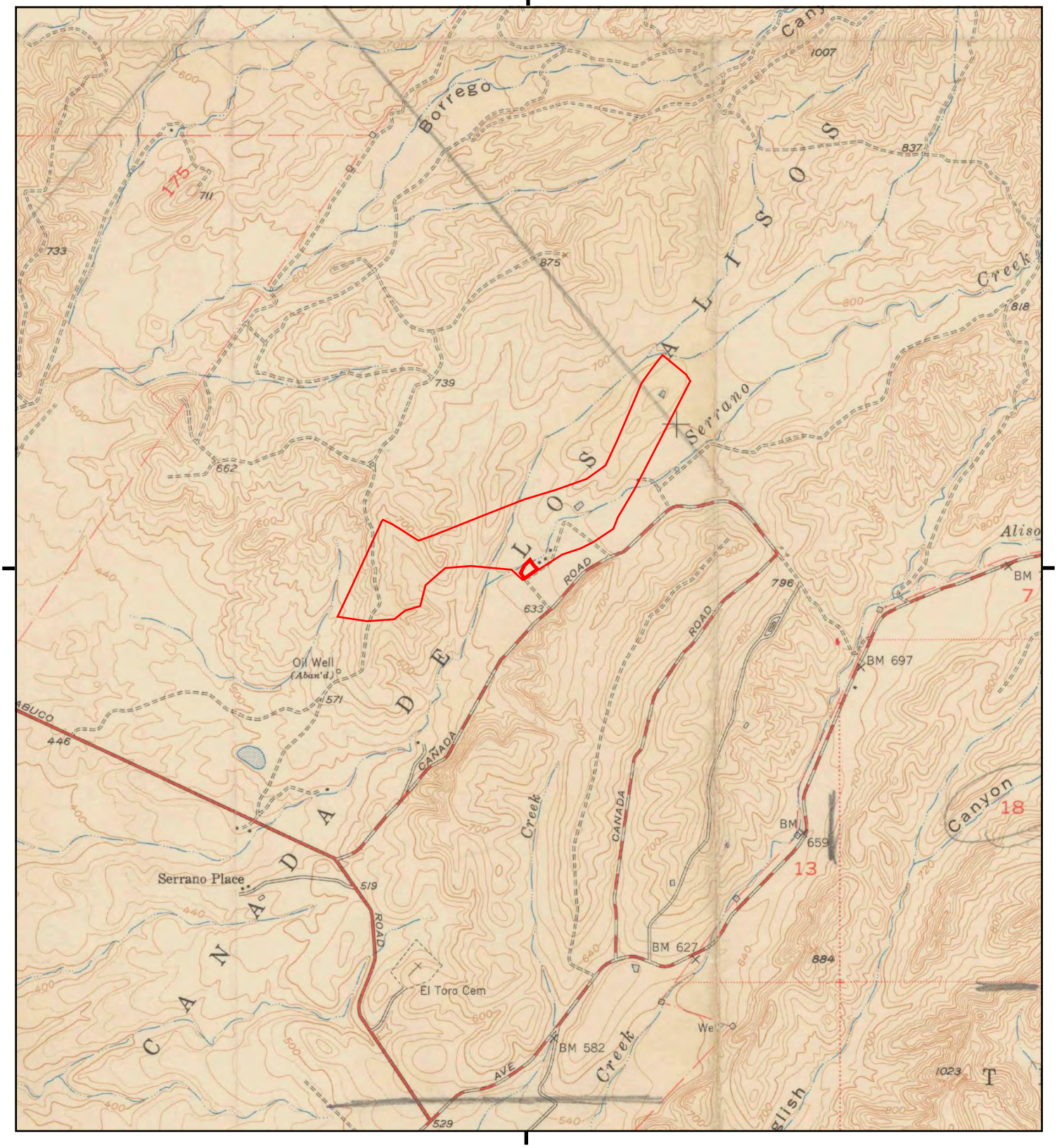
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, El Toro, 1968, 7.5-minute

SITE NAME: Lake Forest
ADDRESS: 20865 Canada Road
Lake Forest, CA 92630
CLIENT: Hillmann Environmental Co.

N



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NW N NE
W E
SW S SE

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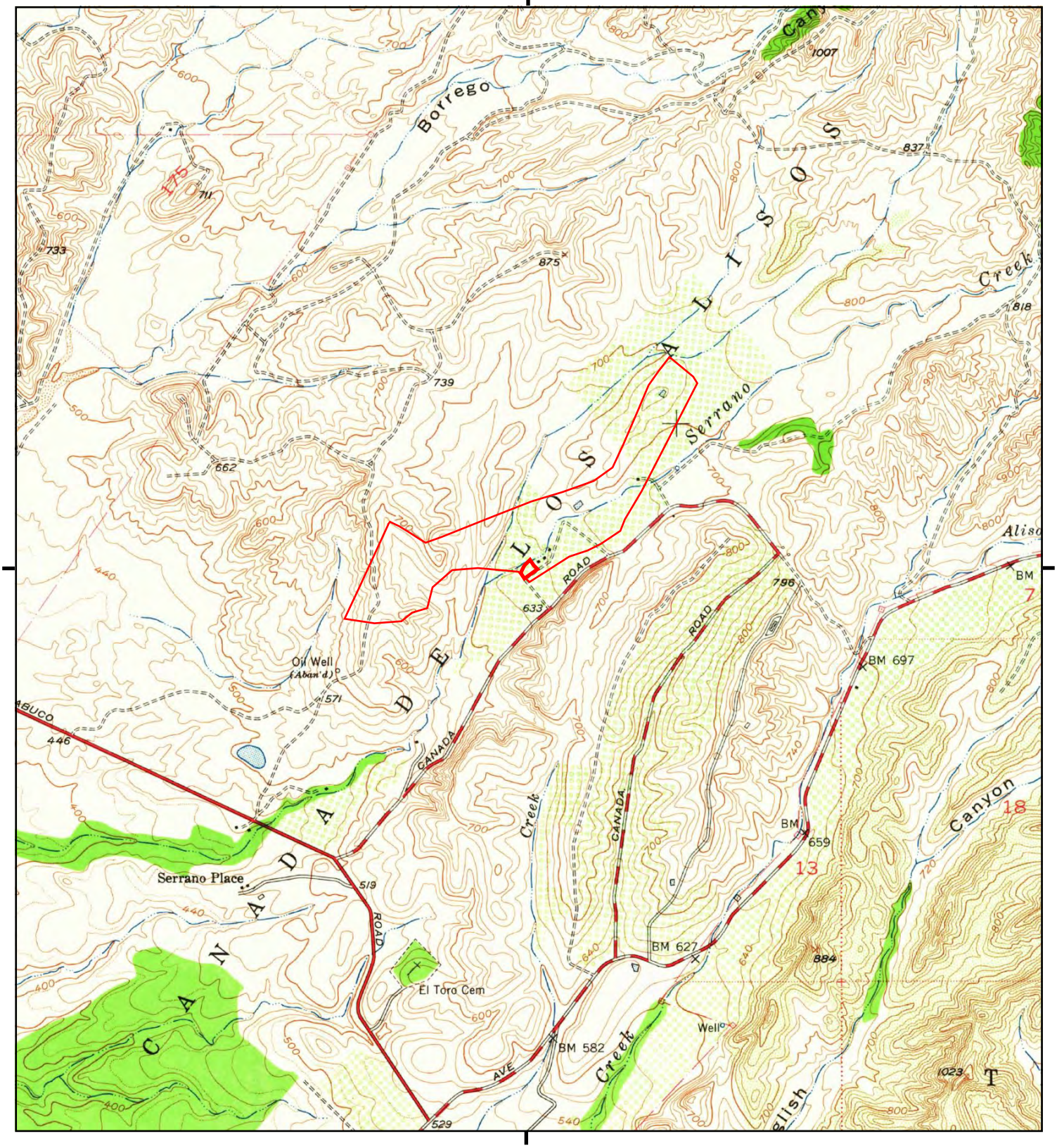
ADDRESS: 20865 Canada Road
Lake Forest, CA 92630
CLIENT: Hillmann Environmental Co.

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

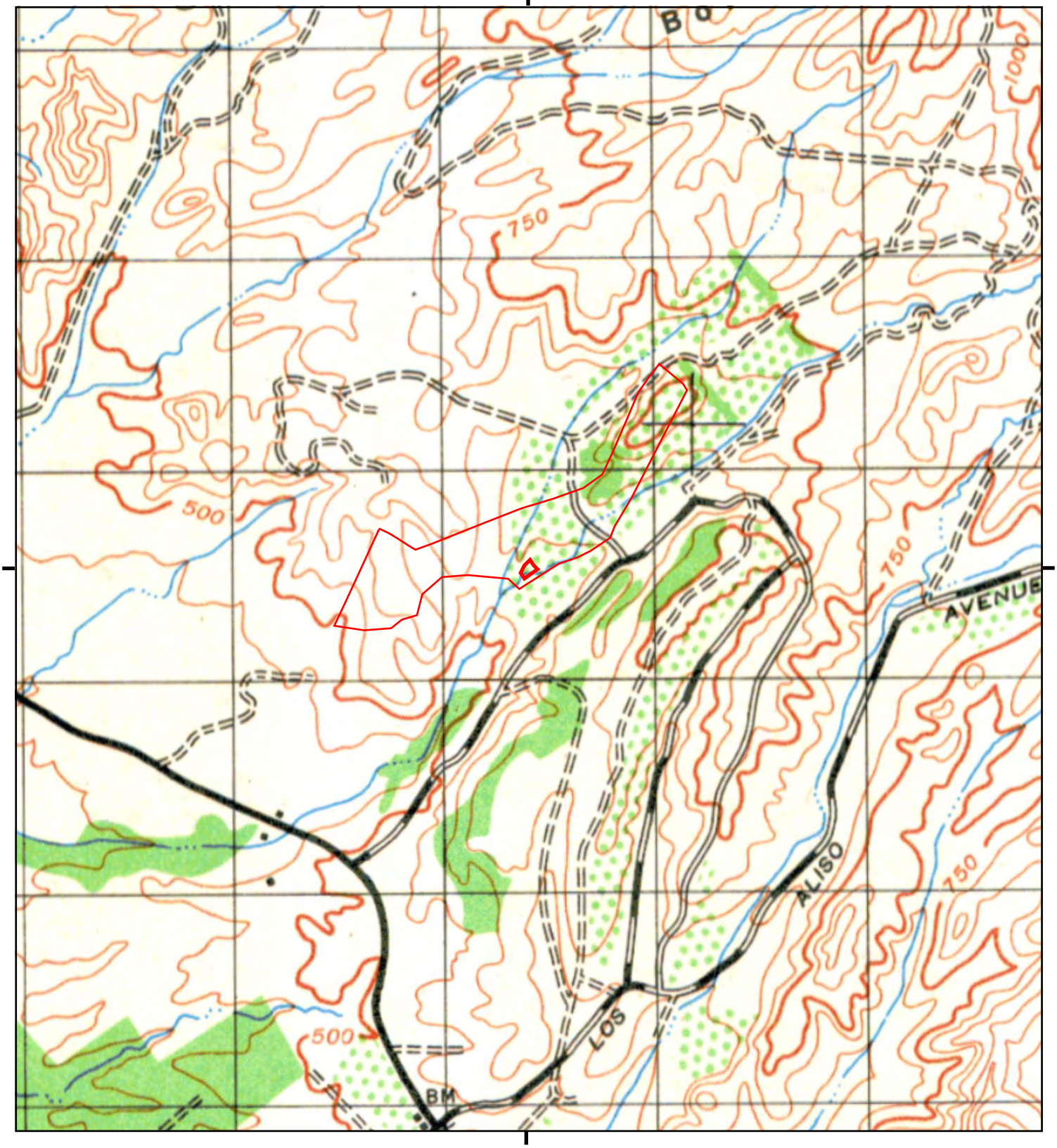
TP, El Toro, 1949, 7.5-minute

SITE NAME: Lake Forest
ADDRESS: 20865 Canada Road
Lake Forest, CA 92630
CLIENT: Hillmann Environmental Co.

N

Historical Topo Map

1942



This report includes information from the following map sheet(s).

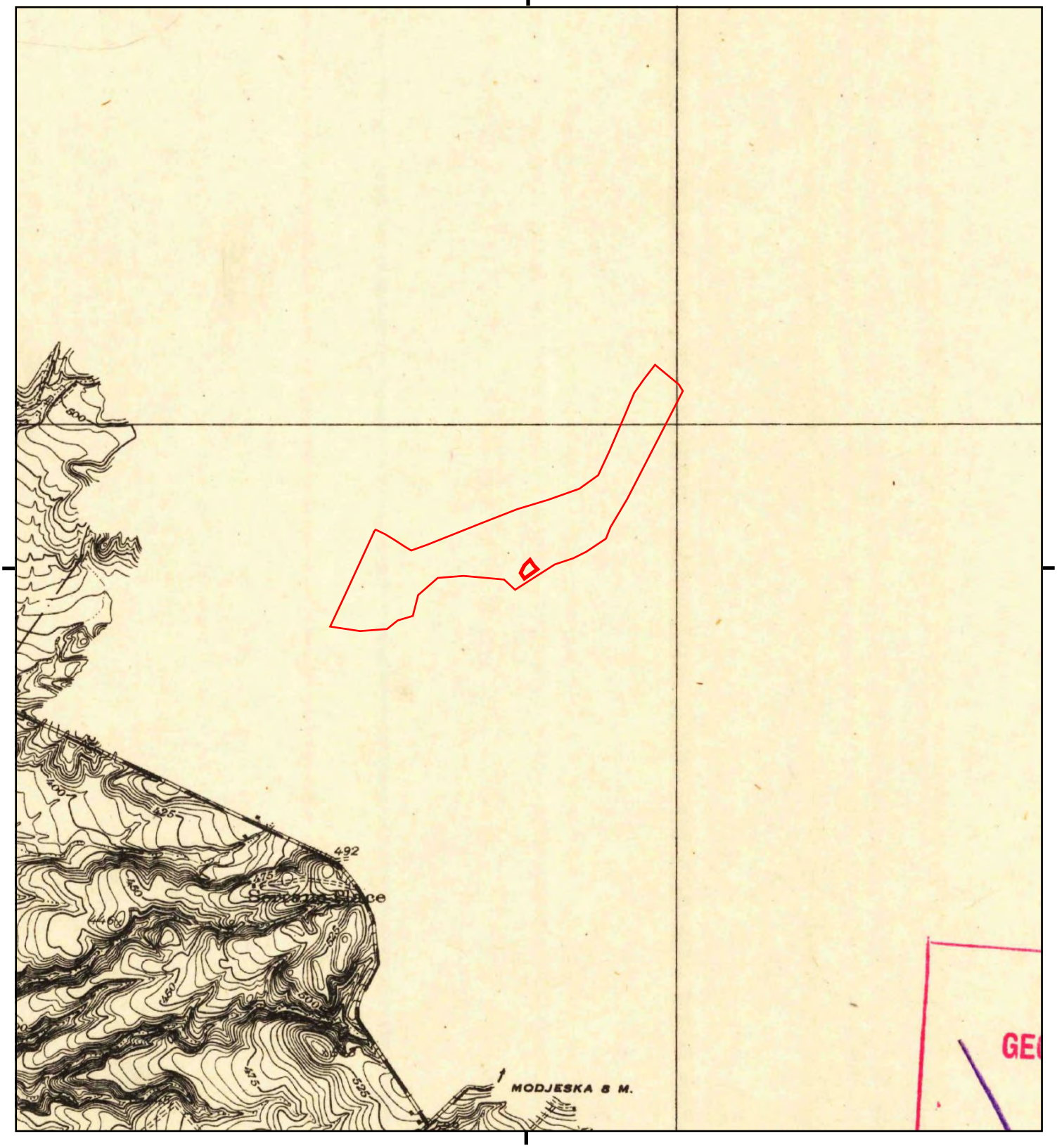
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, SANTIAGO PEAK, 1942, 15-minute

SITE NAME: Lake Forest
ADDRESS: 20865 Canada Road
Lake Forest, CA 92630
CLIENT: Hillmann Environmental Co.

N



This report includes information from the following map sheet(s).

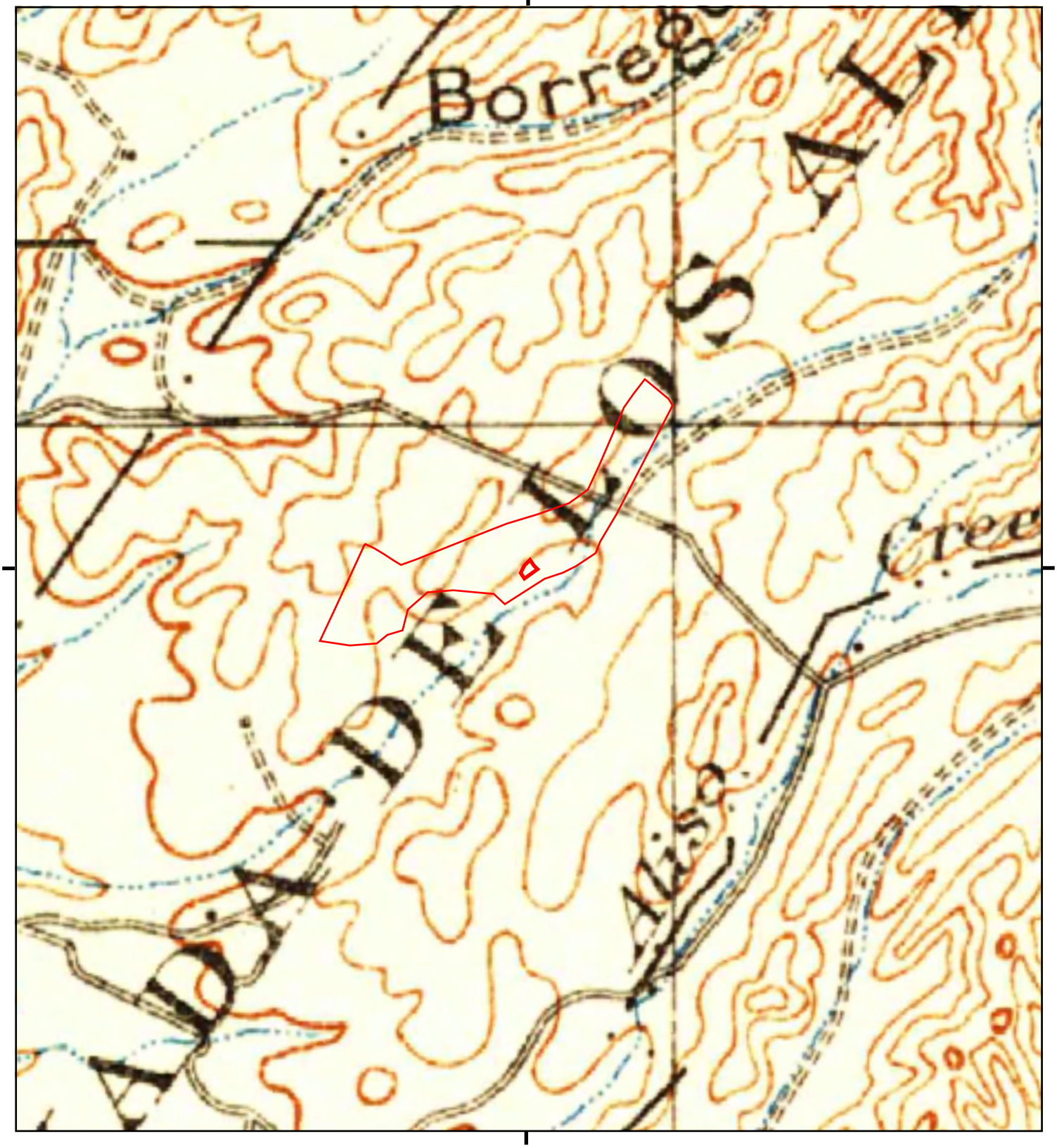
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, El Toro, 1935, 7.5-minute

SITE NAME: Lake Forest
ADDRESS: 20865 Canada Road
Lake Forest, CA 92630
CLIENT: Hillmann Environmental Co.

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Corona, 1902, 30-minute

SITE NAME: Lake Forest
ADDRESS: 20865 Canada Road
Lake Forest, CA 92630
CLIENT: Hillmann Environmental Co.

N

APPENDIX E

REGULATORY RECORDS DOCUMENTATION

20865-20795 Canada Road
20865-20795 Canada Road
Lake Forest, CA 92630

Inquiry Number: 06170828.2r
August 27, 2020

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

20865-20795 CANADA ROAD
LAKE FOREST, CA 92630

COORDINATES

Latitude (North):	33.6605380 - 33° 39' 37.93''
Longitude (West):	117.6751250 - 117° 40' 30.45''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	437404.8
UTM Y (Meters):	3724529.2
Elevation:	631 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	5636489 EL TORO, CA
Version Date:	2012

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20140603
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
20865-20795 CANADA ROAD
LAKE FOREST, CA 92630

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
A1	R COHEN LANDSCAPE &	20795 CANADA RD	FINDS, ECHO		TP
A2	R COHEN LANDSCAPE &	20795 CANADA RD	RCRA NonGen / NLR		TP
A3	R COHEN LANDSCAPE &	20795 CANADA RD	HWTS		TP
A4	CAMALI CORP	20845 CANADA RD	RCRA NonGen / NLR		TP
A5	RICHARD COHEN LANDSC	20795 CANADA ROAD	PEST LIC		TP
A6	RICHARD B COHEN	20795 CANADA RD	PEST LIC		TP
7	GLOBAL POWER TECHNOL	20692 PRISM PL	RCRA NonGen / NLR	Higher	82, 0.016, NNE
B8	XPO LOGISTICS FREIGH	20697 PRISM PL	CERS HAZ WASTE, CERS TANKS, HAZNET, CERS, HWTS	Lower	150, 0.028, NW
B9	XPO LOGISTICS FREIGH	20697 PRISM PL	UST, SWEEPS UST	Lower	150, 0.028, NW
B10	XPO LOGISTICS FREIGH	20697 PRISM PL	RCRA NonGen / NLR	Lower	150, 0.028, NW
B11	CON-WAP WESTERN EXPR	20697 PRISM	UST	Lower	150, 0.028, NW
C12	AFAB PRECISION MACHI	20742 LINEAR LN	CERS HAZ WASTE, HAZNET, CERS, HWTS	Higher	178, 0.034, East
C13	AFAB PERCISION MACHI	20742 LINER LANE	RCRA NonGen / NLR	Higher	178, 0.034, East
D14	SUNSTATE EQUIPMENT C	20772 CIVIC CENTER D	CERS HAZ WASTE, CERS TANKS, CERS	Higher	353, 0.067, West
C15	MCLAREN UNIBODY INC	20781 CANADA RD	RCRA NonGen / NLR	Higher	380, 0.072, East
C16	MCLAREN UNIBODY INC	20781 CANADA RD	CERS HAZ WASTE, EMI, CERS	Higher	380, 0.072, East
C17	MCLAREN UNIBODY INCO	20781 CANADA RD	RCRA NonGen / NLR	Higher	380, 0.072, East
E18	ELECSYS INC	20611 PRISM PLACE	CERS HAZ WASTE, HAZNET, CERS, HWTS	Higher	382, 0.072, North
E19	SEA COUNTRY TOWING &	20611 PRISM PL	RCRA NonGen / NLR	Higher	382, 0.072, North
F20	SHMAZE CUSTOM COATIN	20792 CANADA RD	CERS HAZ WASTE, EMI, CERS	Higher	446, 0.084, ESE
F21	SHAMAZE CUSTOM COATI	20792 CANADA RD	RCRA NonGen / NLR	Higher	446, 0.084, ESE
F22	SHMAZE INDUSTRIES IN	20792 CANADA RD	RCRA-SQG	Higher	446, 0.084, ESE
23	GREENWASTE COMPOSTIN	20712 INDIAN OCEAN D	WMUDS/SWAT	Higher	465, 0.088, WNW
D24	SUNSTATE EQUIPMENT C	20772 INDIAN OCEAN D	AST	Higher	489, 0.093, WNW
D25		20772 INDIAN OCEAN D	AST	Higher	489, 0.093, WNW
D26	SUNSTATE EQUIPMENT C	20772 INDIAN OCEAN D	RCRA NonGen / NLR	Higher	489, 0.093, WNW
G27	IMEX VISION	20761 CANADA RD	RCRA NonGen / NLR	Higher	514, 0.097, East
G28	V P BAKER RANCH	20745 CANADA RD	SWEEPS UST, CA FID UST	Higher	527, 0.100, East
H29	BLAIR'S TOWING INC	26100 DIMENSION DR	RCRA NonGen / NLR	Higher	540, 0.102, North
H30	CALIBER COLLISION CE	26100 DIMENSION DR	RCRA NonGen / NLR	Higher	540, 0.102, North
H31	CALIBER COLLISION CE	26100 DIMENSION DR	CERS HAZ WASTE, HAZNET, HWTS	Higher	540, 0.102, North
I32	FOREVER GREEN ART IN	20611 CANADA RD	RCRA-SQG, FINDS, ECHO, HAZNET, HWTS	Higher	581, 0.110, ENE
I33	LOS ALISOS RANCH	20571 CANADA RD	HIST UST	Higher	630, 0.119, ENE
I34	POWER PROF CLEANERS	20562 CANADA RD	RCRA-SQG, FINDS	Higher	668, 0.127, ENE
I35	SALEEN ALLEN R R R S	20622 CANADA RD	RCRA-SQG, FINDS, ECHO	Higher	681, 0.129, ENE
J36	ARB INC	20602 CIVIC CENTER	UST	Higher	713, 0.135, NNW
J37	ARB INC	20602 CIVIC CENTER D	CERS HAZ WASTE, CERS TANKS, CERS	Higher	713, 0.135, NNW
J38	ARB INC	20632 INDIAN OCEAN D	RCRA NonGen / NLR	Higher	732, 0.139, NW
I39	BOKKES IND MERCEDES	20591 CANADA RD	RCRA-SQG, FINDS, ECHO	Higher	733, 0.139, NE

MAPPED SITES SUMMARY

Target Property Address:
20865-20795 CANADA ROAD
LAKE FOREST, CA 92630

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
I40	COX COMMERCIAL FLEET	20591 CANADA	CERS HAZ WASTE, CERS	Higher	733, 0.139, NE
I41	COX COMMERCIAL FLEET	20591 CANADA RD	RCRA NonGen / NLR	Higher	733, 0.139, NE
K42	BROTHER INTERNATIONA	26250 ENTERPRISE CT	RCRA NonGen / NLR	Higher	823, 0.156, North
I43	HERGESHEIMER MOTORSP	20612 CANADA RD	RCRA NonGen / NLR	Higher	831, 0.157, ENE
I44	HERGESHEIMER MOTORSP	20612 CANADA RD	CERS HAZ WASTE, HAZNET, CERS, HWTS	Higher	831, 0.157, ENE
J45	ARB INC	20602 INDIAN OCEAN	RCRA-SQG, UST, AST, FINDS, ECHO	Higher	850, 0.161, NNW
K46	HALABY RESTORATION &	26230 ENTERPRISE CT	RCRA NonGen / NLR	Higher	917, 0.174, NNE
L47	FABRICANTE AUTO BODY	26341 DIMENSION DR	CERS HAZ WASTE, EMI, HAZNET, CERS, HWTS	Higher	932, 0.177, ENE
L48	FABRICANTE AUTO BODY	26341 DIMENSION DR	RCRA NonGen / NLR	Higher	932, 0.177, ENE
M49	ARB INC	26032 COMMERCENTRE D	UST	Higher	949, 0.180, North
L50	TRABUCO CANYON WATER	26342 DIMENSIONS DRI	RCRA NonGen / NLR	Higher	966, 0.183, ENE
L51	AMERICAN FLYER RACIN	26361 DIMENSION DR	RCRA NonGen / NLR	Higher	1028, 0.195, ENE
N52	WESCON DESIGNED SOLU	20551 PASCAL WAY	CERS HAZ WASTE, HAZNET, CERS, HWTS	Higher	1034, 0.196, NE
N53	WESCON DESIGNED SOLU	20551 PASCAL WAY	RCRA NonGen / NLR	Higher	1034, 0.196, NE
54	ARB INC	20632 CIVIC CENTER D	CERS HAZ WASTE, CERS TANKS, CERS	Higher	1070, 0.203, NNW
55	WHISPERING HILLS	26246 FERN GLEN	RCRA NonGen / NLR	Higher	1076, 0.204, SE
O56	PANASONIC AVIONICS C	26211 ENTERPRISE WAY	CERS HAZ WASTE, CERS TANKS, CERS	Higher	1163, 0.220, NNE
O57	PANASONIC AVIONICS C	26211 ENTERPRISE WAY	RCRA NonGen / NLR	Higher	1163, 0.220, NNE
M58	ASSOCIATED ELECTRICS	26021 COMMERCENTRE D	RCRA NonGen / NLR	Higher	1200, 0.227, NNW
N59	EURO AMERICAN COLLIS	20591 PASCAL WAY	CERS HAZ WASTE, HAZNET, CERS, HWTS	Higher	1215, 0.230, ENE
P60	JERRYS CLASSIC REPAI	22602 PASCAL WAY UNI	CERS HAZ WASTE, CERS	Higher	1239, 0.235, ENE
P61	HERNANDEZ AUTO REPAI	20622 PASCAL WAY STE	RCRA NonGen / NLR	Higher	1281, 0.243, ENE
P62	L & M AUTOMOTIVE	20622 PASCAL WAY STE	RCRA NonGen / NLR	Higher	1281, 0.243, ENE
P63	AUTO MECHANIC SERVIC	20622 PASCAL WAY STE	CERS HAZ WASTE, CERS	Higher	1281, 0.243, ENE
P64	HERNANDEZ AUTO REPAI	20622 PASCAL WAY, UN	CERS HAZ WASTE, CERS	Higher	1281, 0.243, ENE
O65	PANASONIC AVIONICS C	26200 ENTERPRISE	RCRA NonGen / NLR	Higher	1285, 0.243, NNE
O66	PANASONIC AVIONICS C	26200 ENTERPRISE WAY	RCRA-SQG	Higher	1285, 0.243, NNE
O67	PANASONIC	26200 ENTERPRISE WAY	CERS HAZ WASTE, NPDES, CERS	Higher	1285, 0.243, NNE
68	CHEVRON	20731 LAKE FOREST	LUST, SWEEPS UST, Cortese, HIST CORTESE, CERS	Higher	1514, 0.287, East
Q69	BEACON BAY CAR WASH	20602 LAKE FOREST	LUST, Cortese, CERS	Higher	1987, 0.376, ENE
Q70	ARCO	20572 LAKE FOREST	LUST, Cortese, CERS	Higher	2167, 0.410, ENE
Q71	ARCO AM/PM	20572 LAKE FOREST DR	LUST, SWEEPS UST	Higher	2167, 0.410, ENE
72	LOS ALISOS WATER DIS	21802 WISTERIA	LUST, HIST CORTESE, CERS	Lower	2634, 0.499, WSW

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 9 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
R COHEN LANDSCAPE & 20795 CANADA RD LAKE FOREST, CA 92630	FINDS Registry ID:: 110070456792 ECHO Registry ID: 110070456792	N/A
R COHEN LANDSCAPE & 20795 CANADA RD LAKE FOREST, CA 92630	RCRA NonGen / NLR EPA ID:: CAL000285744	CAL000285744
R COHEN LANDSCAPE & 20795 CANADA RD LAKE FOREST, CA 92630	HWTS	N/A
CAMALI CORP 20845 CANADA RD LAKE FOREST, CA 92630	RCRA NonGen / NLR EPA ID:: CAL000399808	CAL000399808
RICHARD COHEN LANDSC 20795 CANADA ROAD LAKE FOREST, CA 92630	PEST LIC	N/A
RICHARD B COHEN 20795 CANADA RD LAKE FOREST, CA 92630	PEST LIC	N/A

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL---------- National Priority List

EXECUTIVE SUMMARY

Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL ---------- National Priority List Deletions

Federal CERCLIS list

FEDERAL FACILITY ---------- Federal Facility Site Information listing
SEMS ---------- Superfund Enterprise Management System

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE ---------- Superfund Enterprise Management System Archive

Federal RCRA CORRACTS facilities list

CORRACTS ---------- Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-LQG ---------- RCRA - Large Quantity Generators
RCRA-VSQG ---------- RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

Federal institutional controls / engineering controls registries

LUCIS ---------- Land Use Control Information System
US ENG CONTROLS ---------- Engineering Controls Sites List
US INST CONTROLS ---------- Institutional Controls Sites List

Federal ERNS list

ERNS ---------- Emergency Response Notification System

State- and tribal - equivalent NPL

RESPONSE ---------- State Response Sites

State- and tribal - equivalent CERCLIS

ENVIROSTOR ---------- EnviroStor Database

State and tribal landfill and/or solid waste disposal site lists

SWF/LF ---------- Solid Waste Information System

State and tribal leaking storage tank lists

INDIAN LUST ---------- Leaking Underground Storage Tanks on Indian Land

CPS-SLIC ---------- Statewide SLIC Cases

State and tribal registered storage tank lists

FEMA UST ---------- Underground Storage Tank Listing
INDIAN UST ---------- Underground Storage Tanks on Indian Land

State and tribal voluntary cleanup sites

VCP ---------- Voluntary Cleanup Program Properties
INDIAN VCP ---------- Voluntary Cleanup Priority Listing

State and tribal Brownfields sites

BROWNFIELDS ---------- Considered Brownfieds Sites Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ---------- A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

SWRCY ---------- Recycler Database
HAULERS ---------- Registered Waste Tire Haulers Listing
INDIAN ODI ---------- Report on the Status of Open Dumps on Indian Lands
DEBRIS REGION 9 ---------- Torres Martinez Reservation Illegal Dump Site Locations
ODI ---------- Open Dump Inventory
IHS OPEN DUMPS ---------- Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL ---------- Delisted National Clandestine Laboratory Register
HIST Cal-Sites ---------- Historical Calsites Database
SCH ---------- School Property Evaluation Program
CDL ---------- Clandestine Drug Labs
Toxic Pits ---------- Toxic Pits Cleanup Act Sites
US CDL ---------- National Clandestine Laboratory Register
PFAS ---------- PFAS Contamination Site Location Listing

Local Land Records

LIENS ---------- Environmental Liens Listing
LIENS 2 ---------- CERCLA Lien Information
DEED ---------- Deed Restriction Listing

Records of Emergency Release Reports

HMIRS ---------- Hazardous Materials Information Reporting System
CHMIRS ---------- California Hazardous Material Incident Report System
LDS ---------- Land Disposal Sites Listing
MCS ---------- Military Cleanup Sites Listing
Orange Co. Industrial Site ---------- List of Industrial Site Cleanups

SPILLS 90	SPILLS 90 data from FirstSearch

Other Ascertainable Records

FUDS	Formerly Used Defense Sites
DOD	Department of Defense Sites
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR	Financial Assurance Information
EPA WATCH LIST	EPA WATCH LIST
2020 COR ACTION	2020 Corrective Action Program List
TSCA	Toxic Substances Control Act
TRIS	Toxic Chemical Release Inventory System
SSTS	Section 7 Tracking Systems
ROD	Records Of Decision
RMP	Risk Management Plans
RAATS	RCRA Administrative Action Tracking System
PRP	Potentially Responsible Parties
PADS	PCB Activity Database System
ICIS	Integrated Compliance Information System
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS	Material Licensing Tracking System
COAL ASH DOE	Steam-Electric Plant Operation Data
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER	PCB Transformer Registration Database
RADINFO	Radiation Information Database
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS	Incident and Accident Data
CONSENT	Superfund (CERCLA) Consent Decrees
INDIAN RESERV	Indian Reservations
FUSRAP	Formerly Utilized Sites Remedial Action Program
UMTRA	Uranium Mill Tailings Sites
LEAD SMELTERS	Lead Smelter Sites
US AIRS	Aerometric Information Retrieval System Facility Subsystem
US MINES	Mines Master Index File
ABANDONED MINES	Abandoned Mines
UXO	Unexploded Ordnance Sites
DOCKET HWC	Hazardous Waste Compliance Docket Listing
FUELS PROGRAM	EPA Fuels Program Registered Listing
CA BOND EXP. PLAN	Bond Expenditure Plan
CUPA Listings	Hazardous Material Business Plan
CUPA Listings	Hazardous Material Business Plan
DRYCLEANERS	Cleaner Facilities
EMI	Emissions Inventory Data
ENF	Enforcement Action Listing
Financial Assurance	Financial Assurance Information Listing
HAZNET	Facility and Manifest Data
ICE	ICE
HWP	EnviroStor Permitted Facilities Listing
HWT	Registered Hazardous Waste Transporter Database
MINES	Mines Site Location Listing
MWMP	Medical Waste Management Program Listing
NPDES	NPDES Permits Listing
PROC	Certified Processors Database
Notify 65	Proposition 65 Records

UIC ---------- UIC Listing
UIC GEO ---------- UIC GEO (GEOTRACKER)
WASTEWATER PITS ---------- Oil Wastewater Pits Listing
WDS ---------- Waste Discharge System
WIP ---------- Well Investigation Program Case List
MILITARY PRIV SITES ---------- MILITARY PRIV SITES (GEOTRACKER)
PROJECT ---------- PROJECT (GEOTRACKER)
WDR ---------- Waste Discharge Requirements Listing
CIWQS ---------- California Integrated Water Quality System
CERS ---------- CERS
NON-CASE INFO ---------- NON-CASE INFO (GEOTRACKER)
OTHER OIL GAS ---------- OTHER OIL & GAS (GEOTRACKER)
PROD WATER PONDS ---------- PROD WATER PONDS (GEOTRACKER)
SAMPLING POINT ---------- SAMPLING POINT (GEOTRACKER)
WELL STIM PROJ ---------- Well Stimulation Project (GEOTRACKER)
MINES MRDS ---------- Mineral Resources Data System

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP ---------- EDR Proprietary Manufactured Gas Plants
EDR Hist Auto ---------- EDR Exclusive Historical Auto Stations
EDR Hist Cleaner ---------- EDR Exclusive Historical Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF ---------- Recovered Government Archive Solid Waste Facilities List
RGA LUST ---------- Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Federal RCRA generators list

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting

the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 03/23/2020 has revealed that there are 7 RCRA-SQG sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
SHMAZE INDUSTRIES IN EPA ID:: CAR000204040	20792 CANADA RD	ESE 0 - 1/8 (0.084 mi.)	F22	202
FOREVER GREEN ART IN EPA ID:: CAR000020172	***20611 CANADA RD***	***ENE 0 - 1/8 (0.110 mi.)***	***I32***	***225***
POWER PROF CLEANERS EPA ID:: CAD983617648	***20562 CANADA RD***	***ENE 1/8 - 1/4 (0.127 mi.)***	***I34***	***233***
SALEEN ALLEN R R R S EPA ID:: CAR000090308	***20622 CANADA RD***	***ENE 1/8 - 1/4 (0.129 mi.)***	***I35***	***234***
BOKKES IND MERCEDES EPA ID:: CAD983583121	***20591 CANADA RD***	***NE 1/8 - 1/4 (0.139 mi.)***	***I39***	***252***
ARB INC EPA ID:: CAR000076760	***20602 INDIAN OCEAN***	***NNW 1/8 - 1/4 (0.161 mi.)***	***J45***	***273***
PANASONIC AVIONICS C EPA ID:: CAR000292755	26200 ENTERPRISE WAY	NNE 1/8 - 1/4 (0.243 mi.)	O66	398

State and tribal leaking storage tank lists

LUST: Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

A review of the LUST list, as provided by EDR, has revealed that there are 5 LUST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CHEVRON	***20731 LAKE FOREST***	***E 1/4 - 1/2 (0.287 mi.)***	***68***	***454***
Database: LUST REG 8, Date of Government Version: 02/14/2005 Database: LUST, Date of Government Version: 06/08/2020 Database: ORANGE CO. LUST, Date of Government Version: 05/01/2020 Status: Completed - Case Closed Facility Id: 97UT037 Facility Status: Case Closed Global Id: T0605902102 Global ID: T0605902102				
BEACON BAY CAR WASH	***20602 LAKE FOREST***	***ENE 1/4 - 1/2 (0.376 mi.)***	***Q69***	***459***
Database: LUST REG 8, Date of Government Version: 02/14/2005 Database: LUST, Date of Government Version: 06/08/2020 Database: ORANGE CO. LUST, Date of Government Version: 05/01/2020 Status: Completed - Case Closed Facility Id: 02UT003 Facility Status: Case Closed				

Global Id: T0605999998
Global ID: T0605999998

ARCO ***20572 LAKE FOREST*** ***ENE 1/4 - 1/2 (0.410 mi.)*** ***Q70*** ***462***
Database: LUST, Date of Government Version: 06/08/2020
Database: ORANGE CO. LUST, Date of Government Version: 05/01/2020
Status: Completed - Case Closed
Facility Id: 02UT008
Global Id: T0605947685

ARCO AM/PM ***20572 LAKE FOREST DR*** ***ENE 1/4 - 1/2 (0.410 mi.)*** ***Q71*** ***465***
Database: LUST REG 8, Date of Government Version: 02/14/2005
Facility Status: Case Closed
Global ID: T0605947685

Lower Elevation	Address	Direction / Distance	Map ID	Page

LOS ALISOS WATER DIS ***21802 WISTERIA*** ***WSW 1/4 - 1/2 (0.499 mi.)*** ***72*** ***468***
Database: LUST, Date of Government Version: 06/08/2020
Database: ORANGE CO. LUST, Date of Government Version: 05/01/2020
Status: Completed - Case Closed
Facility Id: 89UT157
Global Id: T0605901013

State and tribal registered storage tank lists

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database.

A review of the UST list, as provided by EDR, has revealed that there are 5 UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
ARB INC	20602 CIVIC CENTER	NNW 1/8 - 1/4 (0.135 mi.)	J36	236
Database: UST, Date of Government Version: 06/08/2020				
Database: ORANGE CO. UST, Date of Government Version: 05/01/2020				
Facility Id: FA0024287				
Facility Id: FA0024287				
ARB INC	***20602 INDIAN OCEAN***	***NNW 1/8 - 1/4 (0.161 mi.)***	***J45***	***273***
Database: UST, Date of Government Version: 06/08/2020				
ARB INC	26032 COMMERCENTRE D	N 1/8 - 1/4 (0.180 mi.)	M49	291
Database: UST, Date of Government Version: 06/08/2020				
Facility Id: 18624				

Lower Elevation	Address	Direction / Distance	Map ID	Page
XPO LOGISTICS FREIGH	***20697 PRISM PL***	***NW 0 - 1/8 (0.028 mi.)***	***B9***	***140***
Database: UST, Date of Government Version: 06/08/2020				
Database: ORANGE CO. UST, Date of Government Version: 05/01/2020				
Facility Id: FA0024234				
Facility Id: FA0024234				
CON-WAP WESTERN EXPR	20697 PRISM	NW 0 - 1/8 (0.028 mi.)	B11	142
Database: ORANGE CO. UST, Date of Government Version: 05/01/2020				

EXECUTIVE SUMMARY

Facility Id: FA24234

AST: A listing of aboveground storage tank petroleum storage tank locations.

A review of the AST list, as provided by EDR, has revealed that there are 3 AST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
SUNSTATE EQUIPMENT C Database: AST, Date of Government Version: 07/06/2016	20772 INDIAN OCEAN D	WNW 0 - 1/8 (0.093 mi.)	D24	205
Not reported Database: AST, Date of Government Version: 07/06/2016	20772 INDIAN OCEAN D	WNW 0 - 1/8 (0.093 mi.)	D25	205
ARB INC Database: AST, Date of Government Version: 07/06/2016	***20602 INDIAN OCEAN***	***NNW 1/8 - 1/4 (0.161 mi.)***	***J45***	***273***

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT: The Waste Management Unit Database System is used for program tracking and inventory of waste management units. The source is the State Water Resources Control Board.

A review of the WMUDS/SWAT list, as provided by EDR, and dated 04/01/2000 has revealed that there is 1 WMUDS/SWAT site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
GREENWASTE COMPOSTIN	20712 INDIAN OCEAN D	WNW 0 - 1/8 (0.088 mi.)	23	204

Local Lists of Hazardous waste / Contaminated Sites

CERS HAZ WASTE: List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, and RCRA LQ HW Generator programs.

A review of the CERS HAZ WASTE list, as provided by EDR, and dated 04/20/2020 has revealed that there are 19 CERS HAZ WASTE sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
AFAB PRECISION MACHI	***20742 LINEAR LN***	***E 0 - 1/8 (0.034 mi.)***	***C12***	***142***
SUNSTATE EQUIPMENT C	***20772 CIVIC CENTER D***	***W 0 - 1/8 (0.067 mi.)***	***D14***	***155***
MCLAREN UNIBODY INC	***20781 CANADA RD***	***E 0 - 1/8 (0.072 mi.)***	***C16***	***162***
ELECSYS INC	***20611 PRISM PLACE***	***N 0 - 1/8 (0.072 mi.)***	***E18***	***173***
SHMAZE CUSTOM COATIN	***20792 CANADA RD***	***ESE 0 - 1/8 (0.084 mi.)***	***F20***	***182***
CALIBER COLLISION CE	***26100 DIMENSION DR***	***N 0 - 1/8 (0.102 mi.)***	***H31***	***212***
ARB INC	***20602 CIVIC CENTER D***	***NNW 1/8 - 1/4 (0.135 mi.)***	***J37***	***236***
COX COMMERCIAL FLEET	***20591 CANADA***	***NE 1/8 - 1/4 (0.139 mi.)***	***I40***	***254***
HERGESHEIMER MOTORSP	***20612 CANADA RD***	***ENE 1/8 - 1/4 (0.157 mi.)***	***I44***	***265***

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
FABRICANTE AUTO BODY	*26341 DIMENSION DR*	*ENE 1/8 - 1/4 (0.177 mi.)*	*L47*	*277*
WESCON DESIGNED SOLU	*20551 PASCAL WAY*	*NE 1/8 - 1/4 (0.196 mi.)*	*N52*	*294*
ARB INC	*20632 CIVIC CENTER D*	*NNW 1/8 - 1/4 (0.203 mi.)*	*54*	*319*
PANASONIC AVIONICS C	*26211 ENTERPRISE WAY*	*NNE 1/8 - 1/4 (0.220 mi.)*	*O56*	*329*
EURO AMERICAN COLLIS	*20591 PASCAL WAY*	*ENE 1/8 - 1/4 (0.230 mi.)*	*N59*	*337*
JERRYS CLASSIC REPAI	*22602 PASCAL WAY UNI*	*ENE 1/8 - 1/4 (0.235 mi.)*	*P60*	*379*
AUTO MECHANIC SERVIC	*20622 PASCAL WAY STE*	*ENE 1/8 - 1/4 (0.243 mi.)*	*P63*	*384*
HERNANDEZ AUTO REPAI	*20622 PASCAL WAY, UN*	*ENE 1/8 - 1/4 (0.243 mi.)*	*P64*	*394*
PANASONIC	*26200 ENTERPRISE WAY*	*NNE 1/8 - 1/4 (0.243 mi.)*	*O67*	*435*

Lower Elevation	Address	Direction / Distance	Map ID	Page
XPO LOGISTICS FREIGH	*20697 PRISM PL*	*NW 0 - 1/8 (0.028 mi.)*	*B8*	*14*

Local Lists of Registered Storage Tanks

SWEEPS UST: Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

A review of the SWEEPS UST list, as provided by EDR, and dated 06/01/1994 has revealed that there are 2 SWEEPS UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
V P BAKER RANCH Status: A Tank Status: A Comp Number: 10	*20745 CANADA RD*	*E 0 - 1/8 (0.100 mi.)*	*G28*	*209*

Lower Elevation	Address	Direction / Distance	Map ID	Page
XPO LOGISTICS FREIGH Status: A Tank Status: A Comp Number: 11358	*20697 PRISM PL*	*NW 0 - 1/8 (0.028 mi.)*	*B9*	*140*

HIST UST: Historical UST Registered Database.

A review of the HIST UST list, as provided by EDR, and dated 10/15/1990 has revealed that there is 1 HIST UST site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
LOS ALISOS RANCH Facility Id: 00000023543	20571 CANADA RD	ENE 0 - 1/8 (0.119 mi.)	I33	232

CERS TANKS: List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs.

A review of the CERS TANKS list, as provided by EDR, and dated 04/20/2020 has revealed that there are 5 CERS TANKS sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
SUNSTATE EQUIPMENT C	***20772 CIVIC CENTER D***	***W 0 - 1/8 (0.067 mi.)***	***D14***	***155***
ARB INC	***20602 CIVIC CENTER D***	***NNW 1/8 - 1/4 (0.135 mi.)***	***J37***	***236***
ARB INC	***20632 CIVIC CENTER D***	***NNW 1/8 - 1/4 (0.203 mi.)***	***54***	***319***
PANASONIC AVIONICS C	***26211 ENTERPRISE WAY***	***NNE 1/8 - 1/4 (0.220 mi.)***	***O56***	***329***

Lower Elevation	Address	Direction / Distance	Map ID	Page
XPO LOGISTICS FREIGH	***20697 PRISM PL***	***NW 0 - 1/8 (0.028 mi.)***	***B8***	***14***

CA FID UST: The Facility Inventory Database contains active and inactive underground storage tank locations. The source is the State Water Resource Control Board.

A review of the CA FID UST list, as provided by EDR, and dated 10/31/1994 has revealed that there is 1 CA FID UST site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
V P BAKER RANCH Facility Id: 30017405 Status: A	***20745 CANADA RD***	***E 0 - 1/8 (0.100 mi.)***	***G28***	***209***

Other Ascertainable Records

RCRA NonGen / NLR: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 03/23/2020 has revealed that there are 26 RCRA NonGen / NLR sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
GLOBAL POWER TECHNOL EPA ID:: CAL000382470	20692 PRISM PL	NNE 0 - 1/8 (0.016 mi.)	7	13
AFAB PERCISION MACHI EPA ID:: CAL000175207	20742 LINER LANE	E 0 - 1/8 (0.034 mi.)	C13	153
MCLAREN UNIBODY INC EPA ID:: CAL000034592	20781 CANADA RD	E 0 - 1/8 (0.072 mi.)	C15	161
MCLAREN UNIBODY INCO EPA ID:: CAL000309583	20781 CANADA RD	E 0 - 1/8 (0.072 mi.)	C17	171
SEA COUNTRY TOWING & EPA ID:: CAL000371066	20611 PRISM PL	N 0 - 1/8 (0.072 mi.)	E19	181
SHAMAZE CUSTOM COATI	20792 CANADA RD	ESE 0 - 1/8 (0.084 mi.)	F21	201

EPA ID:: CAL000183275				
SUNSTATE EQUIPMENT C EPA ID:: CAL000194793	20772 INDIAN OCEAN D	WNW 0 - 1/8 (0.093 mi.)	D26	206
IMEX VISION EPA ID:: CAL000425449	20761 CANADA RD	E 0 - 1/8 (0.097 mi.)	G27	207
BLAIR'S TOWING INC EPA ID:: CAL000302939	26100 DIMENSION DR	N 0 - 1/8 (0.102 mi.)	H29	209
CALIBER COLLISION CE EPA ID:: CAL000450170	26100 DIMENSION DR	N 0 - 1/8 (0.102 mi.)	H30	211
ARB INC EPA ID:: CAL000197256	20632 INDIAN OCEAN D	NW 1/8 - 1/4 (0.139 mi.)	J38	251
COX COMMERCIAL FLEET EPA ID:: CAL000370584	20591 CANADA RD	NE 1/8 - 1/4 (0.139 mi.)	I41	261
BROTHER INTERNATIONA EPA ID:: CAL000389108	26250 ENTERPRISE CT	N 1/8 - 1/4 (0.156 mi.)	K42	263
HERGESHEIMER MOTORSP EPA ID:: CAC003039839	20612 CANADA RD	ENE 1/8 - 1/4 (0.157 mi.)	I43	264
HALABY RESTORATION & EPA ID:: CAL000337125	26230 ENTERPRISE CT	NNE 1/8 - 1/4 (0.174 mi.)	K46	276
FABRICANTE AUTO BODY EPA ID:: CAL000352403	26341 DIMENSION DR	ENE 1/8 - 1/4 (0.177 mi.)	L48	290
TRABUCO CANYON WATER EPA ID:: CAC003059849	26342 DIMENSIONS DRI	ENE 1/8 - 1/4 (0.183 mi.)	L50	292
AMERICAN FLYER RACIN EPA ID:: CAL000279781	26361 DIMENSION DR	ENE 1/8 - 1/4 (0.195 mi.)	L51	293
WESCON DESIGNED SOLU EPA ID:: CAL000378058	20551 PASCAL WAY	NE 1/8 - 1/4 (0.196 mi.)	N53	318
WHISPERING HILLS EPA ID:: CAC003030423	26246 FERN GLEN	SE 1/8 - 1/4 (0.204 mi.)	55	328
PANASONIC AVIONICS C EPA ID:: CAL000304332	26211 ENTERPRISE WAY	NNE 1/8 - 1/4 (0.220 mi.)	O57	335
ASSOCIATED ELECTRICS EPA ID:: CAL000325984	26021 COMMERCENTRE D	NNW 1/8 - 1/4 (0.227 mi.)	M58	336
HERNANDEZ AUTO REPAI EPA ID:: CAL000419051	20622 PASCAL WAY STE	ENE 1/8 - 1/4 (0.243 mi.)	P61	381
L & M AUTOMOTIVE EPA ID:: CAL000322249	20622 PASCAL WAY STE	ENE 1/8 - 1/4 (0.243 mi.)	P62	383
PANASONIC AVIONICS C EPA ID:: CAL000213077	26200 ENTERPRISE	NNE 1/8 - 1/4 (0.243 mi.)	O65	397

Lower Elevation	Address	Direction / Distance	Map ID	Page
XPO LOGISTICS FREIGH EPA ID:: CAL000078604	20697 PRISM PL	NW 0 - 1/8 (0.028 mi.)	B10	140

EXECUTIVE SUMMARY

Cortese: The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

A review of the Cortese list, as provided by EDR, and dated 03/23/2020 has revealed that there are 3 Cortese sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CHEVRON	***20731 LAKE FOREST***	***E 1/4 - 1/2 (0.287 mi.)***	***68***	***454***
Cleanup Status: COMPLETED - CASE CLOSED				
BEACON BAY CAR WASH	***20602 LAKE FOREST***	***ENE 1/4 - 1/2 (0.376 mi.)***	***Q69***	***459***
Cleanup Status: COMPLETED - CASE CLOSED				
ARCO	***20572 LAKE FOREST***	***ENE 1/4 - 1/2 (0.410 mi.)***	***Q70***	***462***
Cleanup Status: COMPLETED - CASE CLOSED				

HIST CORTESE: The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

A review of the HIST CORTESE list, as provided by EDR, and dated 04/01/2001 has revealed that there are 2 HIST CORTESE sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CHEVRON	***20731 LAKE FOREST***	***E 1/4 - 1/2 (0.287 mi.)***	***68***	***454***
Reg Id: 083003083T				

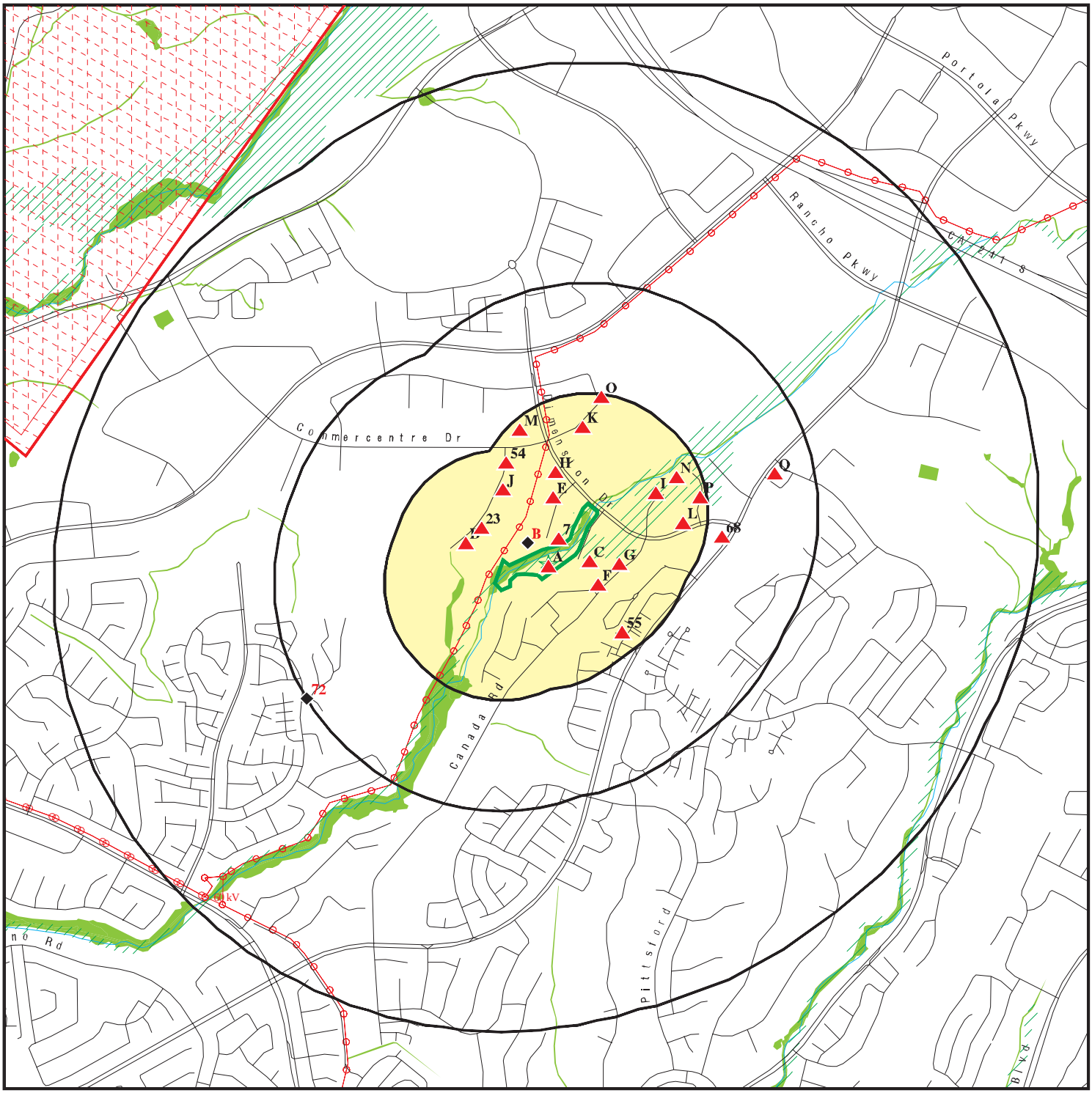
Lower Elevation	Address	Direction / Distance	Map ID	Page
LOS ALISOS WATER DIS	***21802 WISTERIA***	***WSW 1/4 - 1/2 (0.499 mi.)***	***72***	***468***
Reg Id: 083001324T				

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 1 records.

Site Name	Database(s)
LOS ALISOS WATER DISTRICT	LUST, Cortese

OVERVIEW MAP - 06170828.2R



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites

0 1/4 1/2 1 Miles

Indian Reservations BIA

Power transmission lines

Special Flood Hazard Area (1%)

0.2% Annual Chance Flood Hazard

National Wetland Inventory

State Wetlands

Areas of Concern

N

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: 20865-20795 Canada Road ADDRESS: 20865-20795 Canada Road Lake Forest CA 92630 LAT/LONG: 33.660538 / 117.675125	CLIENT: Hillmann Environmental Co. CONTACT: Shilpa Sunil INQUIRY #: 06170828.2r DATE: August 27, 2020 4:10 pm

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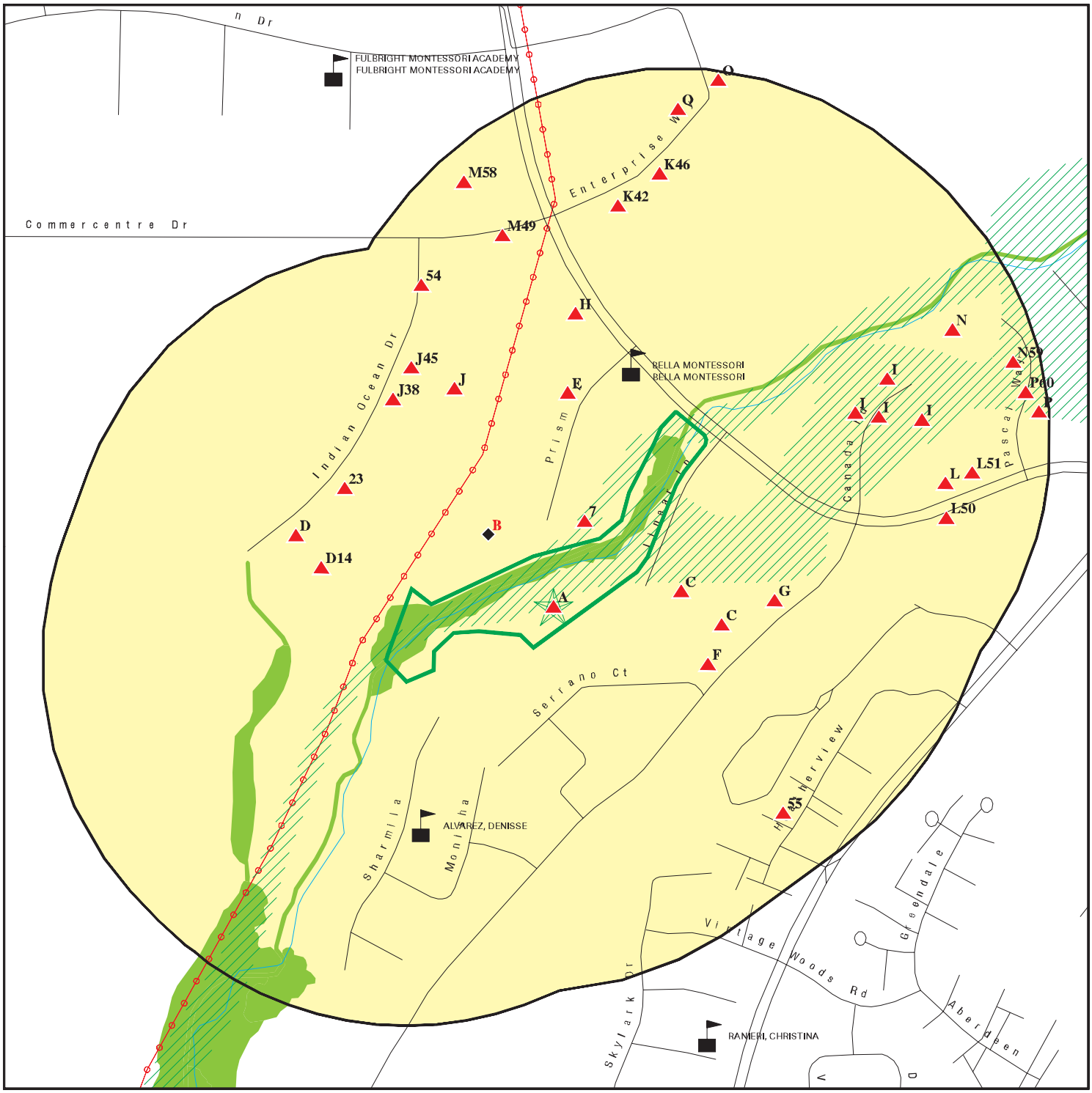
DETAIL MAP - 06170828.2R



0 1/16 1/8 1/4 Miles

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- National Wetland Inventory
- State Wetlands
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: 20865-20795 Canada Road ADDRESS: 20865-20795 Canada Road Lake Forest CA 92630 LAT/LONG: 33.660538 / 117.675125	CLIENT: Hillmann Environmental Co. CONTACT: Shilpa Sunil INQUIRY #: 06170828.2r DATE: August 27, 2020 4:11 pm

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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site list								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		2	5	NR	NR	NR	7
RCRA-VSQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROLS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	0.001		0	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
RESPONSE	1.000		0	0	0	0	NR	0
State- and tribal - equivalent CERCLIS								
ENVIROSTOR	1.000		0	0	0	0	NR	0
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST	0.500		0	0	5	NR	NR	5

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN LUST	0.500		0	0	0	NR	NR	0
CPS-SLIC	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		2	3	NR	NR	NR	5
AST	0.250		2	1	NR	NR	NR	3
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal voluntary cleanup sites								
VCP	0.500		0	0	0	NR	NR	0
INDIAN VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
WMUDS/SWAT	0.500		1	0	0	NR	NR	1
SWRCY	0.500		0	0	0	NR	NR	0
HAULERS	0.001		0	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	0.001		0	NR	NR	NR	NR	0
HIST Cal-Sites	1.000		0	0	0	0	NR	0
SCH	0.250		0	0	NR	NR	NR	0
CDL	0.001		0	NR	NR	NR	NR	0
CERS HAZ WASTE	0.250		7	12	NR	NR	NR	19
Toxic Pits	1.000		0	0	0	0	NR	0
US CDL	0.001		0	NR	NR	NR	NR	0
PFAS	0.500		0	0	0	NR	NR	0
Local Lists of Registered Storage Tanks								
SWEEPS UST	0.250		2	0	NR	NR	NR	2
HIST UST	0.250		1	0	NR	NR	NR	1
CERS TANKS	0.250		2	3	NR	NR	NR	5
CA FID UST	0.250		1	0	NR	NR	NR	1
Local Land Records								
LIENS	0.001		0	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
LIENS 2	0.001		0	NR	NR	NR	NR	0
DEED	0.500		0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS	0.001		0	NR	NR	NR	NR	0
CHMIRS	0.001		0	NR	NR	NR	NR	0
LDS	0.001		0	NR	NR	NR	NR	0
MCS	0.001		0	NR	NR	NR	NR	0
Orange Co. Industrial Site	0.001		0	NR	NR	NR	NR	0
SPILLS 90	0.001		0	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250	2	11	15	NR	NR	NR	28
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	0.001		0	NR	NR	NR	NR	0
EPA WATCH LIST	0.001		0	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	0.001		0	NR	NR	NR	NR	0
TRIS	0.001		0	NR	NR	NR	NR	0
SSTS	0.001		0	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	0.001		0	NR	NR	NR	NR	0
RAATS	0.001		0	NR	NR	NR	NR	0
PRP	0.001		0	NR	NR	NR	NR	0
PADS	0.001		0	NR	NR	NR	NR	0
ICIS	0.001		0	NR	NR	NR	NR	0
FTTS	0.001		0	NR	NR	NR	NR	0
MLTS	0.001		0	NR	NR	NR	NR	0
COAL ASH DOE	0.001		0	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	0.001		0	NR	NR	NR	NR	0
RADINFO	0.001		0	NR	NR	NR	NR	0
HIST FTTS	0.001		0	NR	NR	NR	NR	0
DOT OPS	0.001		0	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	0.001		0	NR	NR	NR	NR	0
US AIRS	0.001		0	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
FINDS	0.001	1	0	NR	NR	NR	NR	1
UXO	1.000		0	0	0	0	NR	0
ECHO	0.001	1	0	NR	NR	NR	NR	1
DOCKET HWC	0.001		0	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	0	0	0	NR	0
Cortese	0.500		0	0	3	NR	NR	3

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
CUPA Listings	0.250		0	0	NR	NR	NR	0
CUPA Listings	0.250		0	0	NR	NR	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
EMI	0.001		0	NR	NR	NR	NR	0
ENF	0.001		0	NR	NR	NR	NR	0
Financial Assurance	0.001		0	NR	NR	NR	NR	0
HAZNET	0.001		0	NR	NR	NR	NR	0
ICE	0.001		0	NR	NR	NR	NR	0
HIST CORTESE	0.500		0	0	2	NR	NR	2
HWP	1.000		0	0	0	0	NR	0
HWT	0.250		0	0	NR	NR	NR	0
MINES	0.250		0	0	NR	NR	NR	0
MWMP	0.250		0	0	NR	NR	NR	0
NPDES	0.001		0	NR	NR	NR	NR	0
PEST LIC	0.001	2	0	NR	NR	NR	NR	2
PROC	0.500		0	0	0	NR	NR	0
Notify 65	1.000		0	0	0	0	NR	0
UIC	0.001		0	NR	NR	NR	NR	0
UIC GEO	0.001		0	NR	NR	NR	NR	0
WASTEWATER PITS	0.500		0	0	0	NR	NR	0
WDS	0.001		0	NR	NR	NR	NR	0
WIP	0.250		0	0	NR	NR	NR	0
MILITARY PRIV SITES	0.001		0	NR	NR	NR	NR	0
PROJECT	0.001		0	NR	NR	NR	NR	0
WDR	0.001		0	NR	NR	NR	NR	0
CIWQS	0.001		0	NR	NR	NR	NR	0
CERS	0.001		0	NR	NR	NR	NR	0
NON-CASE INFO	0.001		0	NR	NR	NR	NR	0
OTHER OIL GAS	0.001		0	NR	NR	NR	NR	0
PROD WATER PONDS	0.001		0	NR	NR	NR	NR	0
SAMPLING POINT	0.001		0	NR	NR	NR	NR	0
WELL STIM PROJ	0.001		0	NR	NR	NR	NR	0
HWTS	TP	1	NR	NR	NR	NR	NR	1
MINES MRDS	0.001		0	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA LF	0.001		0	NR	NR	NR	NR	0
RGA LUST	0.001		0	NR	NR	NR	NR	0
- Totals --		7	31	39	10	0	0	87

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

A1 R COHEN LANDSCAPE & CONSTRUCTION INC. **FINDS 1024668398**
Target 20795 CANADA RD **ECHO N/A**
Property LAKE FOREST, CA 92630

Site 1 of 6 in cluster A

Actual: 631 ft.

FINDS:
Registry ID: 110070456792

Click Here:

Environmental Interest/Information System:
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid:	1024668398
Registry ID:	110070456792
DFR URL:	http://echo.epa.gov/detailed-facility-report?fid=110070456792
Name:	R COHEN LANDSCAPE & CONSTRUCTION INC.
Address:	20795 CANADA RD
City,State,Zip:	LAKE FOREST, CA 92630

A2 R COHEN LANDSCAPE & CONSTRUCTION INC. **RCRA NonGen / NLR 1024809646**
Target 20795 CANADA RD **CAL000285744**
Property LAKE FOREST, CA 92630

Site 2 of 6 in cluster A

Actual: 631 ft.

RCRA NonGen / NLR:

Date form received by agency:	2004-08-20 00:00:00.0
Facility name:	R COHEN LANDSCAPE & CONSTRUCTION INC.
Facility address:	20795 CANADA RD LAKE FOREST, CA 92630
EPA ID:	CAL000285744
Contact:	RICHARD COHEN
Contact address:	20795 CANADA RD LAKE FOREST, CA 92630
Contact country:	Not reported
Contact telephone:	949-768-0599
Contact email:	RICHARDC@RICHARDCOHENLANDSCAPE.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	RICHARD COHEN
Owner/operator address:	21391 ALISO CT LAKE FOREST, CA 92630
Owner/operator country:	Not reported
Owner/operator telephone:	949-215-0975
Owner/operator email:	Not reported
Owner/operator fax:	Not reported

R COHEN LANDSCAPE & CONSTRUCTION INC. (Continued) **1024809646**

Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: RICHARD COHEN
Owner/operator address: 20795 CANADA RD
LAKE FOREST, CA 92630
Owner/operator country: Not reported
Owner/operator telephone: 949-768-0599
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

A3 **R COHEN LANDSCAPE & CONSTRUCTION INC.** **HWTS** **S124850728**
Target **20795 CANADA RD** **N/A**
Property **LAKE FOREST, CA 92630**

Site 3 of 6 in cluster A

Actual:
631 ft.

HWTS:
Name: R COHEN LANDSCAPE & CONSTRUCTION INC.
Address: 20795 CANADA RD
Address 2: Not reported
City,State,Zip: LAKE FOREST, CA 92630
EPA ID: CAL000285744
Inactive Date: Not reported
Create Date: 08/20/2004
Last Act Date: 10/12/2018
Mailing Name: Not reported
Mailing Address: 20795 CANADA RD
Mailing Address 2: Not reported
Mailing City,State,Zip: LAKE FOREST, CA 926307702
Owner Name: RICHARD COHEN

R COHEN LANDSCAPE & CONSTRUCTION INC. (Continued) **S124850728**

Owner Address:	21391 ALISO CT
Owner Address 2:	Not reported
Owner City,State,Zip:	LAKE FOREST, CA 926307702
Contact Name:	RICHARD COHEN
Contact Address:	20795 CANADA RD
Contact Address 2:	Not reported
City,State,Zip:	LAKE FOREST, CA 92630

NAICS:

EPA ID:	CAL000285744
Create Date:	2004-08-20 10:16:15
NAICS Code:	56173
NAICS Description:	Landscaping Services
Issued EPA ID Date:	2004-08-20 10:16:15
Inactive Date:	Not reported
Facility Name:	R COHEN LANDSCAPE & CONSTRUCTION INC.
Facility Address:	20795 CANADA RD
Facility Address 2:	Not reported
Facility City:	LAKE FOREST
Facility County:	30
Facility State:	CA
Facility Zip:	92630

A4 **CAMALI CORP** **RCRA NonGen / NLR** **1024846083**
Target **20845 CANADA RD** **CAL000399808**
Property **LAKE FOREST, CA 92630**

Site 4 of 6 in cluster A

Actual:
631 ft.

RCRA NonGen / NLR:

Date form received by agency:	2014-08-18 00:00:00.0
Facility name:	CAMALI CORP
Facility address:	20845 CANADA RD LAKE FOREST, CA 92630
EPA ID:	CAL000399808
Contact:	JOSE PULIDO
Contact address:	20845 CANADA RD LAKE FOREST, CA 92630
Contact country:	Not reported
Contact telephone:	949-580-0250
Contact email:	JOSEP@CAMALICORP.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	CAMALI CORP
Owner/operator address:	20845 CANADA RD LAKE FOREST, CA 92630
Owner/operator country:	Not reported
Owner/operator telephone:	949-580-0250
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported

CAMALI CORP (Continued) **1024846083**

Owner/Op end date: Not reported

Owner/operator name: JOSE PULIDO
Owner/operator address: 20845 CANADA RD
LAKE FOREST, CA 92630
Owner/operator country: Not reported
Owner/operator telephone: 949-580-0250
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

A5 **RICHARD COHEN LANDSCAPE & CONSTRUCTION INC** **PEST LIC** **S117641293**
Target **20795 CANADA ROAD** **N/A**
Property **LAKE FOREST, CA 92630**

Site 5 of 6 in cluster A

Actual:
631 ft.

PEST LIC:
Name: RICHARD COHEN LANDSCAPE & CONSTRUCTION INC
Address: 20795 CANADA ROAD
City,State,Zip: LAKE FOREST, CA 92630
Facility Type: MGB
Categories: Not reported
License No: 36704
Issued or Renewed Date: 02/04/2020
Expiration Date: 12/31/2021

A6
Target Property
RICHARD B COHEN
20795 CANADA RD
LAKE FOREST, CA 92630

PEST LIC
S117646836
N/A

Site 6 of 6 in cluster A

Actual: 631 ft.

PEST LIC:

Name:	RICHARD B COHEN
Address:	20795 CANADA RD
City,State,Zip:	LAKE FOREST, CA 92630
Facility Type:	QAC
Categories:	Q
License No:	78951
Issued or Renewed Date:	01/01/2019
Expiration Date:	12/31/2020

7
NNE
< 1/8
0.016 mi.
82 ft.
GLOBAL POWER TECHNOLOGIES GROUP
20692 PRISM PL
LAKE FOREST, CA 92630

RCRA NonGen / NLR
1024837338
CAL000382470

Relative: Higher

Actual: 641 ft.

RCRA NonGen / NLR:

Date form received by agency:	2013-02-14 00:00:00.0
Facility name:	GLOBAL POWER TECHNOLOGIES GROUP
Facility address:	20692 PRISM PL LAKE FOREST, CA 92630
EPA ID:	CAL000382470
Contact:	RICHARD WOODIN
Contact address:	20692 PRISM PL LAKE FOREST, CA 92630
Contact country:	Not reported
Contact telephone:	949-216-8790
Contact email:	RWOODIN@GPTECHGROUP.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	GLOBAL POWER TECHNOLOGIES GROUP
Owner/operator address:	20692 PRISM PL LAKE FOREST, CA 92630
Owner/operator country:	Not reported
Owner/operator telephone:	949-273-4373
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	RICHARD WOODIN
Owner/operator address:	20692 PRISM PL LAKE FOREST, CA 92630
Owner/operator country:	Not reported
Owner/operator telephone:	949-216-8790
Owner/operator email:	Not reported
Owner/operator fax:	Not reported

GLOBAL POWER TECHNOLOGIES GROUP (Continued) **1024837338**

Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

B8 **XPO LOGISTICS FREIGHT INC. - UIV** **CERS HAZ WASTE** **S113051905**
NW **20697 PRISM PL** **CERS TANKS** **N/A**
< 1/8 **LAKE FOREST, CA 92630** **HAZNET**
0.028 mi. **CERS**
150 ft. **Site 1 of 4 in cluster B** **HWTS**

Relative: **Lower**
Actual: **628 ft.**

CERS HAZ WASTE:
Name: XPO LOGISTICS FREIGHT, INC.-UIV
Address: 20697 PRISM PL
City,State,Zip: LAKE FOREST, CA 92630
Site ID: 107675
CERS ID: 10449481
CERS Description: Hazardous Waste Generator

CERS TANKS:
Name: XPO LOGISTICS FREIGHT, INC.-UIV
Address: 20697 PRISM PL
City,State,Zip: LAKE FOREST, CA 92630
Site ID: 107675
CERS ID: 10449481
CERS Description: Underground Storage Tank

HAZNET:
Name: XPO LOGISTICS WESTERN UIV
Address: 20697 PRISM PL
Address 2: Not reported
City,State,Zip: LAKE FOREST, CA 926307803
Contact: JEFF SEXTEN
Telephone: 7347571657
Mailing Name: Not reported
Mailing Address: 2211 OLD EARHART RD STE 100

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Year:	2015
Gepaid:	CAL000078604
TSD EPA ID:	CAD008364432
CA Waste Code:	213 - Hydrocarbon solvents (benzene, hexane, Stoddard, Etc.)
Disposal Method:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Tons:	0.2445
Year:	2015
Gepaid:	CAL000078604
TSD EPA ID:	CAD008364432
CA Waste Code:	331 - Off-specification, aged or surplus organics
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.78
Year:	2015
Gepaid:	CAL000078604
TSD EPA ID:	CAD008364432
CA Waste Code:	214 - Unspecified solvent mixture
Disposal Method:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Tons:	0.048
Year:	2015
Gepaid:	CAL000078604
TSD EPA ID:	CAD008364432
CA Waste Code:	352 - Other organic solids
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.451
Year:	2014
Gepaid:	CAL000078604
TSD EPA ID:	CAD008364432
CA Waste Code:	181 - Other inorganic solid waste
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.111
Year:	2014
Gepaid:	CAL000078604
TSD EPA ID:	CAD008364432
CA Waste Code:	221 - Waste oil and mixed oil
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.229
Year:	2014
Gepaid:	CAL000078604
TSD EPA ID:	CAD028409019
CA Waste Code:	223 - Unspecified oil-containing waste
Disposal Method:	H135 - Discharge To Sewer/Potw Or Npdes(With Prior Storage--With Or Without Treatment)
Tons:	0.65469
Year:	2014
Gepaid:	CAL000078604
TSD EPA ID:	CAD008364432

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

CA Waste Code:	214 - Unspecified solvent mixture
Disposal Method:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Tons:	0.1505
Year:	2014
Gepaid:	CAL000078604
TSD EPA ID:	CAD008364432
CA Waste Code:	331 - Off-specification, aged or surplus organics
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.0105
Year:	2014
Gepaid:	CAL000078604
TSD EPA ID:	CAD008364432
CA Waste Code:	232 - Pesticides and other waste associated with pesticide production
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.286

Click this hyperlink while viewing on your computer to access
81 additional CA HAZNET: record(s) in the EDR Site Report.

Additional Info:

Year:	2000
Gen EPA ID:	CAL000078604
Shipment Date:	20000712
Creation Date:	9/11/2000 0:00:00
Receipt Date:	20000714
Manifest ID:	20107421
Trans EPA ID:	CAD983668583
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080033681
Trans Name:	Not reported
TSDF Alt EPA ID:	CAT080033681
TSDF Alt Name:	Not reported
Waste Code Description:	122 - Alkaline solution without metals (pH > 12.5
RCRA Code:	D002
Meth Code:	T01 - Treatment, Tank
Quantity Tons:	0.025
Waste Quantity:	50
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20000712
Creation Date:	9/11/2000 0:00:00
Receipt Date:	20000714
Manifest ID:	20107421
Trans EPA ID:	CAD983668583

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080033681
Trans Name:	Not reported
TSDF Alt EPA ID:	CAT080033681
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	D80 - Disposal, Land Fill
Quantity Tons:	0.075
Waste Quantity:	150
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20000712
Creation Date:	9/11/2000 0:00:00
Receipt Date:	20000714
Manifest ID:	20107421
Trans EPA ID:	CAD983668583
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080033681
Trans Name:	Not reported
TSDF Alt EPA ID:	CAT080033681
TSDF Alt Name:	Not reported
Waste Code Description:	512 - Other empty containers 30 gallons or more
RCRA Code:	Not reported
Meth Code:	D80 - Disposal, Land Fill
Quantity Tons:	0.01
Waste Quantity:	20
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20000712
Creation Date:	9/11/2000 0:00:00
Receipt Date:	20000714
Manifest ID:	20107421
Trans EPA ID:	CAD983668583
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080033681
Trans Name:	Not reported
TSDF Alt EPA ID:	CAT080033681
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	Not reported

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Meth Code:	R01 - Recycler
Quantity Tons:	0.272
Waste Quantity:	80
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2013
Gen EPA ID:	CAL000078604
Shipment Date:	20131209
Creation Date:	2/24/2014 22:15:29
Receipt Date:	20131218
Manifest ID:	000168286MWI
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	CAD983649880
Trans 2 Name:	PSC ENVIRONMENTAL SERVICES OF POMONA LP
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	U154
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.3055
Waste Quantity:	611
Quantity Unit:	P
Additional Code 1:	U002
Additional Code 2:	D035
Additional Code 3:	D018
Additional Code 4:	D001
Additional Code 5:	Not reported
Shipment Date:	20130701
Creation Date:	Not reported
Receipt Date:	Not reported
Manifest ID:	000166590MWI
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	CAD983649880
Trans 2 Name:	PSC ENVIRONMENTAL SERVICES OF POMONA LP
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	331 - Off-specification, aged, or surplus organics
RCRA Code:	D002
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.016
Waste Quantity:	32

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Quantity Unit:	P
Additional Code 1:	D001
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20130701
Creation Date:	9/25/2013 22:15:07
Receipt Date:	20130712
Manifest ID:	000166590MWI
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	CAD983649880
Trans 2 Name:	PSC ENVIRONMENTAL SERVICES OF POMONA LP
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	- Not reported
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	Not reported
Waste Quantity:	Not reported
Quantity Unit:	Not reported
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20130701
Creation Date:	9/25/2013 22:15:07
Receipt Date:	20130712
Manifest ID:	000166590MWI
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	CAD983649880
Trans 2 Name:	PSC ENVIRONMENTAL SERVICES OF POMONA LP
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	331 - Off-specification, aged, or surplus organics
RCRA Code:	D002
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.0145
Waste Quantity:	29
Quantity Unit:	P
Additional Code 1:	D001
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Shipment Date:	20130701
Creation Date:	9/25/2013 22:15:07
Receipt Date:	20130712
Manifest ID:	000166590MWI
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	CAD983649880
Trans 2 Name:	PSC ENVIRONMENTAL SERVICES OF POMONA LP
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	213 - Hydrocarbon solvents (benzene, hexane, Stoddard, etc.
RCRA Code:	D018
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.013
Waste Quantity:	26
Quantity Unit:	P
Additional Code 1:	D001
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20130701
Creation Date:	9/25/2013 22:15:07
Receipt Date:	20130712
Manifest ID:	000166590MWI
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	CAD983649880
Trans 2 Name:	PSC ENVIRONMENTAL SERVICES OF POMONA LP
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	213 - Hydrocarbon solvents (benzene, hexane, Stoddard, etc.
RCRA Code:	D018
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.0175
Waste Quantity:	35
Quantity Unit:	P
Additional Code 1:	D001
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20130307
Creation Date:	Not reported
Receipt Date:	Not reported
Manifest ID:	000167731MWI
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	CAD983649880

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Trans 2 Name:	PSC ENVIRONMENTAL SERVICES OF POMONA LP
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.0115
Waste Quantity:	23
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20130307
Creation Date:	5/4/2013 22:15:12
Receipt Date:	20130313
Manifest ID:	000167731MWI
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	CAD983649880
Trans 2 Name:	PSC ENVIRONMENTAL SERVICES OF POMONA LP
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	331 - Off-specification, aged, or surplus organics
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.0085
Waste Quantity:	17
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20130307
Creation Date:	5/4/2013 22:15:12
Receipt Date:	20130313
Manifest ID:	000167731MWI
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	CAD983649880
Trans 2 Name:	PSC ENVIRONMENTAL SERVICES OF POMONA LP
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	331 - Off-specification, aged, or surplus organics
RCRA Code:	Not reported

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.005
Waste Quantity:	10
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20130307
Creation Date:	5/4/2013 22:15:12
Receipt Date:	20130313
Manifest ID:	000167731MWI
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	CAD983649880
Trans 2 Name:	PSC ENVIRONMENTAL SERVICES OF POMONA LP
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	331 - Off-specification, aged, or surplus organics
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.052
Waste Quantity:	104
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2009
Gen EPA ID:	CAL000078604
Shipment Date:	20090819
Creation Date:	10/23/2009 18:30:20
Receipt Date:	20090826
Manifest ID:	005357217JJK
Trans EPA ID:	CAR000148338
Trans Name:	AMERICAN INTEGRATED SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008364423
Trans Name:	RHOCHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	222 - Oil/water separation sludge
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	1.60545

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Waste Quantity:	385
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20090806
Creation Date:	10/10/2012 9:19:59
Receipt Date:	20090813
Manifest ID:	004230234JJK
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.024
Waste Quantity:	48
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20090806
Creation Date:	10/10/2012 9:19:59
Receipt Date:	20090813
Manifest ID:	004230234JJK
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.151
Waste Quantity:	302
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Shipment Date:	20090806
Creation Date:	10/10/2012 9:19:59
Receipt Date:	20090813
Manifest ID:	004230234JJK
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.013
Waste Quantity:	26
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20090806
Creation Date:	10/10/2012 9:19:59
Receipt Date:	20090813
Manifest ID:	004230234JJK
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	551 - Laboratory waste chemicals 561 Detergent and soap
RCRA Code:	Not reported
Meth Code:	- Not reported
Quantity Tons:	0
Waste Quantity:	0
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20090204
Creation Date:	4/16/2009 18:30:10
Receipt Date:	20090213
Manifest ID:	005587521JJK
Trans EPA ID:	CAR000148338
Trans Name:	AMERICAN INTEGRATED SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	RHO CHEM LLC
TSDF EPA ID:	CAD008364432

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Trans Name:	ROCHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.005
Waste Quantity:	10
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20090204
Creation Date:	4/16/2009 18:30:10
Receipt Date:	20090213
Manifest ID:	005587521JJK
Trans EPA ID:	CAR000148338
Trans Name:	AMERICAN INTEGRATED SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	RHO CHEM LLC
TSDF EPA ID:	CAD008364432
Trans Name:	ROCHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.15
Waste Quantity:	300
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20090204
Creation Date:	4/16/2009 18:30:10
Receipt Date:	20090213
Manifest ID:	005587521JJK
Trans EPA ID:	CAR000148338
Trans Name:	AMERICAN INTEGRATED SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	RHO CHEM LLC
TSDF EPA ID:	CAD008364432
Trans Name:	ROCHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.741

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Waste Quantity:	195
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20090204
Creation Date:	4/16/2009 18:30:10
Receipt Date:	20090213
Manifest ID:	005587521JJK
Trans EPA ID:	CAR000148338
Trans Name:	AMERICAN INTEGRATED SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	RHO CHEM LLC
TSDF EPA ID:	CAD008364432
Trans Name:	ROCHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.005
Waste Quantity:	10
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20090204
Creation Date:	Not reported
Receipt Date:	Not reported
Manifest ID:	005587521JJK
Trans EPA ID:	CAR000148338
Trans Name:	AMERICAN INTEGRATED SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	RHO CHEM LLC
TSDF EPA ID:	CAD008364432
Trans Name:	ROCHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	331 - Off-specification, aged, or surplus organics
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.099
Waste Quantity:	30
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Additional Info:

Year:	1998
Gen EPA ID:	CAL000078604
Shipment Date:	19981203
Creation Date:	1/21/1999 0:00:00
Receipt Date:	19981208
Manifest ID:	98233377
Trans EPA ID:	CAD983668583
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD028409019
TSDF Alt Name:	Not reported
Waste Code Description:	141 - Off-specification, aged, or surplus inorganics
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.0625
Waste Quantity:	125
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19980108
Creation Date:	3/18/1998 0:00:00
Receipt Date:	19980113
Manifest ID:	92735985
Trans EPA ID:	CAD983668583
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028209109
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	331 - Off-specification, aged, or surplus organics
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.075
Waste Quantity:	150
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2004
Gen EPA ID:	CAL000078604

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Shipment Date:	20040922
Creation Date:	12/21/2004 18:31:57
Receipt Date:	20040929
Manifest ID:	23860628
Trans EPA ID:	CAD983668583
Trans Name:	CONSOLIDATED WASTE IND
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	CROSBY AND OVERTON
TSDF Alt EPA ID:	CAD028409019
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	NR
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.25
Waste Quantity:	500
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20040702
Creation Date:	11/5/2004 18:30:59
Receipt Date:	20040707
Manifest ID:	23860616
Trans EPA ID:	CAD983668583
Trans Name:	CONSOLIDATED WASTE IND
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	CROSBY AND OVERTON
TSDF Alt EPA ID:	CAD028409019
TSDF Alt Name:	Not reported
Waste Code Description:	331 - Off-specification, aged, or surplus organics
RCRA Code:	D001
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.1
Waste Quantity:	200
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20040305
Creation Date:	8/23/2004 8:25:08
Receipt Date:	20040310
Manifest ID:	23365597
Trans EPA ID:	CAD983668583
Trans Name:	CONSOLIDATED WASTE IND
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Trans Name:	CROSBY & OVERTON
TSDF Alt EPA ID:	CAD028409019
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.15
Waste Quantity:	300
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2011
Gen EPA ID:	CAL000078604
Shipment Date:	20110928
Creation Date:	10/10/2012 9:22:09
Receipt Date:	20110929
Manifest ID:	000123863MWI
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	CAD983649880
Trans 2 Name:	PSC ENVIRONMENTAL SERVICES OF POMONA LP
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	U220
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.0375
Waste Quantity:	75
Quantity Unit:	P
Additional Code 1:	D035
Additional Code 2:	D001
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20110928
Creation Date:	10/10/2012 9:22:09
Receipt Date:	20110929
Manifest ID:	000123863MWI
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	CAD983649880
Trans 2 Name:	PSC ENVIRONMENTAL SERVICES OF POMONA LP
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	291 - Latex waste
RCRA Code:	Not reported

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.205
Waste Quantity:	410
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20110928
Creation Date:	10/10/2012 9:22:09
Receipt Date:	20110929
Manifest ID:	000123863MWI
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	CAD983649880
Trans 2 Name:	PSC ENVIRONMENTAL SERVICES OF POMONA LP
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	U154
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.34
Waste Quantity:	680
Quantity Unit:	P
Additional Code 1:	U002
Additional Code 2:	D035
Additional Code 3:	D001
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	1995
Gen EPA ID:	CAL000078604
Shipment Date:	19950727
Creation Date:	3/29/1996 0:00:00
Receipt Date:	19950728
Manifest ID:	95583207
Trans EPA ID:	CAD983668583
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080022148
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.417
Waste Quantity:	100
Quantity Unit:	G

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19950727
Creation Date:	3/29/1996 0:00:00
Receipt Date:	19950728
Manifest ID:	95583207
Trans EPA ID:	CAD983668583
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080022148
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.1251
Waste Quantity:	30
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19950710
Creation Date:	11/13/1995 0:00:00
Receipt Date:	19950712
Manifest ID:	95586251
Trans EPA ID:	CAD983668583
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080022148
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	212 - Oxygenated solvents (acetone, butanol, ethyl acetate, etc.
RCRA Code:	D001
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.165
Waste Quantity:	50
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19950710
Creation Date:	11/13/1995 0:00:00
Receipt Date:	19950712

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Manifest ID:	95586251
Trans EPA ID:	CAD983668583
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080022148
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	- Not reported
Quantity Tons:	0
Waste Quantity:	0
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	1996
Gen EPA ID:	CAL000078604
Shipment Date:	19961227
Creation Date:	5/20/1997 0:00:00
Receipt Date:	19970106
Manifest ID:	96161321
Trans EPA ID:	CAD983668583
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD000088252
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	551 - Laboratory waste chemicals 561 Detergent and soap
RCRA Code:	D001
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.175
Waste Quantity:	350
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19960826
Creation Date:	5/30/1997 0:00:00
Receipt Date:	19960830
Manifest ID:	96161963
Trans EPA ID:	CAD983668583
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

TSDF EPA ID:	CAT080022148
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.2085
Waste Quantity:	50
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	19960423
Creation Date:	10/4/1996 0:00:00
Receipt Date:	19960424
Manifest ID:	95582990
Trans EPA ID:	CAD983668583
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080022148
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.6046
Waste Quantity:	145
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	19960423
Creation Date:	10/4/1996 0:00:00
Receipt Date:	19960424
Manifest ID:	95582990
Trans EPA ID:	CAD983668583
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080022148
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	D001
Meth Code:	- Not reported
Quantity Tons:	0
Waste Quantity:	0

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2005
Gen EPA ID:	CAL000078604
Shipment Date:	20050825
Creation Date:	8/23/2006 18:32:59
Receipt Date:	20050831
Manifest ID:	24459367
Trans EPA ID:	CAD982030173
Trans Name:	ECOLOGY CONTROL INDUSTRIES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	CROSBY AND OVERTON
TSDF Alt EPA ID:	CAD028409019
TSDF Alt Name:	Not reported
Waste Code Description:	331 - Off-specification, aged, or surplus organics
RCRA Code:	D001
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.075
Waste Quantity:	150
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20050614
Creation Date:	9/16/2005 18:31:41
Receipt Date:	20050614
Manifest ID:	24385834
Trans EPA ID:	CAT080016116
Trans Name:	NIETO AND SONS TRUCKING INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO KERDOON
TSDF Alt EPA ID:	CAT080013352
TSDF Alt Name:	Not reported
Waste Code Description:	134 - Aqueous solution with <10% total organic residues
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	0.63
Waste Quantity:	150
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Additional Code 5:	Not reported
Shipment Date:	20050606
Creation Date:	9/15/2005 18:32:02
Receipt Date:	20050615
Manifest ID:	24459317
Trans EPA ID:	CAD983668583
Trans Name:	CONSOLIDATED WASTE IND
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	CROSBY AND OVERTON
TSDF Alt EPA ID:	CAD028409019
TSDF Alt Name:	Not reported
Waste Code Description:	331 - Off-specification, aged, or surplus organics
RCRA Code:	D001
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.0275
Waste Quantity:	55
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20050606
Creation Date:	9/15/2005 18:32:02
Receipt Date:	20050615
Manifest ID:	24459549
Trans EPA ID:	CAD983668583
Trans Name:	CONSOLIDATED WASTE IND
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	CROSBY & OVERTON
TSDF Alt EPA ID:	CAD028409019
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.2
Waste Quantity:	400
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20050414
Creation Date:	7/27/2005 10:48:47
Receipt Date:	20050420
Manifest ID:	24460181
Trans EPA ID:	CAD983668583
Trans Name:	CONSOLIDATED WASTE IND
Trans 2 EPA ID:	Not reported

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	CROSBY & OVERTON
TSDF Alt EPA ID:	CAD028409019
TSDF Alt Name:	Not reported
Waste Code Description:	331 - Off-specification, aged, or surplus organics
RCRA Code:	D001
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.0275
Waste Quantity:	55
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2002
Gen EPA ID:	CAL000078604
Shipment Date:	20021017
Creation Date:	2/10/2003 18:31:16
Receipt Date:	20021023
Manifest ID:	21992965
Trans EPA ID:	CAD983668583
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	331 - Off-specification, aged, or surplus organics
RCRA Code:	D001
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.0375
Waste Quantity:	75
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20020815
Creation Date:	3/14/2003 18:31:30
Receipt Date:	20020821
Manifest ID:	21991751
Trans EPA ID:	CAD983668583
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Waste Code Description:	551 - Laboratory waste chemicals 561 Detergent and soap
RCRA Code:	Not reported
Meth Code:	T01 - Treatment, Tank
Quantity Tons:	0.03
Waste Quantity:	60
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20020815
Creation Date:	3/14/2003 18:31:30
Receipt Date:	20020821
Manifest ID:	21991751
Trans EPA ID:	CAD983668583
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	551 - Laboratory waste chemicals 561 Detergent and soap
RCRA Code:	D001
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.1
Waste Quantity:	200
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20020502
Creation Date:	7/19/2002 16:09:28
Receipt Date:	20020508
Manifest ID:	21881530
Trans EPA ID:	CAD983668583
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	T01 - Treatment, Tank
Quantity Tons:	0.095
Waste Quantity:	25
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20020404
Creation Date:	7/17/2002 18:34:07
Receipt Date:	20020410
Manifest ID:	21881360
Trans EPA ID:	CAD983668583
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.275
Waste Quantity:	550
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20020404
Creation Date:	7/17/2002 18:34:07
Receipt Date:	20020410
Manifest ID:	21881360
Trans EPA ID:	CAD983668583
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	134 - Aqueous solution with <10% total organic residues
RCRA Code:	Not reported
Meth Code:	T01 - Treatment, Tank
Quantity Tons:	0.021
Waste Quantity:	5
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20020114
Creation Date:	2/26/2002 0:00:00
Receipt Date:	20020116
Manifest ID:	21784865
Trans EPA ID:	CAD983668583
Trans Name:	Not reported

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	331 - Off-specification, aged, or surplus organics
RCRA Code:	D001
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.165
Waste Quantity:	50
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2003
Gen EPA ID:	CAL000078604
Shipment Date:	Not reported
Creation Date:	Not reported
Receipt Date:	Not reported
Manifest ID:	22567449
Trans EPA ID:	CAD983668583
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD028409019
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.0875
Waste Quantity:	175
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20031202
Creation Date:	7/30/2004 18:31:14
Receipt Date:	20031210
Manifest ID:	22391994
Trans EPA ID:	CAD983668583
Trans Name:	CONSOLIDATED WASTE IND
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	CROSBY AND OVERTON
TSDF Alt EPA ID:	CAD028409019

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	D001
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.025
Waste Quantity:	50
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20031202
Creation Date:	7/30/2004 18:31:14
Receipt Date:	20031210
Manifest ID:	22391994
Trans EPA ID:	CAD983668583
Trans Name:	CONSOLIDATED WASTE IND
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	CROSBY AND OVERTON
TSDF Alt EPA ID:	CAD028409019
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.15
Waste Quantity:	300
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20031121
Creation Date:	8/24/2004 10:00:04
Receipt Date:	20031126
Manifest ID:	22567220
Trans EPA ID:	CAD983668583
Trans Name:	CONSOLIDATED WASTE IND
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	CROSBY & OVERTON
TSDF Alt EPA ID:	CAD028409019
TSDF Alt Name:	Not reported
Waste Code Description:	181 - Other inorganic solid waste Organics
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.175
Waste Quantity:	350
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20031030
Creation Date:	8/9/2004 8:46:56
Receipt Date:	20031105
Manifest ID:	21776113
Trans EPA ID:	CAD983668583
Trans Name:	CONSOLIDATED WASTE INDUST
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	CROSBY AND OVERTON
TSDF Alt EPA ID:	CAD028409019
TSDF Alt Name:	Not reported
Waste Code Description:	551 - Laboratory waste chemicals 561 Detergent and soap
RCRA Code:	D001
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.15
Waste Quantity:	300
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20031030
Creation Date:	8/9/2004 8:46:56
Receipt Date:	20031105
Manifest ID:	21776113
Trans EPA ID:	CAD983668583
Trans Name:	CONSOLIDATED WASTE INDUST
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	CROSBY AND OVERTON
TSDF Alt EPA ID:	CAD028409019
TSDF Alt Name:	Not reported
Waste Code Description:	551 - Laboratory waste chemicals 561 Detergent and soap
RCRA Code:	D002
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.025
Waste Quantity:	50
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20030828
Creation Date:	8/3/2004 7:33:04
Receipt Date:	20030903
Manifest ID:	22504207
Trans EPA ID:	CAD983584681

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Trans Name:	BELSHIRE ENVIRONMENTAL SVCS
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO KERDOON
TSDF Alt EPA ID:	CAT080013352
TSDF Alt Name:	Not reported
Waste Code Description:	134 - Aqueous solution with <10% total organic residues
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	0.42
Waste Quantity:	100
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20030811
Creation Date:	7/28/2004 10:48:03
Receipt Date:	20030813
Manifest ID:	22736677
Trans EPA ID:	CAD983668583
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD028409019
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.1
Waste Quantity:	200
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20030529
Creation Date:	7/20/2004 12:52:41
Receipt Date:	20030604
Manifest ID:	21880810
Trans EPA ID:	CAD983668583
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Meth Code:	H01 - Transfer Station
Quantity Tons:	0.15
Waste Quantity:	300
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20030529
Creation Date:	7/20/2004 12:52:41
Receipt Date:	20030604
Manifest ID:	21880810
Trans EPA ID:	CAD983668583
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	461 - Paint sludge
RCRA Code:	D001
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.025
Waste Quantity:	50
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2008
Gen EPA ID:	CAL000078604
Shipment Date:	20080807
Creation Date:	10/1/2008 18:30:38
Receipt Date:	20080814
Manifest ID:	001329833FLE
Trans EPA ID:	CAR000177576
Trans Name:	DOUBLE BARREL ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008364432
Trans Name:	RHOCHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	F005
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.0175
Waste Quantity:	35
Quantity Unit:	P
Additional Code 1:	F003

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Additional Code 2:	D001
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20080807
Creation Date:	10/1/2008 18:30:38
Receipt Date:	20080814
Manifest ID:	001329833FLE
Trans EPA ID:	CAR000177576
Trans Name:	DOUBLE BARREL ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008364432
Trans Name:	RHOCHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.2
Waste Quantity:	400
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20080807
Creation Date:	10/1/2008 18:30:38
Receipt Date:	20080814
Manifest ID:	001329833FLE
Trans EPA ID:	CAR000177576
Trans Name:	DOUBLE BARREL ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008364432
Trans Name:	RHOCHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.35
Waste Quantity:	700
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20080310
Creation Date:	6/9/2008 18:30:24

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Receipt Date:	20080326
Manifest ID:	001371955FLE
Trans EPA ID:	CAR000177576
Trans Name:	DOUBLE BARREL ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	CAD983649880
Trans 2 Name:	GENERAL ENVIRONMENTAL MANAGMENT
TSDF EPA ID:	CAD980884183
Trans Name:	GEM RANCHO CORDOVA LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	- Not reported
Quantity Tons:	0.5
Waste Quantity:	1000
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20080310
Creation Date:	6/9/2008 18:30:24
Receipt Date:	20080326
Manifest ID:	001371955FLE
Trans EPA ID:	CAR000177576
Trans Name:	DOUBLE BARREL ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	CAD983649880
Trans 2 Name:	GENERAL ENVIRONMENTAL MANAGMENT
TSDF EPA ID:	CAD980884183
Trans Name:	GEM RANCHO CORDOVA LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	F005
Meth Code:	- Not reported
Quantity Tons:	0.0175
Waste Quantity:	35
Quantity Unit:	P
Additional Code 1:	F003
Additional Code 2:	D035
Additional Code 3:	D001
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2010
Gen EPA ID:	CAL000078604

Shipment Date:	20101105
Creation Date:	10/10/2012 9:21:31
Receipt Date:	20101109
Manifest ID:	000071400MWI
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	CAD983649880

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Trans 2 Name:	PSC ENVIRONMENTAL SERVICES OF POMONA LP
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	551 - Laboratory waste chemicals 561 Detergent and soap
RCRA Code:	D001
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.27
Waste Quantity:	540
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20101105
Creation Date:	Not reported
Receipt Date:	Not reported
Manifest ID:	000071400MWI
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	CAD983649880
Trans 2 Name:	PSC ENVIRONMENTAL SERVICES OF POMONA LP
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	512 - Other empty containers 30 gallons or more
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.1
Waste Quantity:	200
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20101105
Creation Date:	Not reported
Receipt Date:	Not reported
Manifest ID:	000071400MWI
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	CAD983649880
Trans 2 Name:	PSC ENVIRONMENTAL SERVICES OF POMONA LP
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Quantity Tons:	0.1875
Waste Quantity:	375
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20101105
Creation Date:	Not reported
Receipt Date:	Not reported
Manifest ID:	000071400MWI
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	CAD983649880
Trans 2 Name:	PSC ENVIRONMENTAL SERVICES OF POMONA LP
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	181 - Other inorganic solid waste Organics
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.2325
Waste Quantity:	465
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20101105
Creation Date:	Not reported
Receipt Date:	Not reported
Manifest ID:	000071400MWI
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	CAD983649880
Trans 2 Name:	PSC ENVIRONMENTAL SERVICES OF POMONA LP
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	181 - Other inorganic solid waste Organics
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.28
Waste Quantity:	560
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Additional Code 5:	Not reported
Shipment Date:	20100712
Creation Date:	9/10/2010 18:30:47
Receipt Date:	20100721
Manifest ID:	005357225JJK
Trans EPA ID:	CAR000148338
Trans Name:	AMERICAN INTEGRATED SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008364432
Trans Name:	RHO-CHEM CORP
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.075
Waste Quantity:	150
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20100712
Creation Date:	9/10/2010 18:30:47
Receipt Date:	20100721
Manifest ID:	005357225JJK
Trans EPA ID:	CAR000148338
Trans Name:	AMERICAN INTEGRATED SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008364432
Trans Name:	RHO-CHEM CORP
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	141 - Off-specification, aged, or surplus inorganics
RCRA Code:	D002
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.025
Waste Quantity:	50
Quantity Unit:	P
Additional Code 1:	D001
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20100308
Creation Date:	Not reported
Receipt Date:	Not reported
Manifest ID:	000070457MWI
Trans EPA ID:	CAD008364432

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	551 - Laboratory waste chemicals 561 Detergent and soap
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.205
Waste Quantity:	410
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20100308
Creation Date:	10/10/2012 9:20:48
Receipt Date:	20100310
Manifest ID:	000070457MWI
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	551 - Laboratory waste chemicals 561 Detergent and soap
RCRA Code:	D002
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.02
Waste Quantity:	40
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20100308
Creation Date:	10/10/2012 9:20:48
Receipt Date:	20100310
Manifest ID:	000070457MWI
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Waste Code Description:	- Not reported
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	Not reported
Waste Quantity:	0
Quantity Unit:	0
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2014
Gen EPA ID:	CAL000078604
Shipment Date:	20141118
Creation Date:	Not reported
Receipt Date:	Not reported
Manifest ID:	013795128JJK
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	CAD983649880
Trans 2 Name:	PSC ENVIRONMENTAL SERVICES OF POMONA LP
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.0855
Waste Quantity:	171
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20141118
Creation Date:	1/14/2015 22:14:59
Receipt Date:	20141121
Manifest ID:	013795128JJK
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	CAD983649880
Trans 2 Name:	PSC ENVIRONMENTAL SERVICES OF POMONA LP
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	232 - Pesticides and other waste associated with pesticide production
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

	Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.059
Waste Quantity:	118
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20141118
Creation Date:	1/14/2015 22:14:59
Receipt Date:	20141121
Manifest ID:	013795128JJK
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	CAD983649880
Trans 2 Name:	PSC ENVIRONMENTAL SERVICES OF POMONA LP
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	232 - Pesticides and other waste associated with pesticide production
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.1265
Waste Quantity:	253
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20141118
Creation Date:	1/14/2015 22:14:59
Receipt Date:	20141121
Manifest ID:	013795128JJK
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	CAD983649880
Trans 2 Name:	PSC ENVIRONMENTAL SERVICES OF POMONA LP
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	181 - Other inorganic solid waste Organics
RCRA Code:	D001
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.111
Waste Quantity:	222
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20141118
Creation Date:	1/14/2015 22:14:59
Receipt Date:	20141121
Manifest ID:	013795128JJK
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	CAD983649880
Trans 2 Name:	PSC ENVIRONMENTAL SERVICES OF POMONA LP
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D035
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.1505
Waste Quantity:	301
Quantity Unit:	P
Additional Code 1:	D007
Additional Code 2:	D006
Additional Code 3:	D005
Additional Code 4:	D001
Additional Code 5:	Not reported
Shipment Date:	20140815
Creation Date:	11/2/2014 22:15:11
Receipt Date:	20140822
Manifest ID:	010524496JJK
Trans EPA ID:	CAR000235960
Trans Name:	EVR ENVIRONMENTAL INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	CROSBY & OVERTON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H135 - Discharge To Sewer/Potw Or Npdes(With Prior Storage--With Or Without Treatment)
Quantity Tons:	0.65469
Waste Quantity:	157
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20140409
Creation Date:	9/10/2014 22:15:25
Receipt Date:	20140423
Manifest ID:	000192403MWI
Trans EPA ID:	CAD008364432

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	CAD983649880
Trans 2 Name:	PSC ENVIRONMENTAL SERVICES OF POMONA LP
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	232 - Pesticides and other waste associated with pesticide production
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.1005
Waste Quantity:	201
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20140409
Creation Date:	9/10/2014 22:15:25
Receipt Date:	20140423
Manifest ID:	000192403MWI
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	CAD983649880
Trans 2 Name:	PSC ENVIRONMENTAL SERVICES OF POMONA LP
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	331 - Off-specification, aged, or surplus organics
RCRA Code:	D040
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.0105
Waste Quantity:	21
Quantity Unit:	P
Additional Code 1:	D035
Additional Code 2:	D005
Additional Code 3:	D001
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20140409
Creation Date:	9/10/2014 22:15:25
Receipt Date:	20140423
Manifest ID:	000192403MWI
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	CAD983649880
Trans 2 Name:	PSC ENVIRONMENTAL SERVICES OF POMONA LP
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	D001
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.229
Waste Quantity:	458
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20140409
Creation Date:	Not reported
Receipt Date:	Not reported
Manifest ID:	000192403MWI
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	CAD983649880
Trans 2 Name:	PSC ENVIRONMENTAL SERVICES OF POMONA LP
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	331 - Off-specification, aged, or surplus organics
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.008
Waste Quantity:	16
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2006
Gen EPA ID:	CAL000078604
Shipment Date:	20061005
Creation Date:	4/19/2007 18:30:35
Receipt Date:	20061006
Manifest ID:	000314172JJK
Trans EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

	Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.15
Waste Quantity:	300
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20061005
Creation Date:	6/29/2007 18:30:27
Receipt Date:	20061011
Manifest ID:	000314173JJK
Trans EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008252405
Trans Name:	PACIFIC RESOURCE RECOVERY
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	331 - Off-specification, aged, or surplus organics
RCRA Code:	D001
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.0099
Waste Quantity:	3
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20061005
Creation Date:	6/29/2007 18:30:27
Receipt Date:	20061011
Manifest ID:	000314173JJK
Trans EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008252405
Trans Name:	PACIFIC RESOURCE RECOVERY
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	331 - Off-specification, aged, or surplus organics
RCRA Code:	D001
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.165
Waste Quantity:	50
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Shipment Date:	20061005
Creation Date:	6/29/2007 18:30:27
Receipt Date:	20061011
Manifest ID:	000314173JJK
Trans EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008252405
Trans Name:	PACIFIC RESOURCE RECOVERY
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	331 - Off-specification, aged, or surplus organics
RCRA Code:	D001
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.099
Waste Quantity:	30
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20061005
Creation Date:	6/29/2007 18:30:27
Receipt Date:	20061011
Manifest ID:	000314173JJK
Trans EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008252405
Trans Name:	PACIFIC RESOURCE RECOVERY
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	331 - Off-specification, aged, or surplus organics
RCRA Code:	F003
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.0025
Waste Quantity:	5
Quantity Unit:	P
Additional Code 1:	D001
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20060504
Creation Date:	8/24/2006 18:32:58
Receipt Date:	20060512
Manifest ID:	24975266
Trans EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

TSDF EPA ID:	CAD008252405
Trans Name:	PACIFIC RESOURCE RECOVERY
TSDF Alt EPA ID:	CAD008252405
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	D001
Meth Code:	R01 - Recycler
Quantity Tons:	0.068
Waste Quantity:	20
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20060504
Creation Date:	8/24/2006 18:31:59
Receipt Date:	20060505
Manifest ID:	24975267
Trans EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING
TSDF Alt EPA ID:	CAD982444481
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	0.15
Waste Quantity:	300
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20060223
Creation Date:	7/5/2006 12:04:15
Receipt Date:	20060224
Manifest ID:	24859072
Trans EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING
TSDF Alt EPA ID:	CAD982444481
TSDF Alt Name:	Not reported
Waste Code Description:	181 - Other inorganic solid waste Organics
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	0.3
Waste Quantity:	600

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20060223
Creation Date:	7/5/2006 12:04:15
Receipt Date:	20060301
Manifest ID:	24859073
Trans EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008252405
Trans Name:	PACIFIC RESOURCE RECOVERY
TSDF Alt EPA ID:	CAD008252405
TSDF Alt Name:	Not reported
Waste Code Description:	181 - Other inorganic solid waste Organics
RCRA Code:	D001
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.0125
Waste Quantity:	25
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20060223
Creation Date:	7/14/2006 18:30:33
Receipt Date:	20060301
Manifest ID:	24859075
Trans EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008364432
Trans Name:	PHILLIPS SERVICES
TSDF Alt EPA ID:	CAD008364432
TSDF Alt Name:	Not reported
Waste Code Description:	331 - Off-specification, aged, or surplus organics
RCRA Code:	D002
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.0099
Waste Quantity:	3
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	1999

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Gen EPA ID:	CAL000078604
Shipment Date:	19990818
Creation Date:	10/28/1999 0:00:00
Receipt Date:	19990820
Manifest ID:	99097765
Trans EPA ID:	CAD983668583
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD028409019
TSDF Alt Name:	Not reported
Waste Code Description:	331 - Off-specification, aged, or surplus organics
RCRA Code:	D002
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.06
Waste Quantity:	120
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19990611
Creation Date:	8/19/1999 0:00:00
Receipt Date:	19990616
Manifest ID:	99100614
Trans EPA ID:	CAD983668583
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.15
Waste Quantity:	300
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19990611
Creation Date:	8/19/1999 0:00:00
Receipt Date:	19990616
Manifest ID:	99100614
Trans EPA ID:	CAD983668583
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	331 - Off-specification, aged, or surplus organics
RCRA Code:	Not reported
Meth Code:	T01 - Treatment, Tank
Quantity Tons:	0.099
Waste Quantity:	30
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2012
Gen EPA ID:	CAL000078604
Shipment Date:	20120919
Creation Date:	11/26/2012 22:16:15
Receipt Date:	20120924
Manifest ID:	010581711JJK
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	CAD983649880
Trans 2 Name:	PSC ENVIRONMENTAL SERVICES OF POMONA LP
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	791 - Liquids with pH < 2 792 Liquids with pH < 2 with metals
RCRA Code:	U123
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.0305
Waste Quantity:	61
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20120919
Creation Date:	11/26/2012 22:16:15
Receipt Date:	20120924
Manifest ID:	010581711JJK
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	CAD983649880
Trans 2 Name:	PSC ENVIRONMENTAL SERVICES OF POMONA LP
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

TSDF Alt Name:	Not reported
Waste Code Description:	331 - Off-specification, aged, or surplus organics
RCRA Code:	D002
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.023
Waste Quantity:	46
Quantity Unit:	P
Additional Code 1:	D001
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20120919
Creation Date:	11/26/2012 22:16:15
Receipt Date:	20120924
Manifest ID:	010581711JJK
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	CAD983649880
Trans 2 Name:	PSC ENVIRONMENTAL SERVICES OF POMONA LP
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.3055
Waste Quantity:	611
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20120919
Creation Date:	11/26/2012 22:16:15
Receipt Date:	20120924
Manifest ID:	010581711JJK
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	CAD983649880
Trans 2 Name:	PSC ENVIRONMENTAL SERVICES OF POMONA LP
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	791 - Liquids with pH < 2 792 Liquids with pH < 2 with metals
RCRA Code:	D007
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.0165
Waste Quantity:	33

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Quantity Unit:	P
Additional Code 1:	D002
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20120424
Creation Date:	6/12/2012 20:30:09
Receipt Date:	20120426
Manifest ID:	009751492JJK
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	CAD983649880
Trans 2 Name:	PSC ENVIRONMENTAL SERVICES OF POMONA LP
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	212 - Oxygenated solvents (acetone, butanol, ethyl acetate, etc.
RCRA Code:	U154
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.008
Waste Quantity:	16
Quantity Unit:	P
Additional Code 1:	U002
Additional Code 2:	D035
Additional Code 3:	D001
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20120424
Creation Date:	6/12/2012 20:30:09
Receipt Date:	20120426
Manifest ID:	009751492JJK
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	CAD983649880
Trans 2 Name:	PSC ENVIRONMENTAL SERVICES OF POMONA LP
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	232 - Pesticides and other waste associated with pesticide production
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.109
Waste Quantity:	218
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20120424

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Creation Date:	6/12/2012 20:30:09
Receipt Date:	20120426
Manifest ID:	009751492JJK
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	CAD983649880
Trans 2 Name:	PSC ENVIRONMENTAL SERVICES OF POMONA LP
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D035
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.0245
Waste Quantity:	49
Quantity Unit:	P
Additional Code 1:	D007
Additional Code 2:	D006
Additional Code 3:	D005
Additional Code 4:	D001
Additional Code 5:	Not reported

Shipment Date:	20120424
Creation Date:	6/12/2012 20:30:09
Receipt Date:	20120426
Manifest ID:	009751492JJK
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	CAD983649880
Trans 2 Name:	PSC ENVIRONMENTAL SERVICES OF POMONA LP
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D035
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.0735
Waste Quantity:	147
Quantity Unit:	P
Additional Code 1:	D007
Additional Code 2:	D006
Additional Code 3:	D005
Additional Code 4:	D001
Additional Code 5:	Not reported

Shipment Date:	20120104
Creation Date:	3/16/2012 20:30:47
Receipt Date:	20120110
Manifest ID:	005357244JJK
Trans EPA ID:	CAR000148338
Trans Name:	AMERICAN INTEGRATED SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD000364423
Trans Name:	RHO-CHEM LLC

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.0875
Waste Quantity:	175
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20120104
Creation Date:	3/16/2012 20:30:47
Receipt Date:	20120110
Manifest ID:	005357244JJK
Trans EPA ID:	CAR000148338
Trans Name:	AMERICAN INTEGRATED SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD000364423
Trans Name:	RHO-CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	D001
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.09
Waste Quantity:	180
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2007
Gen EPA ID:	CAL000078604
Shipment Date:	20071207
Creation Date:	3/4/2008 18:30:41
Receipt Date:	20071212
Manifest ID:	001358722FLE
Trans EPA ID:	CAR000177576
Trans Name:	DOUBLE BARREL ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008364423
Trans Name:	PHILLIPS / RHOCHEM
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.175
Waste Quantity:	350
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20071009
Creation Date:	1/9/2008 18:30:34
Receipt Date:	20071011
Manifest ID:	000070876JJK
Trans EPA ID:	CAR000177576
Trans Name:	DOUBLE BARREL ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008364423
Trans Name:	RHOCHEM
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	331 - Off-specification, aged, or surplus organics
RCRA Code:	D001
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.0175
Waste Quantity:	35
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20071009
Creation Date:	1/9/2008 18:30:34
Receipt Date:	20071011
Manifest ID:	000070876JJK
Trans EPA ID:	CAR000177576
Trans Name:	DOUBLE BARREL ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008364423
Trans Name:	RHOCHEM
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	331 - Off-specification, aged, or surplus organics
RCRA Code:	D001
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.0225
Waste Quantity:	45
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20070530
Creation Date:	10/18/2007 18:30:24
Receipt Date:	20070605
Manifest ID:	000070884JJK
Trans EPA ID:	CAD983620402
Trans Name:	ADVANCED CLEANUP TECHNOLOGIES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	CROSBY & OVERTON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	D001
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.0125
Waste Quantity:	25
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20070530
Creation Date:	10/18/2007 18:30:24
Receipt Date:	20070605
Manifest ID:	000070884JJK
Trans EPA ID:	CAD983620402
Trans Name:	ADVANCED CLEANUP TECHNOLOGIES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	CROSBY & OVERTON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	331 - Off-specification, aged, or surplus organics
RCRA Code:	D001
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.02
Waste Quantity:	40
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20070530
Creation Date:	10/18/2007 18:30:24
Receipt Date:	20070605
Manifest ID:	000070884JJK
Trans EPA ID:	CAD983620402

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Trans Name:	ADVANCED CLEANUP TECHNOLOGIES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	CROSBY & OVERTON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	141 - Off-specification, aged, or surplus inorganics
RCRA Code:	D008
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.025
Waste Quantity:	50
Quantity Unit:	P
Additional Code 1:	D002
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20070322
Creation Date:	8/19/2007 18:30:34
Receipt Date:	20070323
Manifest ID:	002199715JJK
Trans EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.0375
Waste Quantity:	75
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2015
Gen EPA ID:	CAL000078604
Shipment Date:	20151109
Creation Date:	Not reported
Receipt Date:	Not reported
Manifest ID:	014865491JJK
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	CAD983649880
Trans 2 Name:	PSC ENVIRONMENTAL SERVICES OF POMONA LP

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.0355
Waste Quantity:	71
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20151109
Creation Date:	Not reported
Receipt Date:	Not reported
Manifest ID:	014865491JJK
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	CAD983649880
Trans 2 Name:	PSC ENVIRONMENTAL SERVICES OF POMONA LP
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.0605
Waste Quantity:	121
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20151109
Creation Date:	Not reported
Receipt Date:	Not reported
Manifest ID:	014865491JJK
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	CAD983649880
Trans 2 Name:	PSC ENVIRONMENTAL SERVICES OF POMONA LP
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	331 - Off-specification, aged, or surplus organics
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Quantity Tons:	0.148
Waste Quantity:	296
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20151109
Creation Date:	Not reported
Receipt Date:	Not reported
Manifest ID:	014865491JJK
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	CAD983649880
Trans 2 Name:	PSC ENVIRONMENTAL SERVICES OF POMONA LP
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.0265
Waste Quantity:	53
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20151109
Creation Date:	Not reported
Receipt Date:	Not reported
Manifest ID:	014865491JJK
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	CAD983649880
Trans 2 Name:	PSC ENVIRONMENTAL SERVICES OF POMONA LP
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D035
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.0215
Waste Quantity:	43
Quantity Unit:	P
Additional Code 1:	D007
Additional Code 2:	D006
Additional Code 3:	D005
Additional Code 4:	D001
Additional Code 5:	Not reported

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Shipment Date:	20151109
Creation Date:	1/19/2016 22:15:12
Receipt Date:	20151113
Manifest ID:	014865491JJK
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	CAD983649880
Trans 2 Name:	PSC ENVIRONMENTAL SERVICES OF POMONA LP
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	213 - Hydrocarbon solvents (benzene, hexane, Stoddard, etc.
RCRA Code:	D018
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.2445
Waste Quantity:	489
Quantity Unit:	P
Additional Code 1:	D001
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20151109
Creation Date:	Not reported
Receipt Date:	Not reported
Manifest ID:	014865491JJK
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	CAD983649880
Trans 2 Name:	PSC ENVIRONMENTAL SERVICES OF POMONA LP
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D035
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.0785
Waste Quantity:	157
Quantity Unit:	P
Additional Code 1:	D007
Additional Code 2:	D006
Additional Code 3:	D005
Additional Code 4:	D001
Additional Code 5:	Not reported

Shipment Date:	20151109
Creation Date:	1/19/2016 22:15:12
Receipt Date:	20151113
Manifest ID:	014865491JJK
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	CAD983649880
Trans 2 Name:	PSC ENVIRONMENTAL SERVICES OF POMONA LP
TSDF EPA ID:	CAD008364432

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.017
Waste Quantity:	34
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20151109
Creation Date:	1/19/2016 22:15:12
Receipt Date:	20151113
Manifest ID:	014865491JJK
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	CAD983649880
Trans 2 Name:	PSC ENVIRONMENTAL SERVICES OF POMONA LP
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.017
Waste Quantity:	34
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20151109
Creation Date:	1/19/2016 22:15:12
Receipt Date:	20151113
Manifest ID:	014865491JJK
Trans EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
Trans 2 EPA ID:	CAD983649880
Trans 2 Name:	PSC ENVIRONMENTAL SERVICES OF POMONA LP
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.009

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Waste Quantity: 18
Quantity Unit: P
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

CERS:
Name: XPO LOGISTICS FREIGHT, INC.-UIV
Address: 20697 PRISM PL
City,State,Zip: LAKE FOREST, CA 92630
Site ID: 107675
CERS ID: 10449481
CERS Description: Chemical Storage Facilities

Violations:
Site ID: 107675
Site Name: XPO Logistics Freight, Inc.-UIV
Violation Date: 05-06-2016
Citation: 23 CCR 16 2638 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2638
Violation Description: Failure to test leak detection equipment as required every 12 months (VPH, sensor, LLD, ATG, etc.) and/or submit monitoring system certification to the CUPA within 30 days of completion of the test
Violation Notes: Returned to compliance on 05/11/2016. This agency has not received a copy of of monitoring system certification report for tests conducted on 3/2/16. Please be advised that test results must be submitted to this agency within 30 days of testing. A copy of test results must be submitted to this agency by 5/20/16. Failure to submit test results may result in further enforcement action.
Violation Division: Orange County Environmental Health
Violation Program: UST
Violation Source: CERS

Site ID: 107675
Site Name: XPO Logistics Freight, Inc.-UIV
Violation Date: 03-03-2014
Citation: HSC 6.7 25286(a) - California Health and Safety Code, Chapter 6.7, Section(s) 25286(a)
Violation Description: Failure to prepare, maintain, and submit accurate CUPA UST Operating Permit Application for Facility information and/or Tank information.
Violation Notes: Returned to compliance on 03/05/2014. A copy of the monitoring plan is not available on site. Please submit a copy of the monitoring plan to this Agency within 30 days of this inspection.
Violation Division: Orange County Environmental Health
Violation Program: UST
Violation Source: CERS

Site ID: 107675
Site Name: XPO Logistics Freight, Inc.-UIV
Violation Date: 08-25-2014
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description: Failure to complete and electronically submit a site map with all required content.
Violation Notes: Returned to compliance on 04/13/2015. Please be advised that in the

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

inspection report dated 3/3/14, this Agency requested electronic submittal of site map. To date, the site map has not been submitted. The site map must be submitted within 30 days of this inspection.
Violation Division: Orange County Environmental Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 107675
Site Name: XPO Logistics Freight, Inc.-UIV
Violation Date: 11-05-2014
Citation: 23 CCR 16 2637(e) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2637(e)
Violation Description: Failure to submit a copy of the secondary containment test results to the CUPA within 30 days after the test.
Violation Notes: Returned to compliance on 06/26/2015. Results of secondary containment test (SB989) for activities conducted on 8/15/14, have not been received by this Agency within 30 days of testing. A copy of the secondary containment testing report form must be submitted to this Agency within 30 days of this inspection report.
Violation Division: Orange County Environmental Health
Violation Program: UST
Violation Source: CERS

Site ID: 107675
Site Name: XPO Logistics Freight, Inc.-UIV
Violation Date: 01-26-2012
Citation: 2014-0057-DWQ - Industrial General Permit
Violation Description: SW - Denied Access
Violation Notes: The on-site manager would not allow inspection or review of SWPPP without presence of safety staff. Safety staff is located in Fontana.
Violation Division: Water Boards
Violation Program: INDSTW
Violation Source: SMARTS

Site ID: 107675
Site Name: XPO Logistics Freight, Inc.-UIV
Violation Date: 05-07-2019
Citation: HSC 6.75 25299.30-25299.34 - California Health and Safety Code, Chapter 6.75, Section(s) 25299.30-25299.34
Violation Description: Failure to submit and maintain complete and current Certification of Financial Responsibility or other mechanism of financial assurance.
Violation Notes: Returned to compliance on 05/09/2019. Certification of financial responsibility (CFR) for this facility expired on 4/1/19. This agency requested electronic submittal of valid/current CFR by 4/1/19 during onsite inspection conducted on 3/1/19. To date, CFR has not been submitted electronically. Copies of valid CFR must be electronically submitted and be provided to the facility within 30 days of this inspection.
Violation Division: Orange County Environmental Health
Violation Program: UST
Violation Source: CERS

Site ID: 107675
Site Name: XPO Logistics Freight, Inc.-UIV
Violation Date: 03-03-2015
Citation: 23 CCR 16 2638 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2638

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Violation Description:	Failure to test leak detection equipment as required every 12 months (VPH, sensor, LLD, ATG, etc.) and/or submit monitoring system certification to the CUPA within 30 days of completion of the test
Violation Notes:	Returned to compliance on 04/30/2015. The last monitoring system certification test conducted at this facility was on 3/3/14. Monitoring system certification must be conducted annually. Monitoring system certification must be scheduled and conducted within 30 days of this inspection report. Notify this Agency 48 hours in advance of testing.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	04-30-2015
Citation:	23 CCR 16 2638 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2638
Violation Description:	Failure to test leak detection equipment as required every 12 months (VPH, sensor, LLD, ATG, etc.) and/or submit monitoring system certification to the CUPA within 30 days of completion of the test
Violation Notes:	Returned to compliance on 06/26/2015. Monitoring system certification activities were performed at the facility on 3/20/15. A copy of the monitoring system certification report must be submitted to this Agency within 30 days of testing. To date, this Agency has not received a copy of the report. A copy of this report must be submitted by 5/15/15.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	03-03-2015
Citation:	HSC 6.7 25284.2 - California Health and Safety Code, Chapter 6.7, Section(s) 25284.2
Violation Description:	Failure to test the spill bucket annually.
Violation Notes:	Returned to compliance on 04/30/2015. The last spill bucket test conducted at this facility was on 3/3/14. Spill bucket must be tested annually. Spill bucket test must be scheduled and conducted within 30 days of this inspection report. Notify this Agency 48 hours in advance of testing.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	05-04-2017
Citation:	23 CCR 16 2715(i) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(i)
Violation Description:	Failure to have a properly qualified service technician test leak detection equipment as required every 12 months (vapor, pressure, hydrostatic (VPH) system, sensors, line-leak detectors (LLD), automatic tank gauge (ATG), etc.).
Violation Notes:	Returned to compliance on 05/26/2017. Please be advised that this agency has not received a copy of monitoring system certification

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

report for tests conducted on 3/13/17. Test results must be submitted to this agency within 30 days of testing. A copy of monitoring system certification report must be submitted to this agency by 5/18/17 to avoid enforcement action.

Violation Division: Orange County Environmental Health
Violation Program: UST
Violation Source: CERS

Site ID: 107675
Site Name: XPO Logistics Freight, Inc.-UIV
Violation Date: 03-03-2014
Citation: HSC 6.7 25286(a) - California Health and Safety Code, Chapter 6.7, Section(s) 25286(a)
Violation Description: Failure to prepare, maintain, and submit accurate CUPA UST Operating Permit Application for Facility information and/or Tank information.
Violation Notes: Returned to compliance on 03/05/2014. UST Facility and tank pages are not available on site. Please submit copies of these forms to this Agency within 30 days of this inspection.
Violation Division: Orange County Environmental Health
Violation Program: UST
Violation Source: CERS

Site ID: 107675
Site Name: XPO Logistics Freight, Inc.-UIV
Violation Date: 04-30-2015
Citation: HSC 6.7 25286(a) - California Health and Safety Code, Chapter 6.7, Section(s) 25286(a)
Violation Description: Failure to submit an complete and accurate application for a permit to operate an underground storage tank, or for renewal of the permit.
Violation Notes: Returned to compliance on 07/11/2015. UST documents submitted to CERS on 10/9/13, 3/4/14, 9/25/14 and 3/10/15 have not been accepted due to inaccurate information. All requested corrections must be made within 30 days of this inspection report.
Violation Division: Orange County Environmental Health
Violation Program: UST
Violation Source: CERS

Site ID: 107675
Site Name: XPO Logistics Freight, Inc.-UIV
Violation Date: 08-25-2014
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description: Failure to complete and electronically submit hazardous material inventory information for all reportable hazardous materials on site at or above reportable quantities.
Violation Notes: Returned to compliance on 04/13/2015. Please be advised that in the inspection report dated 3/3/14, this Agency requested electronic submittal of hazardous materials inventory forms for hazardous materials at or above the thresholds quantities of 55 gallons/500 lbs/200 cubic feet. To date, this information has not been submitted. The requested forms must be submitted within 30 days of this inspection.
Violation Division: Orange County Environmental Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 107675

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	03-02-2016
Citation:	HSC 6.75 25299.30-25299.34 - California Health and Safety Code, Chapter 6.75, Section(s) 25299.30-25299.34
Violation Description:	Failure to submit and maintain complete and current Certification of Financial Responsibility or other mechanism of financial assurance.
Violation Notes:	Returned to compliance on 03/13/2017. Certification of financial responsibility expired on 12/31/15 and has previous owner's information. A valid certification of financial responsibility with current owner information must be submitted within 30 days of this inspection.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	03-03-2017
Citation:	23 CCR 16 2715(i) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(i)
Violation Description:	Failure to have a properly qualified service technician test leak detection equipment as required every 12 months (vapor, pressure, hydrostatic (VPH) system, sensors, line-leak detectors (LLD), automatic tank gauge (ATG), etc.).
Violation Notes:	Returned to compliance on 03/13/2017. Please be advised that this Agency has reviewed the file for this facility. The last monitoring system certification testing for this facility was conducted on 3/2/16. Monitoring system certification test must be conducted annually. To date, this Agency has not received a notification for scheduled testing or a copy of the monitoring system certification report documenting that the test was conducted. The monitoring system certification test must be scheduled and conducted within 30 days of this inspection report to avoid any enforcement action.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	03-01-2019
Citation:	23 CCR 16 2716(a) through (e) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2716(a) through (e)
Violation Description:	For designated operator (DO) monthly inspections conducted before October 1, 2018, failure to comply with one or more of the following requirements: Be performed by an ICC certified DO. Inspect monthly alarm history report, check that alarms are documented and responded to appropriately, and attach a copy. Inspect for the presence of liquid/debris in spill containers. Inspect for the presence of liquid/debris in under dispenser containment (UDC) and ensure that the monitoring equipment is positioned correctly. Inspect for liquid or debris in containment sumps where an alarm occurred with no service visit. Check that all testing and maintenance has been completed and documented. Verify that all facility employees have been trained in accordance with 23 CCR 2715(c). For designated operator (DO) 30 day inspections conducted on and after October 1, 2018, failure to conduct the designated UST operator visual inspection at least once every 30 days.

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Violation Notes:	Returned to compliance on 05/16/2019. Please be advised that overfill inspection was not conducted on 10/12/18, as listed in monthly inspection reports dated in October 2018 through February 2019, since drop tube could not be removed on that date. Please correct date for last Overfill Prevention Equipment Inspection conducted at this facility to 3/1/19 on those reports.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	07-01-2005
Citation:	2014-0057-DWQ - Industrial General Permit
Violation Description:	SW - Late Report
Violation Notes:	Failure to submit 04-05 Annual Report by 7/1/05.
Violation Division:	Water Boards
Violation Program:	INDSTW
Violation Source:	SMARTS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	08-25-2014
Citation:	HSC 6.95 25508(d) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(d)
Violation Description:	Failure to complete and/or electronically submit a business plan when storing/handling a hazardous material at or above reportable quantities.
Violation Notes:	Returned to compliance on 04/13/2015. Please be advised that in the inspection report dated 3/3/14, this Agency requested electronic submittal of hazardous business emergency plan. To date, this information has not been submitted. Emergency plan must be submitted within 30 days of this inspection.
Violation Division:	Orange County Environmental Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	03-13-2017
Citation:	HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Description:	Failure to annually review and electronically certify that the business plan is complete and accurate on or before the annual due date.
Violation Notes:	Returned to compliance on 04/07/2017. Annual Hazardous Materials Business Plan (HMBP) have not been submitted. Please be advised that HMBP documents must be submitted annually by March 1st. HMBP documents must be submitted within 30 days of this inspection.
Violation Division:	Orange County Environmental Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	10-18-2017
Citation:	23 CCR 16 2637(e) - California Code of Regulations, Title 23, Chapter

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

16, Section(s) 2637(e)
Violation Description: Failure to submit a copy of the secondary containment test results to the CUPA within 30 days after the test.
Violation Notes: Returned to compliance on 01/12/2018. This agency has not received a copy of secondary containment test results within 30 days of testing. Notification dated 7/17/17 sent to this agency indicated that secondary containment test was scheduled for 8/7/17. A copy of secondary containment testing report form must be submitted to this agency by 11/1/17 to avoid further enforcement action.
Violation Division: Orange County Environmental Health
Violation Program: UST
Violation Source: CERS

Evaluation:
Eval General Type: Other/Unknown
Eval Date: 09-11-2014
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: I received a copy of Monitoring System Certification report for test conducted on 8/28/14 after completion of modification activities, replacing Veeder Root panel and sump sensor. All components monitored by the panel passed test. As stated in the inspection report dated 8/28/14, an updated monitoring plan documenting the installation of the Veeder Root panel and sump sensor must be submitted by 9/25/14.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 11-30-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Documents submitted to CERS on 11/25/15 indicate change of ownership. New Owner is XPO Logistics Freight, Inc. Form was submitted to add new owner to program.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 05-09-2019
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Documents submitted to CERS on 5/7/19, included updated copy of Certification of Financial Responsibility (CFR) with coverage period from 4/1/19 to 4/1/20. Violation I583 regarding failure to submit current CFR, cited in the inspection report dated 5/7/19, has been corrected.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 05-22-2018
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: I received a copy of Monitoring System Certification, Line Leak

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

	Detector Test Form and Spill Bucket Testing Report Form for activities conducted on 3/2/18. All components passed test.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	06-02-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I received email from Pamela Nixon, company headquarter, in response to letter stating that facility will not be receiving UST permit. I emailed her another copy of the 5/26/17 F04 report stating (that was both emailed and mailed to ther) that violation was corrected and facility would be receiving permit.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	07-11-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 6/11/15, 6/12/15 and 6/30/15 were reviewed and declined with the following considerations: Diesel Exhaust Fluid: G YesG for G FireG under Federal Hazard Categories section should be deleted since this mixture is mostly water. Propane form must be revised as follows: - Chemical Name and Common Name are reversed. Liquefied Petroleum Gas is the Chemical Name. - Physical State must be changed from G GasG to G Liquid.G - Fire Code Hazard Classes must be changed from G Flammable GasG to G Flammable Liquefied Gas.G - Storage Pressure must be changed from G AmbientG to G Above Ambient.G Windshield Washer Fluid: An MSDS/SDS was not submitted as requested. Therefore, the accuracy of the information cannot be verified. Please submit SDS for this material. Hazardous Material Inventory forms for the following material, reported in previous in submittals and/or observed during onsite inspection must be submitted: - Antifreeze - Motor Oil - [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	08-07-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	SB 989 test notification
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	08-25-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	The documents submitted to CERS on 3/4/14 have been reviewed and not accepted with the following considerations: G Monitor Panel

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

ManufacturerG , G Monitor Panel ModelG , G Leak Sensor ManufacturerG and G Leak Sensor ModelG information is not listed in the G Continuous Electronic Tank MonitoringG section of the Underground Storage G Monitoring Plan (Tank Monitoring) G Monitor Panel ManufacturerG , G Monitor Panel ModelG , G Leak Sensor ManufacturerG and G Leak Sensor ModelG information is not listed in the G Continuous Monitoring off Piping Secondary ContainmentG section of the Underground Storage G Monitoring Plan (Pipe Monitoring) The site map does not show the locations of the piping, dispenser, sensors, emergency shut off or the monitoring panel. Underground Storage Tank - Response Plan, a copy of Owner Statements of Designated Underground Storage Tank (UST) Operator (DO) and Certification of Financial Responsibility must also be submitted.

Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 11-05-2014
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Inspector Comments: Please be advised that this Agency received a notification that secondary containment testing (SB989) was scheduled for 8/15/14. Test results must be submitted to this Agency within 30 days of testing. To date, a copy of the test results have not been received by this Agency. A copy of test results must be submitted to this Agency within 30 days of this inspection report report.

Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 11-30-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Documents submitted to CERS on 11/25/15 indicate change of ownership. New Owner is XPO Logistics Freight, Inc. Form was submitted to add new owner to program. Business Activities form was not accepted since previous owner's (Con-way Freight, Inc.) EPA ID# in listed for new business.

Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 11-30-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Documents submitted to CERS on 11/25/15 were reviewed and not accepted with the following considerations: - EPA ID# CAL000078604 listed on Business Activities form is assigned to former business owner, Con-Way Freight, Inc. This business must obtain a new EPA ID#. - Windshield Washer Fluid. Based on a copy of SDS submitted on 7/29/15, the G Hazardous ComponentG for this material is Methanol. Therefore, G MethanolG with CAS# G 67-56-1G at G 1G % by weight should be listed in Mixture Component section. - Motor Oil form must be revised as follows: - Hazardous Material Type must be changed from G PureG to G

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

	MixtureG since Mixture Components are provided. - Fire Code Hazard Classes must be changed from G Combustible Liquid, Class IIG to G Combustible Liquid, Class III-B.G - CAS# 6474X-XX-X listed for G Various Lubricating Base OilsG in Mixture Components section is not acceptable, especially that this material is the main component at 85%. All digits of the CAS# must be [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	11-30-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 11/25/15 were reviewed and not accepted with the following considerations: Board of Equalization Account Number (44036723) was assigned to former business owner, Con-Way Freight, Inc. Due to change in ownership, a new BOE# must obtained. Name of the former business is listed on the UST Certification of Financial Responsibility (CFR) form. Updated CFR form with new business name must be submitted. In addition, the former businessG s G Letter From Chief Financial OfficerG has been submitted. An updated CFO letter should be submitted.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	12-09-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Change status to receive a permit, per Arghavan.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-24-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Comments on Business Activities form submitted to CERS stated that Con-way Freight, Inc has undergone a legal name change to XPO Logistics Freight, Inc. This is still the same company with the same Tax ID number. The EPA ID number will be updated to reflect the name change, but it will not be a new number.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-02-2016
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to witness monitoring system certification testing activities and to conduct routine UST inspection. The annular and turbine sump sensors alarmed properly (visual and audible) and shut down turbine when submerged in water. Fill sump is not monitored

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since spill bucket is direct bury. UDC has Bravo box has float and chain mechanism. Water was poured in the UDC and the float and chain functioned properly. Fail-safe, sensor out and emergency shut off were tested and passed. Line leak detectors was tested and passed. Site has flappers for overfill prevention. Spill bucket is direct bury. It will be tested at a later date since technician did not have equipment to test it. Valid permit, designated operator documentation, monthly inspection reports, response plan, employee training records, monitoring plan, tank page, certification of financial responsibility (expired on 12/31/15 and has previous owner's information), copies of [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-03-2015
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Inspector Comments: Please be advised that this Agency has reviewed the file for this facility. The last monitoring system certification and spill bucket testing for this facility was conducted on 3/3/14. Monitoring system certification and spill bucket tests must be conducted annually. To date, this Agency has not received a notification for scheduled testing or a copy of monitoring system certification report that the test was conducted. Monitoring system certification and spill bucket test must be scheduled and conducted within 30 days of this inspection report. Notify this Agency 48 hours in advance of testing.

Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-03-2017
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Please be advised that this Agency has reviewed the file for this facility. The last monitoring system certification testing for this facility was conducted on 3/2/16. Monitoring system certification test must be conducted annually. To date, this Agency has not received a notification for scheduled testing or a copy of the monitoring system certification report documenting that the test was conducted. The monitoring system certification test must be scheduled and conducted within 30 days of this inspection report to avoid any enforcement action.

Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-04-2014
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: I reviewed UST submittal in CERS and did not approve it with the following considerations: The following sections in the Underground Storage - Tank Information are either not listed correctly or not

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included: - Overfill protection section under G Tank ConstructionG is not complete. Site has G Fill Tube Shut-Off valveG - The Piping System type is not correct and the Secondary Containment Type is not listed The following sections in the Underground Storage G Monitoring Plan are either not listed correctly or not included: - The Monitor Panel Manufacturer, panel model, sensor manufacturer and model information are not listed under G Tank Monitoring Section.G - The Monitor Panel Manufacturer, panel model, sensor manufacturer and model information are not listed under G Piping Monitoring Section.G - Line Leak Detector information is not listed under G Piping Monitoring Section.G - Periodic System Testing is not included - Recordkeeping information not included - Training [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-09-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Monitor cert notification for 3-10-17
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-13-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to witness monitoring system certification testing activities and to conduct routine UST inspection. Annular and turbine sump sensors alarmed properly (visual and audible) and shut down turbine when submerged in water. Fill sump is not monitored since spill bucket is direct bury. UDC has Bravo box has float and chain mechanism. Water was poured in the UDC and the float and chain functioned properly. Fail-safe and sensor out were tested and passed. Line leak detectors was tested and passed. Site has flappers for overfill prevention. Spill bucket was tested using instrument and passed two consecutive 15 minute tests. Valid permit, designated operator documentation, monthly inspection reports, response to alarms, response plan, employee training records, monitoring plan, tank page, certification of financial responsibility (coverage from 4/1/16 to 3/31/17 with XPO Logistics listed on insurance policy), copies of monitoring system and [Truncated]
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-14-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed documents submitted to CERS on 3/7/17. Accepted Facility Information page after checking BOE website and saw that the profile has been updated with current owner information. Tank Infomation was not accepted and the following need to be addressed: - Vent/Vapor Recovery (VR) and Riser/Fill Piping Construction section must be

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completed. - G YesG must be checked for G IsolationG under Corrosion Protection section.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-15-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Received email from company headquarters contact stating that new BOE# was not obtained since they did not have to obtain a new Federal Tax ID#. I emailed her back stating that I was not aware the Federal Tax ID# makes a difference in not having to obtaining State BOE# and that it appears that two corporations merged or one took over the other business or a parent company took over a subsidiary and that is considered ownership change. I notified her that BOE# matter will not be pursued since my comments are in CERS.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-15-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed and accepted revised tank information page submitted to CERS on 3/15/17.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-20-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspected UST facility with Kevin Jansen. Double walled tanks with pressurized piping and leak detector. Sump sensor appeared to be at the low point and the Bravo Box float was dry. Site has flappers for overfill prevention. Valid permit, designated operator documentation, monthly inspection reports, response plan, employee training records, certification of financial responsibility, copies of monitoring system certification and secondary containment reports are available for review. Copies of electronically submitted monitoring plan and tank page were not available on site. Results of secondary containment test (SB989) for activities conducted on 8/15/14, still have not been received by this agency. copy to: pickford.joseph@con-way.com
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 04-13-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Documents submitted to CERS on 3/10/15 (three submitals) were reviewed and declined with the following considerations: G Days on SiteG for

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all reported material should be changed from G 352G to G 365G days unless material is taken off site for 13 days. Heavy Vacuum Gas Oil: Federal Hazard Categories is not listed and must added. Windshield Washer Fluid form must be revised as follows: - Chemical Name (Windshield Washer Fluid) should be listed. - This material is reported as G pureG but a CAS# is not listed. If it has CAS# then is should be listed. If it is a G mixtureG , then the solutionG s G Hazardous Component Name, CAS# and % by WeightG must be listed in G Mixture ComponentG section. - Fire Code Hazard Classes must be listed Transmission Fluid is must be removed since the volume stored on site is below reportable quantity of 55 gallons. Diesel Exhaust Fluid form must be revised as follows: - Chemical Name (Diesel Exhaust Fluid) should be listed - This [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 04-30-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Documents submitted to CERS on 4/15/15 were reviewed and not accepted with the following considerations: Diesel Exhaust Fluid form must be revised as follows: - Fire Code Hazard Classes must be changed from G Combustible Liquid, Class IIG to G Toxic.G - G YesG should be deleted for Federal Hazard Categories since the mixture is mostly water. Windshield Washer Fluid form must be revised as follows: - G Windshield Washer FluidG should be listed as the Chemical Name. - This material is reported as G pureG and CAS# for antifreeze is listed. Generally this material is a G mixtureG and does not have a CAS#. If it is a G pureG material, then the correct CAS# should be listed. If it is a mixture, then G Hazardous Component Name, CAS# and % by WeightG for at least one component must be listed in G Mixture ComponentG section. - Fire Code Hazard Classes for this type material is usually G ToxicG , not G Combustible Liquid, Class IIG as reported. MSDS should be reviewed and correct [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 05-06-2016
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Inspector Comments: This agency has not received a copy of monitoring system certification report for tests conducted on 3/2/16. Please be advised that test results must be submitted to this agency within 30 days of testing. A copy of test results must be submitted to this agency by 5/20/16.

Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-26-2012
Violations Found: Yes
Eval Type: Industrial Storm Water Compliance Evaluation

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Eval Notes:	Weather: sunny and cool. On entry, explained to front office staff that I was there to conduct a storm water inspection. Staff person went to back office, returned, and instructed me to go out back. I asked to see the SWPPP. Staff appeared confused and brought me to the manager, John Heilman, who then told me that I could not go out back unless their safety staff, Don Anderson, was present. He explained that Mr. Anderson was "domiciled" in Fontana and I would need to make an appointment. Mr. Heilman stated that this was their policy and acknowledged that he was responsible for implementing the SWPPP. He declined to allow me to review the SWPPP unless Mr. Anderson was present and again explained that this was their policy.
Eval Division:	Water Boards
Eval Program:	INDSTW
Eval Source:	SMARTS
Eval General Type:	Other/Unknown
Eval Date:	02-16-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Monitor cert notification
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	05-07-2019
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I received and reviewed copies of Monitoring System Certification Form, Spill Container Testing Report Form and Overfill Prevention Equipment Inspection Report Form for activities conducted on 3/1/19. All components passed test. Certification of financial responsibility (CFR) for this facility expired on 4/1/19. This agency requested electronic submittal of valid/current CFR by 4/1/19 during onsite inspection conducted on 3/1/19. To date, CFR has not been submitted electronically. Copies of valid CFR must be electronically submitted and be provided to the facility within 30 days of this inspection.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	05-22-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Change UST status to not get a permit, per Arghavan.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	06-12-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 6/2/15 were reviewed and declined with the following considerations: Diesel Exhaust Fluid form must be revised as follows: -Chemical Name and Common Name are reversed.

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Common Name is Diesel Exhaust Fluid. - CAS# listed in Chemical Identification & Physical Properties section must be removed since this a mixture. - Fire Code Hazard Classes must be changed from G Combustible Liquid, Class IIG to G Toxic.G - G YesG should be deleted for Federal Hazard Categories since this mixture is mostly water. - DOT Hazard Class is not correct since the mixture is mostly water. Two forms have been submitted for Ethylene Glycol/Windshield Washer Fluid. Only one form is required for each material. One must be deleted. Windshield Washer Fluid form must be revised as follows: - Please provide a SDS for this material to verify constituents. - The Common Name must be changed to G Windshield Washer FluidG and if the mixture contains ethylene glycol, [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 07-11-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Inspector Comments: Documents submitted to CERS on 6/30/15 were reviewed and accepted. Violation I582 regarding not submitting accurate UST documents electronically cited in this agency's inspection report dated 4/30/15, has been corrected. UST Permit to Operate will be issued for this facility.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 08-21-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Received a copy of partial monitoring system certification report documenting installation of a mechanical drop tube overfill prevention valve on 8/8/17.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 02-24-2020
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to conduct hazardous materials chemical inventory and business emergency plan inspection. Joe Pickford granted consent to conduct inspection. I walked through facility and inspected hazardous material storage areas throughout facility. There has been no changes in types and/or volumes of the hazardous material stored on site since last inspection or previous reporting period. Volume of Diesel Exhaust Fluid is below disclosure threshold of 550 gallons required for this material (Irritant/Sensitizer) and should be removed from reporting in your next submission. Facility stores the following hazardous materials at disclosure threshold: - 55 gallons of new antifreeze - 55 gallons of new motor oil - 110 gallons of windshield washer fluid - 192 gallons of propane - 10000 gallons of diesel Hazardous materials management training is provided annually and records are available for

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	review. Emergency contact information and procedures (spill are [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-26-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Monitor cert notification
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-02-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct routine hazardous waste inspection. Kevin Jansen granted consent to conduct inspection. Due to change in ownership (verified during inspection), a new EPA ID# must be obtained for this facility. Waste is generated when packages/boxes are broken during shipping. I walked through the facility, perimeter and inspected waste storage areas. Waste paint drum is stored closed and labeled. Manifests were reviewed. Emergency number is posted throughout the facility.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-02-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	I walked through facility and inspected waste storage area in the dock and by shed in fuel dispenser area. I did not observe any hazardous waste in trash cans throughout the dock or the dumpster at the end of the dock. Hazardous waste drums in dock and fuel dispenser area are stored closed and labeled. Manifests were reviewed. Emergency contact information and procedures (spill cleanup) is posted throughout the facility.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-03-2014
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	On site to witness monitoring system certification testing activities and to conduct routine UST inspection. The sump sensor alarmed properly (visual and audible) and shut down turbine when submerged in water. The annular sensor alarmed properly (visual and audible) and shut down turbine when submerged in water UDC has Bravo box with float and chain mechanism. Water was poured in the UDC and the float and chain functioned properly. Fail-safe, sensor out and emergency shut

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	off were tested and passed. Line leak detectors was not witnessed by this Agency since the test port could not be removed. The technician was going to continue to try to remove the test port to test the line leak detector. Site has flappers for overfill prevention. Spill bucket is direct bury and was tested with an Incon. The spill bucket passed two consecutive 15 minute tests. Valid permit, designated operator documentation, monthly inspection reports, response plan, employee [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-04-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Monitor cert notification
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-08-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I received email from company contact, Pamela Nixon, in response to inspection report with violation regarding failure to conduct annual monitoring system certification within 365 days of last test. A copy of monitoring system report for tests conducted on 2/21/17 was attached to the email. I was not on site since I had not received notification. I checked UST Notification Calendar and site history (7800 report) to determine if this agency received notification of testing. Notification was not received. I emailed Pamela back explaining that notification for testing was not received by this agency and that test must be conducted again so that it can be witnessed by this agency. I received notification to conduct test on 3/13/17.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-09-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Went to site to witness monitor certification as notified and conduct routine UST inspection. Testers were not on site. I called testing company, Tanknology, and was told that technician is running late. Monitor certification will be rescheduled for another day.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-14-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency

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Eval Notes:	I highlighted tank information page with areas that corrections are needed and emailed it to company's CERS contact. I also included comment that Facility Information was accepted even though this conpany did not obtain their own BOE#.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-30-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 3/28/17 were reviewed. Emergency plan was not accepted since CUPA phone # was not listed.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	04-30-2015
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector Comments: Monitoring system certification activities were performed at the facility on 3/20/15. A copy of the monitoring system certification report must be submitted to this Agency within 30 days of testing. To date, this Agency has not received a copy of the report. A copy of this report must be submitted by 5/15/15. Violation I205, regarding not conducting monitoring system certification activities cited in the inspection report dated 3/3/15, has been corrected. However, the violation listed above if for not submitting a copy of the monitoring system certification report. In addition, this Agency has requested corrections of UST documents submitted to CERS on 10/9/13, 3/4/14, 9/25/14 and 3/10/15. All corrections must be made within 30 days if this inspection report. Please be advised that this facility also has an outstanding violation, cited on 11/5/14, regarding not submitting results of Secondary Containment Testing to this Agency within 30 days of [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-24-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Facility Information and Hazardous Materials Inventory documents submitted to CERS on 2/22/16 were reviewed and accepted. Comment on Business Activities form stated that Con-way Freight, Inc has undergone a legal name change to XPO Logistics Freight, Inc. This is still the same company with the same Tax ID number. Emergency Plan was not updated/resubmitted. I emailed contact requesting that emergency plan be updated with CUPA phone# and resubmitted.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection

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Eval Date:	02-24-2020
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to witness monitoring system certification testing activities and to conduct routine UST inspection. Joe Pickford granted consent to conduct inspection. Annular and turbine sump sensors alarmed properly (visual and audible) and shut down turbine when submerged in water. Fill sump is not monitored since spill bucket is direct bury. UDC has Bravo box has float and chain mechanism. Water was poured in the UDC and the float and chain functioned properly. Fail-safe and sensor out were tested and passed. Line leak detector was tested and passed. Overfill prevention method for this facility is Fill Tube Shut-Off Valve. Overfill Prevention Equipment Inspection was conducted on 3/1/19. Spill bucket was tested visually without any changes in water level. Valid permit, designated operator documentation, monthly inspection reports, response to alarms, response plan, employee training records, monitoring plan, tank page, certification of financial [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-01-2019
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Joe Pickford granted consent to conduct inspection. I walked through facility and inspected waste storage area in the dock and by shed in fuel dispenser area. I did not observe any hazardous waste in trash cans throughout the dock or the dumpster at the end of the loading dock. Hazardous waste drums in dock and fuel dispenser area are stored closed and labeled. Manifests were reviewed. Emergency contact information and procedures (spill cleanup) is posted throughout the facility.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-02-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to witness monitoring system certification testing activities and to conduct routine UST inspection. Annular and turbine sump sensors alarmed properly (visual and audible) and shut down turbine when submerged in water. Fill sump is not monitored since spill bucket is direct bury. UDC has Bravo box has float and chain mechanism. Water was poured in the UDC and the float and chain functioned properly. Fail-safe, sensor out and emergency shut off were tested and passed. Line leak detectors was tested and passed. Site has flappers for overfill prevention. Spill buckets were tested visually without any changes in water level. Valid permit, designated operator documentation, monthly inspection reports, response to alarms, response plan, employee training records, monitoring plan, tank page, certification of financial responsibility (expires 4/1/18), copies of monitoring system certification and secondary containment (last test conducted on 8/7/17) reports are [Truncated]

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Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-28-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and purged file.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-01-2019
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	On site to witness monitoring system certification testing activities and to conduct routine UST inspection. Joe Pickford granted consent to conduct inspection. Annular and turbine sump sensors alarmed properly (visual and audible) and shut down turbine when submerged in water. Fill sump is not monitored since spill bucket is direct bury. UDC has Bravo box has float and chain mechanism. Water was poured in the UDC and the float and chain functioned properly. Fail-safe, sensor out and emergency shut off were tested and passed. Line leak detectors was tested and passed. Site has flappers for overfill prevention. The Overfill Prevention Equipment Inspection conducted this date was not witnessed by this agency. Spill bucket was tested visually without any changes in water level. Valid permit, designated operator documentation, monthly inspection reports, response to alarms, response plan, employee training records, monitoring plan, tank page, [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-03-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Spill Bucket testing notification
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-03-2014
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct hazardous materials chemical inventory and business emergency plan inspection. I walked through the facility and inspected hazardous materials storage areas. Facility has hazardous materials (diesel, diesel exhaust fluid, new oils, propane tanks) that meet required disclosure quantities. Business Activities form and Owner/Operator Identification forms are available on CERS. Please be advised that the following documents must be also be electronically submitted within 30 days of this inspection: - Hazardous Material

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Chemical Inventory forms - Facility Site Map - Business Emergency Plan
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-03-2014
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to conduct routine hazardous waste inspection. John Heilman granted consent to conduct inspection. Waste is generated when packages/boxes are broken during shipping. I walked through the facility, perimeter and inspected waste storage areas. Debris contaminated with diesel (1), toxic solid (1) and waste aerosols (1) containers are stored closed. The diesel debris drum has a federal label without waste characteristics. I discussed the requirement to include waste characteristics with Mr. Heilman. The toxic solid and aerosol containers were labeled during the inspection. Manifests were reviewed. Emergency number is posted throughout the faciltiy.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-06-2014
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: A copy of updated/completed monitoring plan was obtained from the facility.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-13-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed and accepted Facility Information submitted to CERS on 3/7/17, even though this business owner had DTSC change owner information from former owner information (Conway Freight) to their rather obtaining a new EPA ID#. Included comment regarding EPA ID#s are owner and/or site specific and a new number should have been obtained.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-20-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspected facility with Kevin Jansen, who provided consent to perform an inspection and take pictures as necessary. Hazardous waste container(s) is/are marked: G HAZARDOUS WASTEG , name and address of business, contents, physical state, hazardous property and initial accumulation date. Reviewed hazardous waste disposal receipts/manifests for prior three years. Verified a copy of the

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

uniform hazardous waste manifest is mailed to the state within 30 days of hazardous waste disposal. Verified all universal wastes (fluorescent lamps, high intensity discharge lamps, batteries, etc.) are managed appropriately. copy to: pickford.joseph@con-way.com

Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 04-26-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Documents submitted to CERS on 4/18/16 were reviewed and not accepted since change in ownership was verified during onsite inspection conducted by this agency on 3/2/16. EPA ID# CAL000078604 listed on Business Activities form is assigned to former business owner, Con-Way Freight, Inc. and a new EPA ID# has not been obtained.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 05-11-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Inspector Comments: I received a copy of Monitoring System Certification, Line Leak Detector Test Form and Spill Bucket Testing Report Form for activities conducted on 3/2/16. All components passed test. Violation I205 regarding failure to submit monitoring system certification report within 30 days of testing cited in the inspection report dated 5/6/16, has been corrected. Please be advised that this facility has an outstanding violation regarding failure to submit and maintain a current certification of financial responsibility (CFR), cited during routine inspection conducted on 3/2/16. A copy of current CFR was not available on site. In addition, the copy of CFR submitted to CERS on 4/18/16 was not accepted since a copy of the insurance policy was not included.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 05-26-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Sent email to Susan B. notifying her that violation has been corrected and UST permit may be issued.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 06-26-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Inspector Comments: I reviewed the following documents received on 6/19/15: - Copy of Secondary Containment Testing Report Form (3 year

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SB989) for activities conducted on 8/15/14. All components passed test. Violation I296, regarding secondary containment test results not being submitted within 30 days of testing cited in this agency's inspection report dated 11/5/14, has been corrected. - Copy of Monitoring System Certification, Line Leak Detector Test and Spill Bucket Testing Report Form for activities conducted on 3/18/15. All components passed test. Violation I205, regarding monitoring system certification test results not being submitted within 30 days of testing cited in this agency's inspection report dated 4/30/15, has been corrected.

Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 07-11-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Change status to receive a UST permit, per Arghavan.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 07-15-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Updated monitoring plan documenting the replacement of Veeder Root panel and sump sensor was submitted to CERS on 6/30/15 and approved. Plan Check may be closed.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 08-28-2014
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: On site to witness monitoring system certification test after completion of modification activities (replacing Veeder Root Panel from TLS 300-C to TLS 350). Only components monitored by the Veeder Root panel were tested. The sump sensor (205) was replaced with a 208 sensor since it was not functioning properly. The annular and sump sensors alarmed properly (visual and audible) and shut down respective turbine when submerged in water. An updated monitoring plan documenting the installation of the new Veeder Root panel and sump sensor must be submitted within 30 days of this inspection. Fail-safe, sensor out and emergency shut off were tested and passed.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 11-30-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Documents submitted to CERS on 11/25/15 indicate change of ownership.

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	New Owner is XPO Logistics Freight, Inc. Form was submitted to add new owner to program.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-03-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Submittal status of Facility Information submitted to CERS on 2/22/16 was changed from "Accepted" to "Not Accepted" since information that by submitter that there was a change in DBA is not correct. Change in ownership was verified during onsite inspection conducted on 3/2/16. EPA ID# CAL000078604 listed on Business Activities form is assigned to former business owner, Con-Way Freight, Inc. This business must obtain a new EPA ID#.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-05-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Went to site on follow up inspection to correct outstanding violations, TR02, regarding UST Facility page and tank page not being available on site and TR07, regarding monitoring plan not being available on site, during routine inspection conducted on 3/3/14. All forms are available on site. Violations TR02 and TR07 have been corrected.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-11-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Monitoring Certification notification
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-13-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Joseph Pickford granted consent to conduct inspection. Waste is generated when packages/boxes are broken during shipping. EPA ID# CAL000078604, assigned to previous business, Conway Freight, is being used to haul off hazardous waste rather than obtaining a new EPA ID# after this company took over this business. Owner information has been changed/updated with the state (DTSC). Please be advised EPA ID#s are owner and/or site specific and a new number should have been obtained. I walked through facility and inspected waste storage area in the

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dock. I did not observe any hazardous waste in trash cans throughout the dock or the dumpster at the end of the dock. There is no hazardous waste stored on site currently. Manifests were reviewed. Emergency contact information and procedures (spill cleanup) is posted throughout the facility.

Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-13-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: On site to conduct hazardous materials chemical inventory and business emergency plan inspection. Joseph Pickford granted consent to conduct inspection. I walked through the facility and inspected hazardous material storage areas. There has been no changes in types and/or volumes of the hazardous material stored on site since last inspection or previous reporting period, except for facility stores only one drum of Windshield Washer Fluid. Propane tank is in a locked enclosure. Propane cylinders are on forklifts, in cage and/or on rack. All 55 gallons storing material are in a shed next to fuel island. Safety meeting that include hazardous materials management are held annually. Training records are available for review on site. Emergency contact information and procedures (spill cleanup) is posted throughout the facility. Annual Hazardous Materials Business Plan (HMBP) have not been submitted. Please be advised that HMBP documents must be submitted [Truncated]
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-14-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed documents submitted to CERS on 3/7/17. Submittal was not accepted since G YesG was not checked for G IsolationG under Corrosion Protection section on Tank Information page. Submittal included the following documents: - This business is using BOE# assigned to previous owner (Conway Freight) with profile updated with their information. - Certification of Financial Responsibility with coverage from 4/1/16 to 3/31/17 with XPO Logistics listed on insurance policy. Violation - Updated DO statement.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-23-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: report writing
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

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Eval General Type:	Other/Unknown
Eval Date:	03-27-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I received a copy of Monitoring System Certification, Leak Detector Testing and Spill Bucket Testing Report Form for activities conducted on 3/3/14. All components passed.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	04-07-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and reviewed revised documents submitted to CERS on 3/30/17. Violation I463 regarding failure to annually review and electronically certify HMBP is complete, accurate and up-to-date, cited during inspection conducted on 3/13/17, has been corrected.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	04-13-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents are identical to 9/25/14 submittal that was not accepted. UST - Tank Information Page: - G Secondary ContainmentG and G Piping /Turbine Containment SumpG information in Product/Waste Piping Construction section is not complete. -Fill Components InstalledG in Vent, Vapor Recovery (VR) and Riser/Fill Pipe Piping Construction section must be completed. UST G Monitoring Plan: -G Secondary Containment SystemG , G Monitor Panel ManufacturerG , G Monitor Panel ModelG , G Leak Sensor ManufacturerG and G Leak Sensor ModelG information must be listed in G Tank Monitoring is Performed Using the Following Method(s)G section. -G Piping Secondary ContainmentG , G Panel ManufacturerG , G Panel Model #G , G Leak Sensor ManufacturerG and G Leak Sensor ModelG information must be listed in G Piping Monitoring is Performed Using the Following Method(s) section. At a minimum, G YesG must be listed under G UDC Monitoring Stops Flow of Product at DispenserG in the Under Dispenser Containment [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	04-26-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 4/18/16 were reviewed and not accepted with the following considerations: - Change in ownership was verified during onsite inspection conducted by this agency on 3/2/16. Board of Equalization Account Number (44036723) was assigned to former business owner, Con-Way Freight, Inc. Due to change in ownership, a new BOE# must obtained. - A copy of certification of financial responsibility with coverage period from 4/1/16 to 3/31/16 was submitted but a copy

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	of the tankG s insurance policy was not submitted.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	05-04-2017
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Please be advised that this agency has not received a copy of monitoring system certification report for tests conducted on 3/13/17. Test results must be submitted to this agency within 30 days of testing. A copy of monitoring system certification report must be submitted to this agency by 5/18/17.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	05-16-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Change permit status to Do Not Issue (03) per email from A. Rashidi-Fard dated 5/15/17
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	05-16-2019
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	On site for follow up inspection to correct violation I106 regarding for failure to check that all testing and maintenance has been completed and documented, cited during routine inspection conducted on 3/1/19. Addrian Orssten granted consent to conduct inspection. Date for Overfill Prevention Equipment Inspection has been corrected from 10/12/18 to 3/1/19 on DO reports. Violation I106 has been corrected.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	05-26-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I received a copy of Monitoring System Certification and Spill Bucket Testing Report Form for activities conducted on 3/13/17. All components passed test. Violation I205 regarding failure to submit monitoring system certification report to CUPA within 30 days of testing event, cited in the inspection report dated 5/4/17, has been corrected. Permit to operate the underground storage tank at this facility will be issued.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS

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Eval General Type:	Other/Unknown
Eval Date:	05-30-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Change permit status to Issue Permit (01) per email from A. Rashidi-Fard dated 5/26/17.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	06-12-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 6/2/15 were reviewed and not accepted with the following considerations: G YesG must be listed for G Spill BucketG and G Striker Plate/Bottom ProtectorG for G Fill Component InstalledG under G Vent, Vapor Recovery (VR) And Riser/Fill Pipe Piping ConstructionG section on Tank Information page. The UDC is not monitored by the Veeder Root panel. Therefore, information listed for G UDC Panel ManufacturerG and G UDC Panel Model #G in G Under Dispenser Containment (UDC) MonitoringG on the monitoring plan should be removed. G YesG should be listed for G Equipment Maintenance and Calibration RecordsG under G RecordkeepingG section of the monitoring plan since copies of tank system test results are maintained on site. G YesG should be listed for G Designated Operator TrainingG under G TrainingG section since copies of training records for employees trained by designated operator are maintained on site. G Corrective ActionG section on the Certification [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	08-25-2014
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector Comments: _____ Please be advised that in the inspection report dated 3/3/14, this Agency requested electronic submittal of hazardous materials inventory for hazardous materials at or above the thresholds quantities of 55 gallons/500 lbs/200 cubic feet, business emergency plan and site map. To date, the requested documents have not been submitted. The violations listed above must be complied with, in order to prevent enforcement action.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	09-11-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 7/29/15 were reviewed and declined with the following considerations: Diesel Exhaust Fluid: G YesG under G FireG under Federal Hazard Categories section must be deleted since

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this mixture is mostly water. Based on the provided SDS, Windshield Washer Fluid form must be revised as follows: - As requested previously, G Windshield Washer FluidG should also be listed as the Chemical Name. - The Hazardous Component for this material (listed on SDS) is G MethanolG with CAS# 67-56-1 at 1% by weight. Motor Oil form must be revised as follows: - Hazardous Material Type must be changed from G PureG to G MixtureG since Mixture Components are provided. - Fire Code Hazard Classes must be changed from G Combustible Liquid, Class IIG to G Combustible Liquid, Class III.G - CAS# 6474X-XX-X listed for G Various Lubricating Base OilsG in Mixture Components section is not acceptable, especially that this material is the main component at 85%. All digits [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 10-18-2017
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: This agency has not received a copy of secondary containment test results within 30 days of testing. Notification dated 7/17/17 sent to this agency indicated that secondary containment test was scheduled for 8/7/17. A copy of secondary containment testing report form must be submitted to this agency by 11/1/17.

Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 11-04-2014
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Submittal dated 9/25/14 was reviewed and not accepted with the following considerations: G Piping /Turbine Containment SumpG information in Product/Waste Piping Construction section and G Fill Components InstalledG in Vent, Vapor Recovery (VR) and Riser/Fill Pipe Piping Construction section must be completed. G Secondary Containment SystemG , G Monitor Panel ManufacturerG , G Monitor Panel ModelG , G Leak Sensor ManufacturerG and G Leak Sensor ModelG information must be listed in the Tank Monitoring section of the UST G Monitoring Plan. G Monitor Panel ManufacturerG , G Monitor Panel ModelG , G Leak Sensor ManufacturerG and G Leak Sensor ModelG information must be listed in the Piping Monitoring section of the UST G Monitoring Plan. G NoG must listed for G Detection of Leak into UDC Triggers Audible and Visual AlarmsG , G UDC Leak Alarm Triggers Automatic Pump ShutdownG , G Failure/Disconnection of UDC Monitoring System Triggers Automatic Pump ShutdownG and G YesG must be listed [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 01-12-2018
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: I received a copy of Secondary Containment Testing Report Form (3 year

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SB989) for activities conducted on 8/7/17. All components passed test. Outstanding violation I296 regarding failure to submit test results within 30 days of testing, cited on 10/18/17, has been corrected.

Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 02-07-2001
Violations Found: No
Eval Type: Industrial Storm Water Compliance Evaluation
Eval Notes: On February 7, 2001 Regional Board Staff, Marc Brown conducted a compliance inspection at the above referenced facility. Brown met with Corky Wyrick, the facility contact. The facility is a merchandise transportation hub, which has a single storage area with multiple loading docks surrounding its perimeter. This loading docks lie in the interior of the facility's parking area. The parking area houses numerous semi-tractor trailers awaiting use. At the southeast corner of the facility, near the entrance is a diesel fueling station (UST). This area is equipped with spill kits. Further west, along the fenceline is the facility's propane storage area, where individual propane fuel tanks are stored for use with forklifts. Review of the SWPPP indicated the facility had weekly inspections and employee training (last conducted on 1/16/01). The SWPPP had a facility map, but no flow directions were illustrated. A site walk was conducted and revealed general housekeeping efforts were well maintained. However, further attention was needed around the facility's fenceline, which borders and drains directly into a storm channel. Debris and sediment build up was identified and noted during the walk through. Mr. Wyrick was instructed to include inspecting these areas as part of the routine inspection and maintenance program in the SWPPP.
Eval Division: Water Boards
Eval Program: INDSTW
Eval Source: SMARTS

Enforcement Action:
Site ID: 107675
Site Name: XPO Logistics Freight, Inc.-UIV
Site Address: 20697 PRISM PL
Site City: LAKE FOREST
Site Zip: 92630
Enf Action Date: 07-15-2005
Enf Action Type: Industrial Storm Water Enforcement
Enf Action Description: Industrial Storm Water Enforcement
Enf Action Notes: Failure to submit 04-05 Annual Report by 7/1/05.
Enf Action Division: Water Boards
Enf Action Program: INDSTW
Enf Action Source: SMARTS

Site ID: 107675
Site Name: XPO Logistics Freight, Inc.-UIV
Site Address: 20697 PRISM PL
Site City: LAKE FOREST
Site Zip: 92630
Enf Action Date: 08-10-2005
Enf Action Type: Industrial Storm Water Enforcement
Enf Action Description: Industrial Storm Water Enforcement

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Enf Action Notes: A clerical error at the Regional Board office resulted in an incorrect Notice of Non-Compliance being issued.
Enf Action Division: Water Boards
Enf Action Program: INDSTW
Enf Action Source: SMARTS

Coordinates:
Site ID: 107675
Facility Name: XPO Logistics Freight, Inc.-UIV
Env Int Type Code: HWG
Program ID: 10449481
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 33.661290
Longitude: -117.675870

Affiliation:
Affiliation Type Desc: Legal Owner
Entity Name: XPO Logistics Freight, Inc.
Entity Title: Not reported
Affiliation Address: 2211 Old Earhart road, Suite 100
Affiliation City: Ann Arbor
Affiliation State: MI
Affiliation Country: United States
Affiliation Zip: 48105
Affiliation Phone: (734) 757-1657

Affiliation Type Desc: UST Tank Operator
Entity Name: XPO Logistics Freight, Inc.- UIV
Entity Title: Not reported
Affiliation Address: 20697 Prism Place
Affiliation City: Lake Forest
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 92630
Affiliation Phone: (734) 757-1657

Affiliation Type Desc: CUPA District
Entity Name: Orange County Env Health
Entity Title: Not reported
Affiliation Address: 1241 East Dyer RoadSuite 120
Affiliation City: Santa Ana
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92705-5611
Affiliation Phone: (714) 433-6406

Affiliation Type Desc: Owner/Operator
Entity Name: XPO Logistics Freight Inc
Entity Title: Operator
Affiliation Address: 2211 Old Earhart RdSTE 100
Affiliation City: Ann Arbor
Affiliation State: MI
Affiliation Country: Not reported
Affiliation Zip: 48105
Affiliation Phone: Not reported

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Affiliation Type Desc:	UST Permit Applicant
Entity Name:	Amanda Galbavi
Entity Title:	Environmental Compliance Analyst
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(734) 757-1234

Affiliation Type Desc:	UST Property Owner Name
Entity Name:	XPO Logistics Freight, Inc.
Entity Title:	Not reported
Affiliation Address:	2211 Old Earhart Road, Suite 100
Affiliation City:	Ann Arbor
Affiliation State:	MI
Affiliation Country:	United States
Affiliation Zip:	48105
Affiliation Phone:	(734) 757-1657

Affiliation Type Desc:	Environmental Contact
Entity Name:	JEFF SEXTEN
Entity Title:	Not reported
Affiliation Address:	2211 Old Earhart Road
Affiliation City:	Ann Arbor
Affiliation State:	MI
Affiliation Country:	Not reported
Affiliation Zip:	48105
Affiliation Phone:	Not reported

Affiliation Type Desc:	Parent Corporation
Entity Name:	XPO Logistics Inc.
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Property Owner
Entity Name:	XPO Logistics Freight, Inc.
Entity Title:	Not reported
Affiliation Address:	2211 Old Earhart Rd
Affiliation City:	Ann Arbor
Affiliation State:	MI
Affiliation Country:	United States
Affiliation Zip:	48105
Affiliation Phone:	(734) 757-1657

Affiliation Type Desc:	Document Preparer
Entity Name:	Jeff Sexten
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 2211 Old Earhart Road, Suite 100
Affiliation City: Ann Arbor
Affiliation State: MI
Affiliation Country: Not reported
Affiliation Zip: 48105
Affiliation Phone: Not reported

Affiliation Type Desc: Identification Signer
Entity Name: Jeff Sexten
Entity Title: Manager of Environmental Compliance
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Operator
Entity Name: XPO Logistics Freight, Inc.-UIV
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (949) 581-9030

Affiliation Type Desc: UST Tank Owner
Entity Name: XPO Logistics Freight, Inc.
Entity Title: Not reported
Affiliation Address: 2211 Old Earhart Road, Suite 100
Affiliation City: Ann Arbor
Affiliation State: MI
Affiliation Country: United States
Affiliation Zip: 48105
Affiliation Phone: (734) 757-1657

Name: XPO LOGISTICS FREIGHT, INC.-UIV
Address: 20697 PRISM PL
City,State,Zip: LAKE FOREST, CA 92630
Site ID: 107675
CERS ID: 215411
CERS Description: Industrial Facility Storm Water

Violations:
Site ID: 107675
Site Name: XPO Logistics Freight, Inc.-UIV
Violation Date: 05-06-2016
Citation: 23 CCR 16 2638 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2638
Violation Description: Failure to test leak detection equipment as required every 12 months

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

	(VPH, sensor, LLD, ATG, etc.) and/or submit monitoring system certification to the CUPA within 30 days of completion of the test
Violation Notes:	Returned to compliance on 05/11/2016. This agency has not received a copy of of monitoring system certification report for tests conducted on 3/2/16. Please be advised that test results must be submitted to this agency within 30 days of testing. A copy of test results must be submitted to this agency by 5/20/16. Failure to submit test results may result in further enforcement action.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	03-03-2014
Citation:	HSC 6.7 25286(a) - California Health and Safety Code, Chapter 6.7, Section(s) 25286(a)
Violation Description:	Failure to prepare, maintain, and submit accurate CUPA UST Operating Permit Application for Facility information and/or Tank information.
Violation Notes:	Returned to compliance on 03/05/2014. A copy of the monitoring plan is not available on site. Please submit a copy of the monitoring plan to this Agency within 30 days of this inspection.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	08-25-2014
Citation:	HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description:	Failure to complete and electronically submit a site map with all required content.
Violation Notes:	Returned to compliance on 04/13/2015. Please be advised that in the inspection report dated 3/3/14, this Agency requested electronic submittal of site map. To date, the site map has not been submitted. The site map must be submitted within 30 days of this inspection.
Violation Division:	Orange County Environmental Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	11-05-2014
Citation:	23 CCR 16 2637(e) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2637(e)
Violation Description:	Failure to submit a copy of the secondary containment test results to the CUPA within 30 days after the test.
Violation Notes:	Returned to compliance on 06/26/2015. Results of secondary containment test (SB989) for activities conducted on 8/15/14, have not been received by this Agency within 30 days of testing. A copy of the secondary containment testing report form must be submitted to this Agency within 30 days of this inspection report.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	01-26-2012
Citation:	2014-0057-DWQ - Industrial General Permit
Violation Description:	SW - Denied Access
Violation Notes:	The on-site manager would not allow inspection or review of SWPPP without presence of safety staff. Safety staff is located in Fontana.
Violation Division:	Water Boards
Violation Program:	INDSTW
Violation Source:	SMARTS

Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	05-07-2019
Citation:	HSC 6.75 25299.30-25299.34 - California Health and Safety Code, Chapter 6.75, Section(s) 25299.30-25299.34
Violation Description:	Failure to submit and maintain complete and current Certification of Financial Responsibility or other mechanism of financial assurance.
Violation Notes:	Returned to compliance on 05/09/2019. Certification of financial responsibility (CFR) for this facility expired on 4/1/19. This agency requested electronic submittal of valid/current CFR by 4/1/19 during onsite inspection conducted on 3/1/19. To date, CFR has not been submitted electronically. Copies of valid CFR must be electronically submitted and be provided to the facility within 30 days of this inspection.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS

Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	03-03-2015
Citation:	23 CCR 16 2638 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2638
Violation Description:	Failure to test leak detection equipment as required every 12 months (VPH, sensor, LLD, ATG, etc.) and/or submit monitoring system certification to the CUPA within 30 days of completion of the test
Violation Notes:	Returned to compliance on 04/30/2015. The last monitoring system certification test conducted at this facility was on 3/3/14. Monitoring system certification must be conducted annually. Monitoring system certification must be scheduled and conducted within 30 days of this inspection report. Notify this Agency 48 hours in advance of testing.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS

Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	04-30-2015
Citation:	23 CCR 16 2638 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2638
Violation Description:	Failure to test leak detection equipment as required every 12 months (VPH, sensor, LLD, ATG, etc.) and/or submit monitoring system certification to the CUPA within 30 days of completion of the test
Violation Notes:	Returned to compliance on 06/26/2015. Monitoring system certification activities were performed at the facility on 3/20/15. A copy of the

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

	monitoring system certification report must be submitted to this Agency within 30 days of testing. To date, this Agency has not received a copy of the report. A copy of this report must be submitted by 5/15/15.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	03-03-2015
Citation:	HSC 6.7 25284.2 - California Health and Safety Code, Chapter 6.7, Section(s) 25284.2
Violation Description:	Failure to test the spill bucket annually.
Violation Notes:	Returned to compliance on 04/30/2015. The last spill bucket test conducted at this facility was on 3/3/14. Spill bucket must be tested annually. Spill bucket test must be scheduled and conducted within 30 days of this inspection report. Notify this Agency 48 hours in advance of testing.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	05-04-2017
Citation:	23 CCR 16 2715(i) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(i)
Violation Description:	Failure to have a properly qualified service technician test leak detection equipment as required every 12 months (vapor, pressure, hydrostatic (VPH) system, sensors, line-leak detectors (LLD), automatic tank gauge (ATG), etc.).
Violation Notes:	Returned to compliance on 05/26/2017. Please be advised that this agency has not received a copy of monitoring system certification report for tests conducted on 3/13/17. Test results must be submitted to this agency within 30 days of testing. A copy of monitoring system certification report must be submitted to this agency by 5/18/17 to avoid enforcement action.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	03-03-2014
Citation:	HSC 6.7 25286(a) - California Health and Safety Code, Chapter 6.7, Section(s) 25286(a)
Violation Description:	Failure to prepare, maintain, and submit accurate CUPA UST Operating Permit Application for Facility information and/or Tank information.
Violation Notes:	Returned to compliance on 03/05/2014. UST Facility and tank pages are not available on site. Please submit copies of these forms to this Agency within 30 days of this inspection.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	107675

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Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	04-30-2015
Citation:	HSC 6.7 25286(a) - California Health and Safety Code, Chapter 6.7, Section(s) 25286(a)
Violation Description:	Failure to submit an complete and accurate application for a permit to operate an underground storage tank, or for renewal of the permit.
Violation Notes:	Returned to compliance on 07/11/2015. UST documents submitted to CERS on 10/9/13, 3/4/14, 9/25/14 and 3/10/15 have not been accepted due to inaccurate information. All requested corrections must be made within 30 days of this inspection report.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	08-25-2014
Citation:	HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description:	Failure to complete and electronically submit hazardous material inventory information for all reportable hazardous materials on site at or above reportable quantities.
Violation Notes:	Returned to compliance on 04/13/2015. Please be advised that in the inspection report dated 3/3/14, this Agency requested electronic submittal of hazardous materials inventory forms for hazardous materials at or above the thresholds quantities of 55 gallons/500 lbs/200 cubic feet. To date, this information has not been submitted. The requested forms must be submitted within 30 days of this inspection.
Violation Division:	Orange County Environmental Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	03-02-2016
Citation:	HSC 6.75 25299.30-25299.34 - California Health and Safety Code, Chapter 6.75, Section(s) 25299.30-25299.34
Violation Description:	Failure to submit and maintain complete and current Certification of Financial Responsibility or other mechanism of financial assurance.
Violation Notes:	Returned to compliance on 03/13/2017. Certification of financial responsibility expired on 12/31/15 and has previous owner's information. A valid certification of financial responsibility with current owner information must be submitted within 30 days of this inspection.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	03-03-2017
Citation:	23 CCR 16 2715(i) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(i)
Violation Description:	Failure to have a properly qualified service technician test leak detection equipment as required every 12 months (vapor, pressure, hydrostatic (VPH) system, sensors, line-leak detectors (LLD),

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

automatic tank gauge (ATG), etc.).

Violation Notes: Returned to compliance on 03/13/2017. Please be advised that this Agency has reviewed the file for this facility. The last monitoring system certification testing for this facility was conducted on 3/2/16. Monitoring system certification test must be conducted annually. To date, this Agency has not received a notification for scheduled testing or a copy of the monitoring system certification report documenting that the test was conducted. The monitoring system certification test must be scheduled and conducted within 30 days of this inspection report to avoid any enforcement action.
Violation Division: Orange County Environmental Health
Violation Program: UST
Violation Source: CERS

Site ID: 107675
Site Name: XPO Logistics Freight, Inc.-UIV
Violation Date: 03-01-2019
Citation: 23 CCR 16 2716(a) through (e) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2716(a) through (e)
Violation Description: For designated operator (DO) monthly inspections conducted before October 1, 2018, failure to comply with one or more of the following requirements: Be performed by an ICC certified DO. Inspect monthly alarm history report, check that alarms are documented and responded to appropriately, and attach a copy. Inspect for the presence of liquid/debris in spill containers. Inspect for the presence of liquid/debris in under dispenser containment (UDC) and ensure that the monitoring equipment is positioned correctly. Inspect for liquid or debris in containment sumps where an alarm occurred with no service visit. Check that all testing and maintenance has been completed and documented. Verify that all facility employees have been trained in accordance with 23 CCR 2715(c). For designated operator (DO) 30 day inspections conducted on and after October 1, 2018, failure to conduct the designated UST operator visual inspection at least once every 30 days.
Violation Notes: Returned to compliance on 05/16/2019. Please be advised that overfill inspection was not conducted on 10/12/18, as listed in monthly inspection reports dated in October 2018 through February 2019, since drop tube could not be removed on that date. Please correct date for last Overfill Prevention Equipment Inspection conducted at this facility to 3/1/19 on those reports.
Violation Division: Orange County Environmental Health
Violation Program: UST
Violation Source: CERS

Site ID: 107675
Site Name: XPO Logistics Freight, Inc.-UIV
Violation Date: 07-01-2005
Citation: 2014-0057-DWQ - Industrial General Permit
Violation Description: SW - Late Report
Violation Notes: Failure to submit 04-05 Annual Report by 7/1/05.
Violation Division: Water Boards
Violation Program: INDSTW
Violation Source: SMARTS

Site ID: 107675
Site Name: XPO Logistics Freight, Inc.-UIV
Violation Date: 08-25-2014

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Citation:	HSC 6.95 25508(d) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(d)
Violation Description:	Failure to complete and/or electronically submit a business plan when storing/handling a hazardous material at or above reportable quantities.
Violation Notes:	Returned to compliance on 04/13/2015. Please be advised that in the inspection report dated 3/3/14, this Agency requested electronic submittal of hazardous business emergency plan. To date, this information has not been submitted. Emergency plan must be submitted within 30 days of this inspection.
Violation Division:	Orange County Environmental Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	03-13-2017
Citation:	HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Description:	Failure to annually review and electronically certify that the business plan is complete and accurate on or before the annual due date.
Violation Notes:	Returned to compliance on 04/07/2017. Annual Hazardous Materials Business Plan (HMBP) have not been submitted. Please be advised that HMBP documents must be submitted annually by March 1st. HMBP documents must be submitted within 30 days of this inspection.
Violation Division:	Orange County Environmental Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	107675
Site Name:	XPO Logistics Freight, Inc.-UIV
Violation Date:	10-18-2017
Citation:	23 CCR 16 2637(e) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2637(e)
Violation Description:	Failure to submit a copy of the secondary containment test results to the CUPA within 30 days after the test.
Violation Notes:	Returned to compliance on 01/12/2018. This agency has not received a copy of secondary containment test results within 30 days of testing. Notification dated 7/17/17 sent to this agency indicated that secondary containment test was scheduled for 8/7/17. A copy of secondary containment testing report form must be submitted to this agency by 11/1/17 to avoid further enforcement action.
Violation Division:	Orange County Environmental Health
Violation Program:	UST
Violation Source:	CERS

Evaluation:

Eval General Type:	Other/Unknown
Eval Date:	09-11-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I received a copy of Monitoring System Certification report for test conducted on 8/28/14 after completion of modification activities, replacing Veeder Root panel and sump sensor. All components monitored by the panel passed test. As stated in the inspection report dated 8/28/14, an updated monitoring plan documenting the installation of

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

	the Veeder Root panel and sump sensor must be submitted by 9/25/14.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	11-30-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 11/25/15 indicate change of ownership. New Owner is XPO Logistics Freight, Inc. Form was submitted to add new owner to program.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	05-09-2019
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 5/7/19, included updated copy of Certification of Financial Responsibility (CFR) with coverage period from 4/1/19 to 4/1/20. Violation I583 regarding failure to submit current CFR, cited in the inspection report dated 5/7/19, has been corrected.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	05-22-2018
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I received a copy of Monitoring System Certification, Line Leak Detector Test Form and Spill Bucket Testing Report Form for activities conducted on 3/2/18. All components passed test.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	06-02-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I received email from Pamela Nixon, company headquarter, in response to letter stating that facility will not be receiving UST permit. I emailed her another copy of the 5/26/17 F04 report stating (that was both emailed and mailed to ther) that violation was corrected and facility would be receiving permit.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	07-11-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency

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Eval Notes:	Documents submitted to CERS on 6/11/15, 6/12/15 and 6/30/15 were reviewed and declined with the following considerations: Diesel Exhaust Fluid: G YesG for G FireG under Federal Hazard Categories section should be deleted since this mixture is mostly water. Propane form must be revised as follows: - Chemical Name and Common Name are reversed. Liquefied Petroleum Gas is the Chemical Name. - Physical State must be changed from G GasG to G Liquid.G - Fire Code Hazard Classes must be changed from G Flammable GasG to G Flammable Liquefied Gas.G - Storage Pressure must be changed from G AmbientG to G Above Ambient.G Windshield Washer Fluid: An MSDS/SDS was not submitted as requested. Therefore, the accuracy of the information cannot be verified. Please submit SDS for this material. Hazardous Material Inventory forms for the following material, reported in previous in submittals and/or observed during onsite inspection must be submitted: - Antifreeze - Motor Oil - [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	08-07-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	SB 989 test notification
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	08-25-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	The documents submitted to CERS on 3/4/14 have been reviewed and not accepted with the following considerations: G Monitor Panel ManufacturerG , G Monitor Panel ModelG , G Leak Sensor ManufacturerG and G Leak Sensor ModelG information is not listed in the G Continuous Electronic Tank MonitoringG section of the Underground Storage G Monitoring Plan (Tank Monitoring) G Monitor Panel ManufacturerG , G Monitor Panel ModelG , G Leak Sensor ManufacturerG and G Leak Sensor ModelG information is not listed in the G Continuous Monitoring off Piping Secondary ContainmentG section of the Underground Storage G Monitoring Plan (Pipe Monitoring) The site map does not show the locations of the piping, dispenser, sensors, emergency shut off or the monitoring panel. Underground Storage Tank - Response Plan, a copy of Owner Statements of Designated Underground Storage Tank (UST) Operator (DO) and Certification of Financial Responsibility must also be submitted.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	11-05-2014
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector Comments: Please be advised that this Agency received a notification that secondary containment testing (SB989) was scheduled

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	for 8/15/14. Test results must be submitted to this Agency within 30 days of testing. To date, a copy of the test results have not been received by this Agency. A copy of test results must be submitted to this Agency within 30 days of this inspection report report.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	11-30-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 11/25/15 indicate change of ownership. New Owner is XPO Logistics Freight, Inc. Form was submitted to add new owner to program. Business Activities form was not accepted since previous owner's (Con-way Freight, Inc.) EPA ID# in listed for new business.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	11-30-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 11/25/15 were reviewed and not accepted with the following considerations: - EPA ID# CAL000078604 listed on Business Activities form is assigned to former business owner, Con-Way Freight, Inc. This business must obtain a new EPA ID#. - Windshield Washer Fluid. Based on a copy of SDS submitted on 7/29/15, the G Hazardous ComponentG for this material is Methanol. Therefore, G MethanolG with CAS# G 67-56-1G at G 1G % by weight should be listed in Mixture Component section. - Motor Oil form must be revised as follows: - Hazardous Material Type must be changed from G PureG to G MixtureG since Mixture Components are provided. - Fire Code Hazard Classes must be changed from G Combustible Liquid, Class IIG to G Combustible Liquid, Class III-B.G - CAS# 6474X-XX-X listed for G Various Lubricating Base OilsG in Mixture Components section is not acceptable, especially that this material is the main component at 85%. All digits of the CAS# must be [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	11-30-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 11/25/15 were reviewed and not accepted with the following considerations: Board of Equalization Account Number (44036723) was assigned to former business owner, Con-Way Freight, Inc. Due to change in ownership, a new BOE# must obtained. Name of the former business is listed on the UST Certification of Financial Responsibility (CFR) form. Updated CFR form with new business name must be submitted. In addition, the former businessG s G Letter From Chief Financial OfficerG has been submitted. An updated CFO letter should be submitted.

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Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	12-09-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Change status to receive a permit, per Arghavan.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-24-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Comments on Business Activities form submitted to CERS stated that Con-way Freight, Inc has undergone a legal name change to XPO Logistics Freight, Inc. This is still the same company with the same Tax ID number. The EPA ID number will be updated to reflect the name change, but it will not be a new number.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-02-2016
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to witness monitoring system certification testing activities and to conduct routine UST inspection. The annular and turbine sump sensors alarmed properly (visual and audible) and shut down turbine when submerged in water. Fill sump is not monitored since spill bucket is direct bury. UDC has Bravo box has float and chain mechanism. Water was poured in the UDC and the float and chain functioned properly. Fail-safe, sensor out and emergency shut off were tested and passed. Line leak detectors was tested and passed. Site has flappers for overfill prevention. Spill bucket is direct bury. It will be tested at a later date since technician did not have equipment to test it. Valid permit, designated operator documentation, monthly inspection reports, response plan, employee training records, monitoring plan, tank page, certification of financial responsibility (expired on 12/31/15 and has previous owner's information), copies of [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-03-2015
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector Comments: Please be advised that this Agency has reviewed the file for this facility. The last monitoring system certification and spill bucket testing for this facility was conducted on 3/3/14. Monitoring system certification and spill bucket tests must be

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

conducted annually. To date, this Agency has not received a notification for scheduled testing or a copy of monitoring system certification report that the test was conducted. Monitoring system certification and spill bucket test must be scheduled and conducted within 30 days of this inspection report. Notify this Agency 48 hours in advance of testing.

Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-03-2017
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Please be advised that this Agency has reviewed the file for this facility. The last monitoring system certification testing for this facility was conducted on 3/2/16. Monitoring system certification test must be conducted annually. To date, this Agency has not received a notification for scheduled testing or a copy of the monitoring system certification report documenting that the test was conducted. The monitoring system certification test must be scheduled and conducted within 30 days of this inspection report to avoid any enforcement action.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-04-2014
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: I reviewed UST submittal in CERS and did not approve it with the following considerations: The following sections in the Underground Storage - Tank Information are either not listed correctly or not included: - Overfill protection section under G Tank ConstructionG is not complete. Site has G Fill Tube Shut-Off valveG - The Piping System type is not correct and the Secondary Containment Type is not listed The following sections in the Underground Storage G Monitoring Plan are either not listed correctly or not included: - The Monitor Panel Manufacturer, panel model, sensor manufacturer and model information are not listed under G Tank Monitoring Section.G - The Monitor Panel Manufacturer, panel model, sensor manufacturer and model information are not listed under G Piping Monitoring Section.G - Line Leak Detector information is not listed under G Piping Monitoring Section.G - Periodic System Testing is not included - Recordkeeping information not included - Training [Truncated]
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-09-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Monitor cert notification for 3-10-17
Eval Division: Orange County Environmental Health
Eval Program: UST

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Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-13-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to witness monitoring system certification testing activities and to conduct routine UST inspection. Annular and turbine sump sensors alarmed properly (visual and audible) and shut down turbine when submerged in water. Fill sump is not monitored since spill bucket is direct bury. UDC has Bravo box has float and chain mechanism. Water was poured in the UDC and the float and chain functioned properly. Fail-safe and sensor out were tested and passed. Line leak detectors was tested and passed. Site has flappers for overfill prevention. Spill bucket was tested using instrument and passed two consecutive 15 minute tests. Valid permit, designated operator documentation, monthly inspection reports, response to alarms, response plan, employee training records, monitoring plan, tank page, certification of financial responsibility (coverage from 4/1/16 to 3/31/17 with XPO Logistics listed on insurance policy), copies of monitoring system and [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-14-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed documents submitted to CERS on 3/7/17. Accepted Facility Information page after checking BOE website and saw that the profile has been updated with current owner information. Tank Infomation was not accepted and the following need to be addressed: - Vent/Vapor Recovery (VR) and Riser/Fill Piping Construction section must be completed. - G YesG must be checked for G IsolationG under Corrosion Protection section.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-15-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Received email from company headquarters contact stating that new BOE# was not obtained since they did not have to obtain a new Federal Tax ID#. I emailed her back stating that I was not aware the Federal Tax ID# makes a difference in not having to obtaining State BOE# and that it appears that two corporations merged or one took over the other business or a parent company took over a subsidiary and that is considered ownership change. I notified her that BOE# matter will not be pursued since my comments are in CERS.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Eval Date:	03-15-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted revised tank information page submitted to CERS on 3/15/17.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-20-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspected UST facility with Kevin Jansen. Double walled tanks with pressurized piping and leak detector. Sump sensor appeared to be at the low point and the Bravo Box float was dry. Site has flappers for overfill prevention. Valid permit, designated operator documentation, monthly inspection reports, response plan, employee training records, certification of financial responsibility, copies of monitoring system certification and secondary containment reports are available for review. Copies of electronically submitted monitoring plan and tank page were not available on site. Results of secondary containment test (SB989) for activities conducted on 8/15/14, still have not been received by this agency. copy to: pickford.joseph@con-way.com
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	04-13-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 3/10/15 (three submitals) were reviewed and declined with the following considerations: G Days on SiteG for all reported material should be changed from G 352G to G 365G days unless material is taken off site for 13 days. Heavy Vacuum Gas Oil: Federal Hazard Categories is not listed and must added. Windshield Washer Fluid form must be revised as follows: - Chemical Name (Windshield Washer Fluid) should be listed. - This material is reported as G pureG but a CAS# is not listed. If it has CAS# then is should be listed. If it is a G mixtureG , then the solutionG s G Hazardous Component Name, CAS# and % by WeightG must be listed in G Mixture ComponentG section. - Fire Code Hazard Classes must be listed Transmission Fluid is must be removed since the volume stored on site is below reportable quantity of 55 gallons. Diesel Exhaust Fluid form must be revised as follows: - Chemical Name (Diesel Exhaust Fluid) should be listed - This [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	04-30-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 4/15/15 were reviewed and not accepted with the following considerations: Diesel Exhaust Fluid form must be

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

revised as follows: - Fire Code Hazard Classes must be changed from G Combustible Liquid, Class IIG to G Toxic.G - G YesG should be deleted for Federal Hazard Categories since the mixture is mostly water. Windshield Washer Fluid form must be revised as follows: - G Windshield Washer FluidG should be listed as the Chemical Name. - This material is reported as G pureG and CAS# for antifreeze is listed. Generally this material is a G mixtureG and does not have a CAS#. If it is a G pureG material, then the correct CAS# should be listed. If it is a mixture, then G Hazardous Component Name, CAS# and % by WeightG for at least one component must be listed in G Mixture ComponentG section. - Fire Code Hazard Classes for this type material is usually G ToxicG , not G Combustible Liquid, Class IIG as reported. MSDS should be reviewed and correct [Truncated]
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 05-06-2016
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Inspector Comments: This agency has not received a copy of monitoring system certification report for tests conducted on 3/2/16. Please be advised that test results must be submitted to this agency within 30 days of testing. A copy of test results must be submitted to this agency by 5/20/16.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-26-2012
Violations Found: Yes
Eval Type: Industrial Storm Water Compliance Evaluation
Eval Notes: Weather: sunny and cool. On entry, explained to front office staff that I was there to conduct a storm water inspection. Staff person went to back office, returned, and instructed me to go out back. I asked to see the SWPPP. Staff appeared confused and brought me to the manager, John Heilman, who then told me that I could not go out back unless their safety staff, Don Anderson, was present. He explained that Mr. Anderson was "domiciled" in Fontana and I would need to make an appointment. Mr. Heilman stated that this was their policy and acknowledged that he was responsible for implementing the SWPPP. He declined to allow me to review the SWPPP unless Mr. Anderson was present and again explained that this was their policy.
Eval Division: Water Boards
Eval Program: INDSTW
Eval Source: SMARTS

Eval General Type: Other/Unknown
Eval Date: 02-16-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Monitor cert notification
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Eval General Type:	Other/Unknown
Eval Date:	05-07-2019
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I received and reviewed copies of Monitoring System Certification Form, Spill Container Testing Report Form and Overfill Prevention Equipment Inspection Report Form for activities conducted on 3/1/19. All components passed test. Certification of financial responsibility (CFR) for this facility expired on 4/1/19. This agency requested electronic submittal of valid/current CFR by 4/1/19 during onsite inspection conducted on 3/1/19. To date, CFR has not been submitted electronically. Copies of valid CFR must be electronically submitted and be provided to the facility within 30 days of this inspection.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS

Eval General Type:	Other/Unknown
Eval Date:	05-22-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Change UST status to not get a permit, per Arghavan.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS

Eval General Type:	Other/Unknown
Eval Date:	06-12-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 6/2/15 were reviewed and declined with the following considerations: Diesel Exhaust Fluid form must be revised as follows: -Chemical Name and Common Name are reversed. Common Name is Diesel Exhaust Fluid. - CAS# listed in Chemical Identification & Physical Properties section must be removed since this a mixture. - Fire Code Hazard Classes must be changed from G Combustible Liquid, Class IIG to G Toxic.G - G YesG should be deleted for Federal Hazard Categories since this mixture is mostly water. - DOT Hazard Class is not correct since the mixture is mostly water. Two forms have been submitted for Ethylene Glycol/Windshield Washer Fluid. Only one form is required for each material. One must be deleted. Windshield Washer Fluid form must be revised as follows: - Please provide a SDS for this material to verify constituents. - The Common Name must be changed to G Windshield Washer FluidG and if the mixture contains ethylene glycol, [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Other/Unknown
Eval Date:	07-11-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector Comments: Documents submitted to CERS on 6/30/15 were reviewed and accepted. Violation I582 regarding not submitting accurate UST documents electronically cited in this agency's inspection report dated 4/30/15, has been corrected. UST Permit to

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

	Operate will be issued for this facility.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	08-21-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Received a copy of partial monitoring system certification report documenting installation of a mechanical drop tube overfill prevention valve on 8/8/17.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	02-24-2020
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct hazardous materials chemical inventory and business emergency plan inspection. Joe Pickford granted consent to conduct inspection. I walked through facility and inspected hazardous material storage areas throughout facility. There has been no changes in types and/or volumes of the hazardous material stored on site since last inspection or previous reporting period. Volume of Diesel Exhaust Fluid is below disclosure threshold of 550 gallons required for this material (Irritant/Sensitizer) and should be removed from reporting in your next submission. Facility stores the following hazardous materials at disclosure threshold: - 55 gallons of new antifreeze - 55 gallons of new motor oil - 110 gallons of windshield washer fluid - 192 gallons of propane - 10000 gallons of diesel Hazardous materials management training is provided annually and records are available for review. Emergency contact information and procedures (spill are [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-26-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Monitor cert notification
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-02-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct routine hazardous waste inspection. Kevin Jansen granted consent to conduct inspection. Due to change in ownership (verified during inspection), a new EPA ID# must be obtained for this facility. Waste is generated when packages/boxes are broken during shipping. I walked through the facility, perimeter

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

and inspected waste storage areas. Waste paint drum is stored closed and labeled. Manifests were reviewed. Emergency number is posted throughout the facility.

Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-02-2018
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: I walked through facility and inspected waste storage area in the dock and by shed in fuel dispenser area. I did not observe any hazardous waste in trash cans throughout the dock or the dumpster at the end of the dock. Hazardous waste drums in dock and fuel dispenser area are stored closed and labeled. Manifests were reviewed. Emergency contact information and procedures (spill cleanup) is posted throughout the facility.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-03-2014
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: On site to witness monitoring system certification testing activities and to conduct routine UST inspection. The sump sensor alarmed properly (visual and audible) and shut down turbine when submerged in water. The annular sensor alarmed properly (visual and audible) and shut down turbine when submerged in water UDC has Bravo box with float and chain mechanism. Water was poured in the UDC and the float and chain functioned properly. Fail-safe, sensor out and emergency shut off were tested and passed. Line leak detectors was not witnessed by this Agency since the test port could not be removed. The technician was going to continue to try to remove the test port to test the line leak detector. Site has flappers for overfill prevention. Spill bucket is direct bury and was tested with an Incon. The spill bucket passed two consecutive 15 minute tests. Valid permit, designated operator documentation, monthly inspection reports, response plan, employee [Truncated]
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-04-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Monitor cert notification
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-08-2017
Violations Found: No

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Eval Type:	Other, not routine, done by local agency
Eval Notes:	I received email from company contact, Pamela Nixon, in response to inspection report with violation regarding failure to conduct annual monitoring system certification within 365 days of last test. A copy of monitoring system report for tests conducted on 2/21/17 was attached to the email. I was not on site since I had not received notification. I checked UST Notification Calendar and site history (7800 report) to determine if this agency received notification of testing. Notification was not received. I emailed Pamela back explaining that notification for testing was not received by this agency and that test must be conducted again so that it can be witnessed by this agency. I received notification to conduct test on 3/13/17.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-09-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Went to site to witness monitor certification as notified and conduct routine UST inspection. Testers were not on site. I called testing company, Tanknology, and was told that technician is running late. Monitor certification will be rescheduled for another day.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-14-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I highlighted tank information page with areas that corrections are needed and emailed it to company's CERS contact. I also included comment that Facility Information was accepted even though this conpany did not obtain their own BOE#.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-30-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 3/28/17 were reviewed. Emergency plan was not accepted since CUPA phone # was not listed.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	04-30-2015
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector Comments: Monitoring system certification activities were performed at the facility on 3/20/15. A copy of the monitoring system

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certification report must be submitted to this Agency within 30 days of testing. To date, this Agency has not received a copy of the report. A copy of this report must be submitted by 5/15/15. Violation I205, regarding not conducting monitoring system certification activities cited in the inspection report dated 3/3/15, has been corrected. However, the violation listed above if for not submitting a copy of the monitoring system certification report. In addition, this Agency has requested corrections of UST documents submitted to CERS on 10/9/13, 3/4/14, 9/25/14 and 3/10/15. All corrections must be made within 30 days if this inspection report. Please be advised that this facility also has an outstanding violation, cited on 11/5/14, regarding not submitting results of Secondary Containment Testing to this Agency within 30 days of [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 02-24-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Facility Information and Hazardous Materials Inventory documents submitted to CERS on 2/22/16 were reviewed and accepted. Comment on Business Activities form stated that Con-way Freight, Inc has undergone a legal name change to XPO Logistics Freight, Inc. This is still the same company with the same Tax ID number. Emergency Plan was not updated/resubmitted. I emailed contact requesting that emergency plan be updated with CUPA phone# and resubmitted.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 02-24-2020
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to witness monitoring system certification testing activities and to conduct routine UST inspection. Joe Pickford granted consent to conduct inspection. Annular and turbine sump sensors alarmed properly (visual and audible) and shut down turbine when submerged in water. Fill sump is not monitored since spill bucket is direct bury. UDC has Bravo box has float and chain mechanism. Water was poured in the UDC and the float and chain functioned properly. Fail-safe and sensor out were tested and passed. Line leak detector was tested and passed. Overfill prevention method for this facility is Fill Tube Shut-Off Valve. Overfill Prevention Equipment Inspection was conducted on 3/1/19. Spill bucket was tested visually without any changes in water level. Valid permit, designated operator documentation, monthly inspection reports, response to alarms, response plan, employee training records, monitoring plan, tank page, certification of financial [Truncated]
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-01-2019

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Joe Pickford granted consent to conduct inspection. I walked through facility and inspected waste storage area in the dock and by shed in fuel dispenser area. I did not observe any hazardous waste in trash cans throughout the dock or the dumpster at the end of the loading dock. Hazardous waste drums in dock and fuel dispenser area are stored closed and labeled. Manifests were reviewed. Emergency contact information and procedures (spill cleanup) is posted throughout the facility.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-02-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to witness monitoring system certification testing activities and to conduct routine UST inspection. Annular and turbine sump sensors alarmed properly (visual and audible) and shut down turbine when submerged in water. Fill sump is not monitored since spill bucket is direct bury. UDC has Bravo box has float and chain mechanism. Water was poured in the UDC and the float and chain functioned properly. Fail-safe, sensor out and emergency shut off were tested and passed. Line leak detectors was tested and passed. Site has flappers for overfill prevention. Spill buckets were tested visually without any changes in water level. Valid permit, designated operator documentation, monthly inspection reports, response to alarms, response plan, employee training records, monitoring plan, tank page, certification of financial responsibility (expires 4/1/18), copies of monitoring system certification and secondary containment (last test conducted on 8/7/17) reports are [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-28-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and purged file.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-01-2019
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	On site to witness monitoring system certification testing activities and to conduct routine UST inspection. Joe Pickford granted consent to conduct inspection. Annular and turbine sump sensors alarmed properly (visual and audible) and shut down turbine when submerged in water. Fill sump is not monitored since spill bucket is direct bury. UDC has Bravo box has float and chain mechanism. Water was poured in the UDC and the float and chain functioned properly. Fail-safe, sensor out and

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emergency shut off were tested and passed. Line leak detectors was tested and passed. Site has flappers for overfill prevention. The Overfill Prevention Equipment Inspection conducted this date was not witnessed by this agency. Spill bucket was tested visually without any changes in water level. Valid permit, designated operator documentation, monthly inspection reports, response to alarms, response plan, employee training records, monitoring plan, tank page, [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-03-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Spill Bucket testing notification
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-03-2014
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to conduct hazardous materials chemical inventory and business emergency plan inspection. I walked through the facility and inspected hazardous materials storage areas. Facility has hazardous materials (diesel, diesel exhaust fluid, new oils, propane tanks) that meet required disclosure quantities. Business Activities form and Owner/Operator Identification forms are available on CERS. Please be advised that the following documents must be also be electronically submitted within 30 days of this inspection: - Hazardous Material Chemical Inventory forms - Facility Site Map - Business Emergency Plan
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-03-2014
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to conduct routine hazardous waste inspection. John Heilman granted consent to conduct inspection. Waste is generated when packages/boxes are broken during shipping. I walked through the facility, perimeter and inspected waste storage areas. Debris contaminated with diesel (1), toxic solid (1) and waste aerosols (1) containers are stored closed. The diesel debris drum has a federal label without waste characteristics. I discussed the requirement to include waste characteristics with Mr. Heilman. The toxic solid and aerosol containers were labeled during the inspection. Manifests were reviewed. Emergency number is posted throughout the faciltiy.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Eval Date:	03-06-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	A copy of updated/completed monitoring plan was obtained from the facility.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-13-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted Facility Information submitted to CERS on 3/7/17, even though this business owner had DTSC change owner information from former owner information (Conway Freight) to their rather obtaining a new EPA ID#. Included comment regarding EPA ID#s are owner and/or site specific and a new number should have been obtained.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-20-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspected facility with Kevin Jansen, who provided consent to perform an inspection and take pictures as necessary. Hazardous waste container(s) is/are marked: G HAZARDOUS WASTEG , name and address of business, contents, physical state, hazardous property and initial accumulation date. Reviewed hazardous waste disposal receipts/manifests for prior three years. Verified a copy of the uniform hazardous waste manifest is mailed to the state within 30 days of hazardous waste disposal. Verified all universal wastes (fluorescent lamps, high intensity discharge lamps, batteries, etc.) are managed appropriately. copy to: pickford.joseph@con-way.com
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	04-26-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 4/18/16 were reviewed and not accepted since change in ownership was verified during onsite inspection conducted by this agency on 3/2/16. EPA ID# CAL000078604 listed on Business Activities form is assigned to former business owner, Con-Way Freight, Inc. and a new EPA ID# has not been obtained.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	05-11-2016
Violations Found:	No

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Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector Comments: I received a copy of Monitoring System Certification, Line Leak Detector Test Form and Spill Bucket Testing Report Form for activities conducted on 3/2/16. All components passed test. Violation I205 regarding failure to submit monitoring system certification report within 30 days of testing cited in the inspection report dated 5/6/16, has been corrected. Please be advised that this facility has an outstanding violation regarding failure to submit and maintain a current certification of financial responsibility (CFR), cited during routine inspection conducted on 3/2/16. A copy of current CFR was not available on site. In addition, the copy of CFR submitted to CERS on 4/18/16 was not accepted since a copy of the insurance policy was not included.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	05-26-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Sent email to Susan B. notifying her that violation has been corrected and UST permit may be issued.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	06-26-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector Comments: I reviewed the following documents received on 6/19/15: - Copy of Secondary Containment Testing Report Form (3 year SB989) for activities conducted on 8/15/14. All components passed test. Violation I296, regarding secondary containment test results not being submitted within 30 days of testing cited in this agency's inspection report dated 11/5/14, has been corrected. - Copy of Monitoring System Certification, Line Leak Detector Test and Spill Bucket Testing Report Form for activities conducted on 3/18/15. All components passed test. Violation I205, regarding monitoring system certification test results not being submitted within 30 days of testing cited in this agency's inspection report dated 4/30/15, has been corrected.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	07-11-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Change status to receive a UST permit, per Arghavan.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown

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Eval Date:	07-15-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Updated monitoring plan documenting the replacement of Veeder Root panel and sump sensor was submitted to CERS on 6/30/15 and approved. Plan Check may be closed.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	08-28-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	On site to witness monitoring system certification test after completion of modification activities (replacing Veeder Root Panel from TLS 300-C to TLS 350). Only components monitored by the Veeder Root panel were tested. The sump sensor (205) was replaced with a 208 sensor since it was not functioning properly. The annular and sump sensors alarmed properly (visual and audible) and shut down respective turbine when submerged in water. An updated monitoring plan documenting the installation of the new Veeder Root panel and sump sensor must be submitted within 30 days of this inspection. Fail-safe, sensor out and emergency shut off were tested and passed.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	11-30-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 11/25/15 indicate change of ownership. New Owner is XPO Logistics Freight, Inc. Form was submitted to add new owner to program.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-03-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Submittal status of Facility Information submitted to CERS on 2/22/16 was changed from "Accepted" to "Not Accepted" since information that by submitter that there was a change in DBA is not correct. Change in ownership was verified during onsite inspection conducted on 3/2/16. EPA ID# CAL000078604 listed on Business Activities form is assigned to former business owner, Con-Way Freight, Inc. This business must obtain a new EPA ID#.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-05-2014
Violations Found:	No

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Eval Type:	Other, not routine, done by local agency
Eval Notes:	Went to site on follow up inspection to correct outstanding violations, TR02, regarding UST Facility page and tank page not being available on site and TR07, regarding monitoring plan not being available on site, during routine inspection conducted on 3/3/14. All forms are available on site. Violations TR02 and TR07 have been corrected.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-11-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Monitoring Certification notification
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-13-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Joseph Pickford granted consent to conduct inspection. Waste is generated when packages/boxes are broken during shipping. EPA ID# CAL000078604, assigned to previous business, Conway Freight, is being used to haul off hazardous waste rather than obtaining a new EPA ID# after this company took over this business. Owner information has been changed/updated with the state (DTSC). Please be advised EPA ID#s are owner and/or site specific and a new number should have been obtained. I walked through facility and inspected waste storage area in the dock. I did not observe any hazardous waste in trash cans throughout the dock or the dumpster at the end of the dock. There is no hazardous waste stored on site currently. Manifests were reviewed. Emergency contact information and procedures (spill cleanup) is posted throughout the facility.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-13-2017
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct hazardous materials chemical inventory and business emergency plan inspection. Joseph Pickford granted consent to conduct inspection. I walked through the facility and inspected hazardous material storage areas. There has been no changes in types and/or volumes of the hazardous material stored on site since last inspection or previous reporting period, except for facility stores only one drum of Windshield Washer Fluid. Propane tank is in a locked enclosure. Propane cylinders are on forklifts, in cage and/or on rack. All 55 gallons storing material are in a shed next to fuel island. Safety meeting that include hazardous materials management are held annually. Training records are available for review on site. Emergency contact

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

	information and procedures (spill cleanup) is posted throughout the facility. Annual Hazardous Materials Business Plan (HMBP) have not been submitted. Please be advised that HMBP documents must be submitted [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-14-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed documents submitted to CERS on 3/7/17. Submittal was not accepted since G YesG was not checked for G IsolationG under Corrosion Protection section on Tank Information page. Submittal included the following documents: - This business is using BOE# assigned to previous owner (Conway Freight) with profile updated with their information. - Certification of Financial Responsibility with coverage from 4/1/16 to 3/31/17 with XPO Logistics listed on insurance policy. Violation - Updated DO statement.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-23-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	report writing
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-27-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I received a copy of Monitoring System Certification, Leak Detector Testing and Spill Bucket Testing Report Form for activities conducted on 3/3/14. All components passed.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	04-07-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and reviewed revised documents submitted to CERS on 3/30/17. Violation I463 regarding failure to annually review and electronically certify HMBP is complete, accurate and up-to-date, cited during inspection conducted on 3/13/17, has been corrected.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Eval Date:	04-13-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents are identical to 9/25/14 submittal that was not accepted. UST - Tank Information Page: - G Secondary ContainmentG and G Piping /Turbine Containment SumpG information in Product/Waste Piping Construction section is not complete. -Fill Components InstalledG in Vent, Vapor Recovery (VR) and Riser/Fill Pipe Piping Construction section must be completed. UST G Monitoring Plan: -G Secondary Containment SystemG , G Monitor Panel ManufacturerG , G Monitor Panel ModelG , G Leak Sensor ManufacturerG and G Leak Sensor ModelG information must be listed in G Tank Monitoring is Performed Using the Following Method(s)G section. -G Piping Secondary ContainmentG , G Panel ManufacturerG , G Panel Model #G , G Leak Sensor ManufacturerG and G Leak Sensor ModelG information must be listed in G Piping Monitoring is Performed Using the Following Method(s) section. At a minimum, G YesG must be listed under G UDC Monitoring Stops Flow of Product at DispenserG in the Under Dispenser Containment [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS

Eval General Type:	Other/Unknown
Eval Date:	04-26-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 4/18/16 were reviewed and not accepted with the following considerations: - Change in ownership was verified during onsite inspection conducted by this agency on 3/2/16. Board of Equalization Account Number (44036723) was assigned to former business owner, Con-Way Freight, Inc. Due to change in ownership, a new BOE# must obtained. - A copy of certification of financial responsibility with coverage period from 4/1/16 to 3/31/16 was submitted but a copy of the tankG s insurance policy was not submitted.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS

Eval General Type:	Other/Unknown
Eval Date:	05-04-2017
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Please be advised that this agency has not received a copy of monitoring system certification report for tests conducted on 3/13/17. Test results must be submitted to this agency within 30 days of testing. A copy of monitoring system certification report must be submitted to this agency by 5/18/17.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS

Eval General Type:	Other/Unknown
Eval Date:	05-16-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Change permit status to Do Not Issue (03) per email from A. Rashidi-Fard dated 5/15/17

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	05-16-2019
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	On site for follow up inspection to correct violation I106 regarding for failure to check that all testing and maintenance has been completed and documented, cited during routine inspection conducted on 3/1/19. Addrian Orssten granted consent to conduct inspection. Date for Overfill Prevention Equipment Inspection has been corrected from 10/12/18 to 3/1/19 on DO reports. Violation I106 has been corrected.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	05-26-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I received a copy of Monitoring System Certification and Spill Bucket Testing Report Form for activities conducted on 3/13/17. All components passed test. Violation I205 regarding failure to submit monitoring system certification report to CUPA within 30 days of testing event, cited in the inspection report dated 5/4/17, has been corrected. Permit to operate the underground storage tank at this facility will be issued.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	05-30-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Change permit status to Issue Permit (01) per email from A. Rashidi-Fard dated 5/26/17.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	06-12-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to CERS on 6/2/15 were reviewed and not accepted with the following considerations: G YesG must be listed for G Spill BucketG and G Striker Plate/Bottom ProtectorG for G Fill Component InstalledG under G Vent, Vapor Recovery (VR) And Riser/Fill Pipe Piping ConstructionG section on Tank Information page. The UDC is not monitored by the Veeder Root panel. Therefore, information listed for G UDC Panel ManufacturerG and G UDC Panel Model #G in G Under Dispenser Containment (UDC) MonitoringG on the monitoring plan should be removed. G YesG should be listed for G Equipment Maintenance and Calibration RecordsG under G RecordkeepingG section of the monitoring

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

plan since copies of tank system test results are maintained on site. G YesG should be listed for G Designated Operator TrainingG under G TrainingG section since copies of training records for employees trained by designated operator are maintained on site. G Corrective ActionG section on the Certification [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 08-25-2014
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Inspector Comments:

_____ Please be advised that in the inspection report dated 3/3/14, this Agency requested electronic submittal of hazardous materials inventory for hazardous materials at or above the thresholds quantities of 55 gallons/500 lbs/200 cubic feet, business emergency plan and site map. To date, the requested documents have not been submitted. The violations listed above must be complied with, in order to prevent enforcement action.

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 09-11-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Documents submitted to CERS on 7/29/15 were reviewed and declined with the following considerations: Diesel Exhaust Fluid: G YesG under G FireG under Federal Hazard Categories section must be deleted since this mixture is mostly water. Based on the provided SDS, Windshield Washer Fluid form must be revised as follows: - As requested previously, G Windshield Washer FluidG should also be listed as the Chemical Name. - The Hazardous Component for this material (listed on SDS) is G MethanolG with CAS# 67-56-1 at 1% by weight. Motor Oil form must be revised as follows: - Hazardous Material Type must be changed from G PureG to G MixtureG since Mixture Components are provided. - Fire Code Hazard Classes must be changed from G Combustible Liquid, Class IIG to G Combustible Liquid, Class III.G - CAS# 6474X-XX-X listed for G Various Lubricating Base OilsG in Mixture Components section is not acceptable, especially that this material is the main component at 85%. All digits [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 10-18-2017
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: This agency has not received a copy of secondary containment test results within 30 days of testing. Notification dated 7/17/17 sent to this agency indicated that secondary containment test was scheduled for 8/7/17. A copy of secondary containment testing report form must

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

	be submitted to this agency by 11/1/17.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	11-04-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Submittal dated 9/25/14 was reviewed and not accepted with the following considerations: G Piping /Turbine Containment SumpG information in Product/Waste Piping Construction section and G Fill Components InstalledG in Vent, Vapor Recovery (VR) and Riser/Fill Pipe Piping Construction section must be completed. G Secondary Containment SystemG , G Monitor Panel ManufacturerG , G Monitor Panel ModelG , G Leak Sensor ManufacturerG and G Leak Sensor ModelG information must be listed in the Tank Monitoring section of the UST G Monitoring Plan. G Monitor Panel ManufacturerG , G Monitor Panel ModelG , G Leak Sensor ManufacturerG and G Leak Sensor ModelG information must be listed in the Piping Monitoring section of the UST G Monitoring Plan. G NoG must listed for G Detection of Leak into UDC Triggers Audible and Visual AlarmsG , G UDC Leak Alarm Triggers Automatic Pump ShutdownG , G Failure/Disconnection of UDC Monitoring System Triggers Automatic Pump ShutdownG and G YesG must be listed [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-12-2018
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I received a copy of Secondary Containment Testing Report Form (3 year SB989) for activities conducted on 8/7/17. All components passed test. Outstanding violation I296 regarding failure to submit test results within 30 days of testing, cited on 10/18/17, has been corrected.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	02-07-2001
Violations Found:	No
Eval Type:	Industrial Storm Water Compliance Evaluation
Eval Notes:	On February 7, 2001 Regional Board Staff, Marc Brown conducted a compliance inspection at the above referenced facility. Brown met with Corky Wyrick, the facility contact. The facility is a merchandise transportation hub, which has a single storage area with multiple loading docks surrounding its perimeter. This loading docks lie in the interior of the facility's parking area. The parking area houses numerous semi-tractor trailers awaiting use. At the southeast corner of the facility, near the entrance is a diesel fueling station (UST). This area is equipped with spill kits. Further west, along the fenceline is the facility's propane storage area, where individual propane fuel tanks are stored for use with forklifts. Review of the SWPPP indicated the facility had weekly inspections and employee training (last conducted on 1/16/01). The SWPPP had a facility map,

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

but no flow directions were illustrated. A site walk was conducted and revealed general housekeeping efforts were well maintained. However, further attention was needed around the facility's fenceline, which borders and drains directly into a storm channel. Debris and sediment build up was identified and noted during the walk through. Mr. Wyrick was instructed to include inspecting these areas as part of the routine inspection and maintenance program in the SWPPP.

Eval Division: Water Boards
Eval Program: INDSTW
Eval Source: SMARTS

Enforcement Action:
Site ID: 107675
Site Name: XPO Logistics Freight, Inc.-UIV
Site Address: 20697 PRISM PL
Site City: LAKE FOREST
Site Zip: 92630
Enf Action Date: 07-15-2005
Enf Action Type: Industrial Storm Water Enforcement
Enf Action Description: Industrial Storm Water Enforcement
Enf Action Notes: Failure to submit 04-05 Annual Report by 7/1/05.
Enf Action Division: Water Boards
Enf Action Program: INDSTW
Enf Action Source: SMARTS

Site ID: 107675
Site Name: XPO Logistics Freight, Inc.-UIV
Site Address: 20697 PRISM PL
Site City: LAKE FOREST
Site Zip: 92630
Enf Action Date: 08-10-2005
Enf Action Type: Industrial Storm Water Enforcement
Enf Action Description: Industrial Storm Water Enforcement
Enf Action Notes: A clerical error at the Regional Board office resulted in an incorrect Notice of Non-Compliance being issued.
Enf Action Division: Water Boards
Enf Action Program: INDSTW
Enf Action Source: SMARTS

Coordinates:
Site ID: 107675
Facility Name: XPO Logistics Freight, Inc.-UIV
Env Int Type Code: HWG
Program ID: 10449481
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 33.661290
Longitude: -117.675870

Affiliation:
Affiliation Type Desc: Legal Owner
Entity Name: XPO Logistics Freight, Inc.
Entity Title: Not reported
Affiliation Address: 2211 Old Earhart road, Suite 100
Affiliation City: Ann Arbor
Affiliation State: MI

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Affiliation Country:	United States
Affiliation Zip:	48105
Affiliation Phone:	(734) 757-1657
Affiliation Type Desc:	UST Tank Operator
Entity Name:	XPO Logistics Freight, Inc.- UIV
Entity Title:	Not reported
Affiliation Address:	20697 Prism Place
Affiliation City:	Lake Forest
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92630
Affiliation Phone:	(734) 757-1657
Affiliation Type Desc:	CUPA District
Entity Name:	Orange County Env Health
Entity Title:	Not reported
Affiliation Address:	1241 East Dyer RoadSuite 120
Affiliation City:	Santa Ana
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92705-5611
Affiliation Phone:	(714) 433-6406
Affiliation Type Desc:	Owner/Operator
Entity Name:	XPO Logistics Freight Inc
Entity Title:	Operator
Affiliation Address:	2211 Old Earhart RdSTE 100
Affiliation City:	Ann Arbor
Affiliation State:	MI
Affiliation Country:	Not reported
Affiliation Zip:	48105
Affiliation Phone:	Not reported
Affiliation Type Desc:	UST Permit Applicant
Entity Name:	Amanda Galbavi
Entity Title:	Environmental Compliance Analyst
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(734) 757-1234
Affiliation Type Desc:	UST Property Owner Name
Entity Name:	XPO Logistics Freight, Inc.
Entity Title:	Not reported
Affiliation Address:	2211 Old Earhart Road, Suite 100
Affiliation City:	Ann Arbor
Affiliation State:	MI
Affiliation Country:	United States
Affiliation Zip:	48105
Affiliation Phone:	(734) 757-1657
Affiliation Type Desc:	Environmental Contact
Entity Name:	JEFF SEXTEN
Entity Title:	Not reported

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Affiliation Address:	2211 Old Earhart Road
Affiliation City:	Ann Arbor
Affiliation State:	MI
Affiliation Country:	Not reported
Affiliation Zip:	48105
Affiliation Phone:	Not reported
Affiliation Type Desc:	Parent Corporation
Entity Name:	XPO Logistics Inc.
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Property Owner
Entity Name:	XPO Logistics Freight, Inc.
Entity Title:	Not reported
Affiliation Address:	2211 Old Earhart Rd
Affiliation City:	Ann Arbor
Affiliation State:	MI
Affiliation Country:	United States
Affiliation Zip:	48105
Affiliation Phone:	(734) 757-1657
Affiliation Type Desc:	Document Preparer
Entity Name:	Jeff Sexten
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	2211 Old Earhart Road, Suite 100
Affiliation City:	Ann Arbor
Affiliation State:	MI
Affiliation Country:	Not reported
Affiliation Zip:	48105
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	Jeff Sexten
Entity Title:	Manager of Environmental Compliance
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **S113051905**

Affiliation Type Desc:	Operator
Entity Name:	XPO Logistics Freight, Inc.-UIV
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(949) 581-9030

Affiliation Type Desc:	UST Tank Owner
Entity Name:	XPO Logistics Freight, Inc.
Entity Title:	Not reported
Affiliation Address:	2211 Old Earhart Road, Suite 100
Affiliation City:	Ann Arbor
Affiliation State:	MI
Affiliation Country:	United States
Affiliation Zip:	48105
Affiliation Phone:	(734) 757-1657

HWTS:

Name:	XPO LOGISTICS FREIGHT INC. - UIV
Address:	20697 PRISM PL
Address 2:	Not reported
City,State,Zip:	LAKE FOREST, CA 926307803
EPA ID:	CAL000078604
Inactive Date:	Not reported
Create Date:	08/06/1993
Last Act Date:	08/19/2019
Mailing Name:	Not reported
Mailing Address:	2211 OLD EARHART RD STE 100
Mailing Address 2:	Not reported
Mailing City,State,Zip:	ANN ARBOR, MI 481050000
Owner Name:	XPO LOGISTICS FREIGHT, INC.
Owner Address:	2211 OLD EARHART RD STE 100
Owner Address 2:	Not reported
Owner City,State,Zip:	ANN ARBOR, MI 481050000
Contact Name:	JEFF SEXTEN
Contact Address:	2211 OLD EARHART ROAD, SUITE 100
Contact Address 2:	Not reported
City,State,Zip:	ANN ARBOR, MI 48105

NAICS:

EPA ID:	CAL000078604
Create Date:	2011-04-05 10:18:12
NAICS Code:	48849
NAICS Description:	Other Support Activities for Road Transportation
Issued EPA ID Date:	1993-08-06 00:00:00
Inactive Date:	Not reported
Facility Name:	XPO LOGISTICS FREIGHT INC. - UIV
Facility Address:	20697 PRISM PL
Facility Address 2:	Not reported
Facility City:	LAKE FOREST
Facility County:	30
Facility State:	CA
Facility Zip:	926307803

B9 **XPO LOGISTICS FREIGHT INC - UIV** **UST** **U003432928**
NW **20697 PRISM PL** **SWEEPS UST** **N/A**
< 1/8 **LAKE FOREST, CA 92630**
0.028 mi.
150 ft. **Site 2 of 4 in cluster B**

Relative: **Lower**

Actual: **628 ft.**

ORANGE CO. UST:
Name: XPO LOGISTICS FREIGHT INC - UIV
Address: 20697 PRISM PL
City,State,Zip: LAKE FOREST, CA 92630
Facility ID: FA0024234

UST:
Name: XPO LOGISTICS FREIGHT, INC.-UIV
Address: 20697 PRISM PL
City,State,Zip: LAKE FOREST, CA 92630
Facility ID: FA0024234
Permitting Agency: Orange County Environmental Health
Latitude: 33.66129
Longitude: -117.67587

SWEEPS UST:
Name: CONWAY EXPRESS
Address: 20697 PRISM PL
City: LAKE FOREST
Status: Active
Comp Number: 11358
Number: 9
Board Of Equalization: Not reported
Referral Date: 09-30-92
Action Date: 09-15-92
Created Date: 02-29-88
Owner Tank Id: Not reported
SWRCB Tank Id: 30-000-011358-000001
Tank Status: A
Capacity: 10000
Active Date: Not reported
Tank Use: M.V. FUEL
STG: P
Content: DIESEL
Number Of Tanks: 1

B10 **XPO LOGISTICS FREIGHT INC. - UIV** **RCRA NonGen / NLR** **1024790138**
NW **20697 PRISM PL** **CAL000078604**
< 1/8 **LAKE FOREST, CA 92630**
0.028 mi.
150 ft. **Site 3 of 4 in cluster B**

Relative: **Lower**

Actual: **628 ft.**

RCRA NonGen / NLR:
Date form received by agency: 1993-08-06 00:00:00.0
Facility name: XPO LOGISTICS FREIGHT INC. - UIV
Facility address: 20697 PRISM PL
LAKE FOREST, CA 92630-7803
EPA ID: CAL000078604
Mailing address: 2211 OLD EARHART RD STE 100
ANN ARBOR, MI 48105-0000
Contact: JEFF SEXTEN
Contact address: 2211 OLD EARHART ROAD, SUITE 100
ANN ARBOR, MI 48105

XPO LOGISTICS FREIGHT INC. - UIV (Continued) **1024790138**

Contact country:	Not reported
Contact telephone:	734-757-1657
Contact email:	JEFF.SEXTEN@XPO.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	XPO LOGISTICS FREIGHT, INC.
Owner/operator address:	2211 OLD EARHART RD STE 100 ANN ARBOR, MI 48105
Owner/operator country:	Not reported
Owner/operator telephone:	734-757-1657
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	JEFF SEXTEN
Owner/operator address:	2211 OLD EARHART ROAD, SUITE 100 ANN ARBOR, MI 48105
Owner/operator country:	Not reported
Owner/operator telephone:	734-757-1657
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

B11 **CON-WAP WESTERN EXPRESS** **UST** **U004316478**
NW **20697 PRISM** **N/A**
< 1/8 **LAKE FOREST, CA 92630**
0.028 mi.
150 ft. **Site 4 of 4 in cluster B**

Relative: ORANGE CO. UST:
Lower
Name: CON-WAP WESTERN EXPRESS
Actual: Address: 20697 PRISM
628 ft. City,State,Zip: LAKE FOREST 92630
Facility ID: FA24234

C12 **AFAB PRECISION MACHINING** **CERS HAZ WASTE** **S118229749**
East **20742 LINEAR LN** **HAZNET** **N/A**
< 1/8 **LAKE FOREST, CA 92630** **CERS**
0.034 mi. **HWTS**
178 ft. **Site 1 of 5 in cluster C**

Relative: CERS HAZ WASTE:
Higher
Name: AFAB PRECISION MACHINE
Actual: Address: 20742 LINEAR LN
647 ft. City,State,Zip: LAKE FOREST, CA 92630
Site ID: 410611
CERS ID: 10543018
CERS Description: Hazardous Waste Generator

HAZNET:
Name: AFAB PRECISION MACHINING
Address: 20742 LINEAR LN
Address 2: Not reported
City,State,Zip: LAKE FOREST, CA 926307804
Contact: HERB WENDORF
Telephone: 9499160778
Mailing Name: Not reported
Mailing Address: 20742 LINEAR LN

Year: 2016
Gepaid: CAC002797843
TSD EPA ID: CAD044429835
CA Waste Code: 223 - Unspecified oil-containing waste
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.8

Year: 2015
Gepaid: CAC002797843
TSD EPA ID: CAD044429835
CA Waste Code: 223 - Unspecified oil-containing waste
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 1.725

Year: 2014
Gepaid: CAC002797843
TSD EPA ID: CAD044429835
CA Waste Code: 223 - Unspecified oil-containing waste
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 1

AFAB PRECISION MACHINING (Continued) **S118229749**

Additional Info:

Year:	2016
Gen EPA ID:	CAC002797843
Shipment Date:	20151110
Creation Date:	1/11/2016 22:16:49
Receipt Date:	20151111
Manifest ID:	008828447FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICE INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD044429835
Trans Name:	CLEAN HARBORS WILMINGTON LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.675
Waste Quantity:	1350
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20150812
Creation Date:	10/12/2015 22:15:28
Receipt Date:	20150812
Manifest ID:	008819752FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD044429835
Trans Name:	CLEAN HARBORS WILMINGTON LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.4
Waste Quantity:	800
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20150526
Creation Date:	7/8/2015 22:15:46
Receipt Date:	20150526

AFAB PRECISION MACHINING (Continued) **S118229749**

Manifest ID:	008315859FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD044429835
Trans Name:	CLEAN HARBORS WILMINGTON LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.65
Waste Quantity:	1300
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2014
Gen EPA ID:	CAC002797843
Shipment Date:	20141231
Creation Date:	3/27/2015 22:15:05
Receipt Date:	20141231
Manifest ID:	008039636FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD044429835
Trans Name:	CLEAN HARBORS WILMINGTON LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	1
Waste Quantity:	2000
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2015
Gen EPA ID:	CAC002797843
Shipment Date:	20151110

AFAB PRECISION MACHINING (Continued) **S118229749**

Creation Date:	1/11/2016 22:16:49
Receipt Date:	20151111
Manifest ID:	008828447FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICE INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD044429835
Trans Name:	CLEAN HARBORS WILMINGTON LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.675
Waste Quantity:	1350
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20150812
Creation Date:	10/12/2015 22:15:28
Receipt Date:	20150812
Manifest ID:	008819752FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD044429835
Trans Name:	CLEAN HARBORS WILMINGTON LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.4
Waste Quantity:	800
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20150526
Creation Date:	7/8/2015 22:15:46
Receipt Date:	20150526
Manifest ID:	008315859FLE
Trans EPA ID:	MAD039322250
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported

AFAB PRECISION MACHINING (Continued) **S118229749**

TSDF EPA ID: CAD044429835
Trans Name: CLEAN HARBORS WILMINGTON LLC
TSDF Alt EPA ID: Not reported
TSDF Alt Name: Not reported
Waste Code Description: 223 - Unspecified oil-containing waste
RCRA Code: Not reported
Meth Code: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons: 0.65
Waste Quantity: 1300
Quantity Unit: P
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

CERS:
Name: AFAB PRECISION MACHINE
Address: 20742 LINEAR LN
City,State,Zip: LAKE FOREST, CA 92630
Site ID: 410611
CERS ID: 10543018
CERS Description: Chemical Storage Facilities

Violations:
Site ID: 410611
Site Name: AFAB PRECISION MACHINE
Violation Date: 01-23-2018
Citation: HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Description: Failure to annually review and electronically certify that the business plan is complete and accurate on or before the annual due date.
Violation Notes: Returned to compliance on 01/23/2018. Inventory forms were updated and new material were added to inventory in CERS during inspection. Annual certification documents were submitted electronically during inspection. This violation has been corrected.
Violation Division: Orange County Environmental Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 410611
Site Name: AFAB PRECISION MACHINE
Violation Date: 01-23-2018
Citation: HSC 6.5 25123.3(c)25123.3(h)(1)(C) - California Health and Safety Code, Chapter 6.5 , Section(s) 25123.3(c)25123.3(h)(1)(C)
Violation Description: Failure to send hazardous waste offsite for treatment, storage, or disposal of acute/extremely hazardous waste after the first 1-kilogram threshold amount was accumulated within a 90 day period.
Violation Notes: Returned to compliance on 04/02/2018.
Violation Division: Orange County Environmental Health
Violation Program: HW
Violation Source: CERS

Evaluation:
Eval General Type: Other/Unknown

AFAB PRECISION MACHINING (Continued) **S118229749**

Eval Date:	09-13-2013
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Went to site to conduct hazardous waste inspection. The owner was in a meeting. Inspection will be conducted at a later date.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	10-15-2013
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Called Larry Campbell, owner, to go to site for inspection. He said that he was leaving for an appointment and requested that inspection be conducted at a later date.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	11-15-2013
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Not reported
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-23-2018
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	I walked though facility, perimeter and inspected hazardous material storage area. There has been changes in types and/or volumes of the hazardous material stored on site since last inspection or previous reporting period. In addition to new and waste machine coolant previously reported, business stores the following material at disclosure threshold: - 55 gallons of Arrowlube 503 (Way Lube Oil) - 110 gallons of Mobil DTE 24 (Hydraulic Oil) Safety meeting that include hazardous materials management are held annually. Training records are available for review. Emergency contact information is posted in the shop. Evacuation site maps are posted throughout the facility. I assisted business with updating inventory forms and adding new material in CERS during inspection. Annual certification documents were submitted electronically during inspection.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-23-2018
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	I walked through the facility, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans throughout facility. Facility began recycling and reusing spent coolant in

AFAB PRECISION MACHINING (Continued) **S118229749**

10/2017, by adding DI water to waste coolant, aerating mixture using aquarium pump, skimming oil (disposed as hazardous waste) and reusing coolant. Waste machine coolant (4) drums are stored closed and labeled. Manifests were reviewed. Volume of waste increased to due to one time cleaning of all machines. Emergency contact information is posted in shop.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 01-24-2018
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed and accepted annual certification documents submitted on 1/23/18 with request to add location of fire extinguishers and adjacent street names to site map and resubmit.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 06-24-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 04-02-2018
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Received copy of manifest showing 600 pounds of spent machine coolant was hauled off site by Clean Harbors on 3/19/18. Violation regarding failure to dispose of hazardous waste within permissible time, cited during routine inspection conducted on 1/23/18, has been corrected.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 05-18-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed and accepted annual certification documents submitted to E-submit on 5/17/16.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 11-17-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Went to site to conduct routine inspection. Owner was in a meeting and

AFAB PRECISION MACHINING (Continued) **S118229749**

	requested that inspection be conducted at a later date.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	11-23-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct routine hazardous waste inspection. Larry Campbell granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans. Waste machine coolant (2) drums are stored closed and labeled. Manifests were reviewed. A new emergency card was provided to be filled out and posted.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	11-29-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed HMBP documents in preparation for onsite inspection.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-13-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct hazardous materials chemical inventory and business emergency plan inspection. Chad Jackson granted consent to conduct inspection. I walked through the facility and inspected hazardous material storage area. There has been no changes in types of hazardous material, new and waste machine coolant, stored on site. However, volumes of the hazardous material stored on site has changed since last inspection or previous reporting period. Discussed updating volume of material stored on site in the annual HMBEP certification in CERS. Facility currently stores the following material at reportable volumes on site: - 855 gallons of new machine coolant (includes coolant stored in machines) - 275 gallons of waste machine coolant Safety meeting that include hazardous materials management are held annually. Training records are available for review. Emergency contact information is posted in the shop. Evacuation site maps are posted throughout the [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	07-27-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to E-submit on 7/20/15 were reviewed and declined

AFAB PRECISION MACHINING (Continued) **S118229749**

with the following considerations: Hazardous Materials Inventory form must be revised as follows: - Hazardous Material Type must be changed from G MixtureG to G Waste.G - Multiple CAS#s listed below G Common NameG should be removed since this material is not G pure.G - CAS# for the hazardous G Component 5G is missing a digit. Please correct it to CAS# is G 26530-20-1.G - G ToxicG should be listed as the G Fire Code Hazard Class.G - G Federal Hazard CategoriesG (Chronic Health) must be reported. - The reported volume of waste material (machine coolant) being hauled off site for disposal appears too high and does not correspond with manifests reviewed during onsite inspections conducted by this agency. Volume of waste machine coolant generated annually should be reviewed and if necessary, G Annual Waste AmountG be adjusted. A Hazardous Materials Inventory form for new machine coolant, stored in drum(s) [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 07-31-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Documents submitted to E-submit on 7/31/15 were reviewed and accepted.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 11-18-2013
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to conduct new hazardous materials chemical inventory and business emergency plan inspection. I walked through the facility and inspected hazardous materials storage area. The facility has hazardous materials that meet the required disclosure quantities. Facility is in the process of uploading all required documents electronically to E-submit.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 11-18-2013
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to conduct routine hazardous waste inspection. Larry Campbell granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans. Waste machine coolant (2) drums are stored closed and labeled. Manifests were reviewed. Last pick up was on 7/5/11. The accumulation time for the waste stored on site is 7/30/13 and storage time has not been exceeded. A emergency card was filled out to be posted during the inspection.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

AFAB PRECISION MACHINING (Continued) **S118229749**

Eval General Type:	Other/Unknown
Eval Date:	11-20-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Went to site to conduct routine inspection. Business owner was in a meeting and manager was not available. Inspection will be conducted at a later date.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS

Enforcement Action:

Site ID:	410611
Site Name:	AFAB PRECISION MACHINE
Site Address:	20742 LINEAR LN
Site City:	LAKE FOREST
Site Zip:	92630
Enf Action Date:	06-24-2015
Enf Action Type:	Notice of Violation (Unified Program)
Enf Action Description:	Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:	HMD/BEP.
Enf Action Division:	Orange County Environmental Health
Enf Action Program:	UNSPEC
Enf Action Source:	CERS

Coordinates:

Site ID:	410611
Facility Name:	AFAB PRECISION MACHINE
Env Int Type Code:	HMBP
Program ID:	10543018
Coord Name:	Not reported
Ref Point Type Desc:	Center of a facility or station.
Latitude:	33.660700
Longitude:	-117.673480

Affiliation:

Affiliation Type Desc:	Identification Signer
Entity Name:	R Larry Campbell
Entity Title:	President
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Legal Owner
Entity Name:	AMERICAN DEBURRING INC
Entity Title:	Not reported
Affiliation Address:	20742 LINEAR LN
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92630
Affiliation Phone:	(949) 457-9790

AFAB PRECISION MACHINING (Continued) **S118229749**

Affiliation Type Desc:	CUPA District
Entity Name:	Orange County Env Health
Entity Title:	Not reported
Affiliation Address:	1241 East Dyer RoadSuite 120
Affiliation City:	Santa Ana
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92705-5611
Affiliation Phone:	(714) 433-6406

Affiliation Type Desc:	Document Preparer
Entity Name:	R Larry Campbell
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Operator
Entity Name:	R. Larry Campbell
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(949) 457-9790

Affiliation Type Desc:	Environmental Contact
Entity Name:	R Larry Campbell
Entity Title:	Not reported
Affiliation Address:	20742 Linear Lane
Affiliation City:	Lake Forest
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92630
Affiliation Phone:	Not reported

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	20742 LINEAR LN
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92630
Affiliation Phone:	Not reported

Affiliation Type Desc:	Parent Corporation
Entity Name:	AFAB PRECISION MACHINE
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported

AFAB PRECISION MACHINING (Continued) **S118229749**

Affiliation Zip: Not reported
Affiliation Phone: Not reported

HWTS:
Name: AFAB PRECISION MACHINING
Address: 20742 LINEAR LN
Address 2: Not reported
City,State,Zip: LAKE FOREST, CA 926307804
EPA ID: CAC002797843
Inactive Date: 03/23/2015
Create Date: 12/22/2014
Last Act Date: 03/24/2015
Mailing Name: Not reported
Mailing Address: 20742 LINEAR LN
Mailing Address 2: Not reported
Mailing City,State,Zip: LAKE FOREST, CA 926307804
Owner Name: LARRY C AMPBELL
Owner Address: 20742 LINEAR LN
Owner Address 2: Not reported
Owner City,State,Zip: LAKE FOREST, CA 926307804
Contact Name: HERB WENDORF
Contact Address: 20742 LINEAR LN
Contact Address 2: Not reported
City,State,Zip: LAKE FOREST, CA 926307804

NAICS:
EPA ID: CAC002797843
Create Date: 2014-12-22 10:34:47
NAICS Code: 324191
NAICS Description: Petroleum Lubricating Oil and Grease Manufacturing
Issued EPA ID Date: 2014-12-22 10:34:47
Inactive Date: 2015-03-23 10:34:47
Facility Name: AFAB PRECISION MACHINING
Facility Address: 20742 LINEAR LN
Facility Address 2: Not reported
Facility City: LAKE FOREST
Facility County: 31
Facility State: CA
Facility Zip: 926307804

C13 **AFAB PERCISION MACHINING** **RCRA NonGen / NLR** **1024796373**
East **20742 LINER LANE** **CAL000175207**
< 1/8 **LAKE FOREST, CA 92630**
0.034 mi.
178 ft. **Site 2 of 5 in cluster C**

Relative:
Higher

Actual:
647 ft.

RCRA NonGen / NLR:
Date form received by agency: 1996-09-26 00:00:00.0
Facility name: AFAB PERCISION MACHINING
Facility address: 20742 LINER LANE
LAKE FOREST, CA 92630-0000
EPA ID: CAL000175207
Mailing address: 20742 LINEAR LN
LAKE FOREST, CA 92630-0000
Contact: THERESA COOK
Contact address: 20742 LINEAR LANE

AFAB PERCISION MACHINING (Continued) **1024796373**

LAKE FOREST, CA 92630
Contact country: Not reported
Contact telephone: 949-457-9790
Contact email: THERESA@AFABCNC.COM
EPA Region: 09
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: AFAB PRECISION MACHINING
Owner/operator address: 20742 LINEAR LANE
LAKE FOREST, CA 92630
Owner/operator country: Not reported
Owner/operator telephone: 949-457-9790
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: THERESA COOK
Owner/operator address: 20742 LINEAR LANE
LAKE FOREST, CA 92630
Owner/operator country: Not reported
Owner/operator telephone: 949-457-9790
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

D14 **SUNSTATE EQUIPMENT CO** **CERS HAZ WASTE** **S123512598**
West **20772 CIVIC CENTER DR** **CERS TANKS** **N/A**
< 1/8 **LAKE FOREST, CA 92630** **CERS**
0.067 mi.
353 ft. **Site 1 of 4 in cluster D**

Relative:
Higher

Actual:
638 ft.

CERS HAZ WASTE:
Name: SUNSTATE EQUIPMENT CO
Address: 20772 CIVIC CENTER DR
City,State,Zip: LAKE FOREST, CA 92630
Site ID: 359105
CERS ID: 10540978
CERS Description: Hazardous Waste Generator

CERS TANKS:
Name: SUNSTATE EQUIPMENT CO
Address: 20772 CIVIC CENTER DR
City,State,Zip: LAKE FOREST, CA 92630
Site ID: 359105
CERS ID: 10540978
CERS Description: Aboveground Petroleum Storage

CERS:
Name: SUNSTATE EQUIPMENT CO
Address: 20772 CIVIC CENTER DR
City,State,Zip: LAKE FOREST, CA 92630
Site ID: 359105
CERS ID: 10540978
CERS Description: Chemical Storage Facilities

Evaluation:
Eval General Type: Other/Unknown
Eval Date: 02-17-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Documents submitted to CERS on 2/2/16 were reviewed and not accepted with the following considerations: Antifreeze (new): G State Waste CodeG and G Annual Waste AmountG should be removed since this material is not waste. Diesel Fuel No. 2: G Annual Waste AmountG should be removed since this material is not waste. Gasoline: G Annual Waste AmountG should be removed since this material is not waste. Motor Oil: G State Waste CodeG and G Annual Waste AmountG should be removed since this material is not waste. The following material are below reporting quantities of 55 gallons, 200/1000 cubic feet or 500 pounds and must be removed: - Acetylene (less than 200 cubic feet) - Automatic Transmission Fluid (less than 55 gallons) - Nitrogen (less than 1000 cubic feet) - Argon/CO2 (less than 200 cubic feet) - Oxygen (less than 200 cubic feet) - Waste Oil Filters (less than 500 pounds) This agency administers the Hazardous Material Inspection program for this city [Truncated]
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-18-2018
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to conduct aboveground petroleum storage tank (APST)

SUNSTATE EQUIPMENT CO (Continued) **S123512598**

inspection. Street name has been changed from Indian Ocean Dr. to Civic Center Dr. Facility has the following APSTs: - 1500 gallon compartment tank (1250 gallon diesel & 250 gallon gasoline) - 120 gallon hydraulic oil - 120 gallon new motor oil - 240 gallons waste oil Weekly APST inspections are conducted and logs are included in the "Weekly Hazardous Material Storage Area Inspection Checklist." Annual employee training is provided and training records are available for review. SPCC plan dated 11/4/15 is available on site.

Eval Division: Orange County Environmental Health
Eval Program: APSA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-18-2018
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to conduct routine hazardous waste inspection. Street name has been changed from Indian Ocean Dr. to Civic Center Dr. I walked through the shop, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans throughout facility. Waste oil is stored in an aboveground tank that is kept closed and labeled. Waste antifreeze (1), spent absorbent (1), used oil filters/metal (1) and used oil filters/paper (1) drums are stored closed and labeled. Manifests were reviewed. "Weekly Hazardous Material Storage Area Inspection Checklist" are available for review. Emergency card is posted in posted in a glass covered bulletin board in front office area. A copy of Contingency Plan and Evacuation Plan is available on site.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-22-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector Comments: On site to conduct new Aboveground Petroleum Storage Tank (APST) inspection. This business left/closed this location six years ago but came back and began operations again in June 2015. I walked through the facility and perimeter. The facility has the following APSTs: - 1500 gallon compartment tank (1250 gallon diesel & 250 gallon gasoline) - 55 gallon new motor oil - 120 gallon hydraulic oil - 120 gallon new motor oil - 240 gallons waste oil SPCC plan is currently being prepared by an environmental consulting company.
Eval Division: Orange County Environmental Health
Eval Program: APSA
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 09-26-2018
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed Facility Information and Emergency documents submitted to CERS on 9/18/18. Facility Information was not accepted since street name was not changed to G Civic Center Dr.G Emergency plan was accepted with comment to add Regional Water Quality Control Board’s

SUNSTATE EQUIPMENT CO (Continued) **S123512598**

	phone number in next submittal. I emailed a copy of inspection report dated 9/18/18 to CERS contact so inventory could be updated.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	10-30-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted revised documents submitted to CERS on 10/26/15.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	09-22-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct new hazardous materials chemical inventory and business emergency plan inspection. Paul Barnhouse assisted with the inspection. I walked through the facility and inspected hazardous materials storage areas. Facility has the following hazardous materials that meet required disclosure quantities: - 1250 gallons of diesel - 250 gallons of gasoline - 120 gallons of new motor oil - 120 gallons of hydraulic oil - 55 gallons of Zep Formula 940 detergent - 250 gallons of propane (tank) and propane cylinders (approximately 110 gallons) - 240 gallons of waste oil - 55 gallons of waste antifreeze Facility is required and has been notified to electronically submit the following documents within 30 days of this inspection: - Business Activities form - Owner/Operator Identification form - Hazardous Material Chemical Inventory forms - Facility Site Map - Business Emergency Plan Documents must be electronically [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-12-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Mike Williams granted consent to conduct inspection. I walked through the shop, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans throughout shop. Waste oil is stored in an aboveground tank that is kept closed and labeled. Waste antifreeze (1), used oil filters/metal (1) and used oil filters/paper (1) drums are stored closed and labeled. Manifests were reviewed. An emergency card was provided to be filled out and posted.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	07-16-2019
Violations Found:	No

SUNSTATE EQUIPMENT CO (Continued) **S123512598**

Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted revised documents submitted to CERS on 5/23/19.
Eval Division:	Orange County Environmental Health
Eval Program:	APSA
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	09-18-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct hazardous materials chemical inventory and business emergency plan (HMBEP) inspection. Street name has been changed from Indian Ocean Dr. to Civic Center Dr. Please update CERS (Facility Information and site map) with new address. I walked through the facility and inspected hazardous material storage areas inside shop and yard. There has been changes in types and/or volumes of the hazardous material stored on site since last inspection or previous reporting period. Facility does not store new antifreeze at disclosure threshold and does not store waste ATF. Waste antifreeze and ATF must be deleted from inventory. The following material previously not observed on site must be added to inventory: - 1004 cubic of oxygen gas (largest cylinder - 251 cubic feet) - 420 cubic of acetylene gas (largest cylinder - 118 cubic feet) - 330 gallons of Diesel Exhaust Fluid Site map must be revised to show locations of new material. In addition, [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-03-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted annual certification documents submitted to CERS on 1/30/17.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-18-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted revised HMBP documents submitted to CERS on 2/17/16.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	09-22-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct hazardous waste generator inspection. Paul Barnhouse granted consent to conduct inspection. This business left/closed this location six years ago but came back and began operations again in June 2015. I walked through the facility,

SUNSTATE EQUIPMENT CO (Continued) **S123512598**

perimeter and inspected waste storage area. Facility is maintained very clean. I did not observe any hazardous waste in trash cans throughout the facility or municipal trash. Waste oil is stored in an aboveground tank that is kept closed and labeled. Waste antifreeze (1) and used oil filter (1) drums are stored closed and labeled. Manifest was reviewed. Emergency contact information is available on site.

Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 10-23-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Documents submitted to CERS on 10/16/15 were reviewed and declined with the following considerations: - Waste Antifreeze: CAS# listed in Chemical Identification and Physical Properties section must be deleted and waste information be listed in Mixture Components section. - Hydraulic Oil: Information in Mixture Components section must be deleted and CAS# should be listed in Chemical Identification and Physical Properties section. Also, Fire Code Hazard Classes and G FireG as a Federal Hazard Categories must be listed. - Motor Oil: Chemical Name must be listed on form. Also, CAS# 6474X-XX-X listed for G Various Lubricating Base OilsG in Mixture Components section is not acceptable, especially that this material is the main component at 85%. All digits of the CAS# must be provided or CAS# 64742-65-0 may be used. - Waste Motor Oil: CAS# 6474X-XX-X listed for G Various Lubricating Base OilsG in Mixture Components section is not acceptable, especially that this material [Truncated]
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Affiliation:
Affiliation Type Desc: Environmental Contact
Entity Name: Annie Bodell
Entity Title: Not reported
Affiliation Address: 5552 E. Washington Street
Affiliation City: Phoenix
Affiliation State: AZ
Affiliation Country: Not reported
Affiliation Zip: 85034
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner
Entity Name: Sunstate Equipment Co., LLC.
Entity Title: Not reported
Affiliation Address: 5552 E. Washington Street
Affiliation City: Phoenix
Affiliation State: AZ
Affiliation Country: United States
Affiliation Zip: 85034
Affiliation Phone: (602) 275-2398

Affiliation Type Desc: Parent Corporation
Entity Name: Sunstate Equipment Co
Entity Title: Not reported

SUNSTATE EQUIPMENT CO (Continued) **S123512598**

Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	CUPA District
Entity Name:	Orange County Env Health
Entity Title:	Not reported
Affiliation Address:	1241 East Dyer RoadSuite 120
Affiliation City:	Santa Ana
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92705-5611
Affiliation Phone:	(714) 433-6406
Affiliation Type Desc:	Operator
Entity Name:	Sunstate Equipment Co., L.L.C.
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(602) 683-2268
Affiliation Type Desc:	Document Preparer
Entity Name:	Annmarie Bodell
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	5552 E Washington St
Affiliation City:	Phoenix
Affiliation State:	AZ
Affiliation Country:	Not reported
Affiliation Zip:	85034
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	Annmarie Bodell
Entity Title:	Environmental & Compliance Specialist
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

SUNSTATE EQUIPMENT CO (Continued) **S123512598**

Affiliation Type Desc:	Property Owner
Entity Name:	Sukut Real Properties, LP
Entity Title:	Not reported
Affiliation Address:	4010 W. Chandler Ave.
Affiliation City:	Santa Ana
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92704-5202
Affiliation Phone:	(714) 460-1016

C15 **MCLAREN UNIBODY INC** **RCRA NonGen / NLR** **1024787577**
East **20781 CANADA RD** **CAL000034592**
< 1/8 **EL TORO, CA 92630**
0.072 mi.
380 ft. **Site 3 of 5 in cluster C**

Relative:
Higher

Actual:
654 ft.

RCRA NonGen / NLR:

Date form received by agency:	1990-05-16 00:00:00.0
Facility name:	MCLAREN UNIBODY INC
Facility address:	20781 CANADA RD EL TORO, CA 92630-7702
EPA ID:	CAL000034592
Contact:	MARY DAVIS
Contact address:	20781 CANADA RD LAKE FOREST, CA 92630
Contact country:	Not reported
Contact telephone:	949-855-0145
Contact email:	MARY.DAVIS113@GMAIL.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	MARY DAVIS
Owner/operator address:	20781 CANADA RD LAKE FOREST, CA 92630
Owner/operator country:	Not reported
Owner/operator telephone:	949-855-0145
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	MCLAREN UNIBODY INC
Owner/operator address:	20781 CANADA RD LAKE FOREST, CA 92630
Owner/operator country:	Not reported
Owner/operator telephone:	949-855-0145
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner

MCLAREN UNIBODY INC (Continued) **1024787577**

Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

C16 **MCLAREN UNIBODY INC** **CERS HAZ WASTE** **S109282016**
East **20781 CANADA RD** **EMI** **N/A**
< 1/8 **LAKE FOREST, CA 92630** **CERS**
0.072 mi.
380 ft. **Site 4 of 5 in cluster C**

Relative:
Higher

Actual:
654 ft.

CERS HAZ WASTE:
Name: MCLAREN UNIBODY INC
Address: 20781 CANADA RD
City,State,Zip: LAKE FOREST, CA 92630
Site ID: 411774
CERS ID: 10542040
CERS Description: Hazardous Waste Generator

EMI:
Name: MCLAREN UNIBODY, INC.
Address: 20781 CANADA RD
City,State,Zip: LAKE FOREST, CA 92630
Year: 2006
County Code: 30
Air Basin: SC
Facility ID: 148182
Air District Name: SC
SIC Code: 7532
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 1.398352450966500434
Reactive Organic Gases Tons/Yr: 1.336
Carbon Monoxide Emissions Tons/Yr: .005
NOX - Oxides of Nitrogen Tons/Yr: .019
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: .03
Part. Matter 10 Micrometers and Smllr Tons/Yr: .02884

Name: MCLAREN UNIBODY, INC.

MCLAREN UNIBODY INC (Continued) **S109282016**

Address:	20781 CANADA RD
City,State,Zip:	LAKE FOREST, CA 92630
Year:	2007
County Code:	30
Air Basin:	SC
Facility ID:	148182
Air District Name:	SC
SIC Code:	7532
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	1.398352450966500434
Reactive Organic Gases Tons/Yr:	1.336
Carbon Monoxide Emissions Tons/Yr:	.005
NOX - Oxides of Nitrogen Tons/Yr:	.019
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	.03
Part. Matter 10 Micrometers and Smllr Tons/Yr:	.02884

CERS:

Name:	MCLAREN UNIBODY INC
Address:	20781 CANADA RD
City,State,Zip:	LAKE FOREST, CA 92630
Site ID:	411774
CERS ID:	10542040
CERS Description:	Chemical Storage Facilities

Violations:

Site ID:	411774
Site Name:	MCLAREN UNIBODY INC
Violation Date:	03-02-2015
Citation:	HSC 6.95 25508(d) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(d)
Violation Description:	Failure to complete and/or electronically submit a business plan when storing/handling a hazardous material at or above reportable quantities.
Violation Notes:	Not reported
Violation Division:	Orange County Environmental Health
Violation Program:	HMRRP
Violation Source:	CERS

Site ID:	411774
Site Name:	MCLAREN UNIBODY INC
Violation Date:	08-14-2017
Citation:	22 CCR 15 66265.173 - California Code of Regulations, Title 22, Chapter 15, Section(s) 66265.173
Violation Description:	Failure to meet the following container management requirements: (a) A container holding hazardous waste must always be closed during storage, except when it is necessary to add or remove waste. (b) A container holding hazardous waste must not be opened, handled, or stored in a manner which may rupture the container or cause it to leak.
Violation Notes:	Returned to compliance on 08/14/2017. Waste oil (1) and waste antifreeze (1) drums are not stored closed. Please be advised that hazardous waste drums must be stored closed unless in active use. Bung holes on both drums were closed during the inspection. This violation has been corrected.

MCLAREN UNIBODY INC (Continued) **S109282016**

Violation Division: Orange County Environmental Health
Violation Program: HW
Violation Source: CERS

Site ID: 411774
Site Name: MCLAREN UNIBODY INC
Violation Date: 03-02-2015
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description: Failure to complete and electronically submit hazardous material inventory information for all reportable hazardous materials on site at or above reportable quantities.
Violation Notes: Not reported
Violation Division: Orange County Environmental Health
Violation Program: HMRRP
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-30-2019
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to conduct routine hazardous waste inspection. Alec Okamoto granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage areas in paint mixing room and throughout shop. I did not observe any hazardous waste in municipal trash or trash cans throughout the facility. Waste paint (1), spent waterborne cleaning solution (1), waste oil (1), waste antifreeze (1), waste aerosols (1) and bondo dust (1) drums are stored closed and labeled. Manifests were reviewed. New emergency card was provided to be filled out and posted.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 08-14-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed annual certification documents submitted to CERS on 8/14/17. Updated data in EC.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 08-25-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Documents submitted to E-submit on 7/30/15 were reviewed and declined with the following considerations: Acetylene form must be revised as follows: - G Compressed GasG must be added to G AcetyleneG in Chemical Name section. - Common Name must be changed from G Welding GasG to G Acetylene.G - All checked boxes except for G Flammable GasG must be unchecked under G Fire Code Hazard Classes.G - In addition to G Fire,G the G Pressure ReleaseG box also be checked in G Federal Hazard CategoriesG section. - G Maximum Daily AmountG must be changed from G

MCLAREN UNIBODY INC (Continued) **S109282016**

5.0G to G 200G (the size of the largest container). - G Days On SiteG is reported at 30 days. G Days On SiteG should be changed to 365 days, unless this material is on site during specific days (dates should be included.) - G Storage PressureG must be changed from G AmbientG to G Above Ambient.G Documents submitted on 7/30/15 were reviewed and declined with the following considerations: Argon (Carbon Dioxide) form must be revised as [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 08-30-2018
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to conduct routine hazardous waste inspection. I walked through the facility, perimeter and inspected waste storage areas. I did not observe any hazardous waste in municipal trash or trash cans throughout the facility. Waste paint (1), spent waterborne cleaning solution (1), waste oil (1) and waste antifreeze (1) drums are stored closed and labeled. Manifests were reviewed. New emergency card was provided to be filled out and posted.

Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-04-2013
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to conduct new hazardous materials chemical inventory and business emergency plan inspection. Mary Davis granted consent to conduct inspection. I walked through the facility and inspected hazardous materials storage area. The facility has hazardous materials, compressed gases, (200 cubic feet or greater) that meet the required disclosure. Facility is required and has been notified to electronically submit the following documents within 30 days of this inspection: - Business Activities form - Owner/Operator Identification form - Hazardous Material Chemical Inventory forms - Facility Site Map - Business Emergency Plan Documents must be electronically submitted by going to www.esubmit.ocgov.com and requesting a username and password. User guides and tutorials are located on the home page to help you get started. If you are having trouble, please call (714) 433-6000 and request to speak to the portal administrator.

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-22-2014
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector Comments: On site to conduct routine hazardous waste inspection. James Davis granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage areas. I did not observe any hazardous waste in trash cans throughout the facility or municipal trash. Waste paint (1), spent waterborne

MCLAREN UNIBODY INC (Continued) **S109282016**

cleaning solution (1), waste oil (1) and waste antifreeze (1) drums are stored closed and labeled. The "accumulation start date" on the labels is the date when the last waste pick up occurred. Please be advised that in order to extend waste storage period, the "accumulation start date" may be written on the label(s) when there is 27 gallons of waste on site, then have all waste hauled off site by a registered transporter for proper disposal within 180 days of that date. Manifests were reviewed. Emergency card is posted on the wall in the shop by the door leading into the reception area.

Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 09-22-2014
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: On site for follow up inspection to verify the volume of compressed gases on site and determine whether or not the facility must electronically submit documents. There is an oxygen gas cylinder on site with the volume unknown and it may store 200 cubic feet or more of this gas. The volume of the oxygen gas stored on site must be verified. Please notify this Agency of the volume of oxygen gas stored on site within 30 days of this inspection.

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-02-2015
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Inspector Comments: Orange County Environmental Health as the Certified Unified Program Agency (OC CUPA) is the administrating agency for the Hazardous Materials Disclosure and Business Emergency Plan programs (HMD/BEP) previously administered by the Orange County Fire Authority. During the months of August and December of 2013, the OC CUPA sent out letters to regulated businesses requesting them to electronically submit their HMD/BEP forms. In addition, during the onsite inspection conducted on 9/4/13 and 9/22/14, your facility was notified again to submit HMD/BEP electronically. Electronic submission of these forms is a legal requirement. Failure to submit HMD/BEP forms is in violation of the California Health & Safety Code Chapter 6.95. According to our records there is no electronic submission for this facility. Please go to www.esubmit.ocgov.com to request a username and password and submit the following HMD/BEP forms within the next 30 days: - Business [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 04-23-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: 4/23/16: File Review. Routine Inspection 9-4-13. SUBMITTED 7/30/15. Declined 8/25/15. No Resubmission. VIOLATIONS OUTSTANDING.

MCLAREN UNIBODY INC (Continued) **S109282016**

Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	07-26-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct hazardous materials chemical inventory and business emergency plan inspection. Alec Okamoto granted consent to conduct inspection. I walked through the facility, perimeter and inspected hazardous material storage area. Reported material, Argon/Carbon Dioxide and Acetylene gases, as reported were verified. Cylinders are chained to the pole/beam. There has been no change in chemical inventory. Business Emergency Plan and disclosure information is available electronically. Corrections to submittal, both inventory and site map were made during the inspection. Emergency contact information is posted on the wall above the phone in the shop.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	07-27-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted revised documents submitted on 7/27/16. Violations I169 and I292 regarding failure to submit HMBP documents electronically has been corrected.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	09-04-2013
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Mary Davis granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage areas. I did not observe any hazardous waste in trash cans or municipal trash. Waste paint (1), spent waterborne cleaning solution (1), waste oil (1) and waste antifreeze (1) drums are stored closed and labeled. Manifests were reviewed. Emergency card is posted in the shop by the entrance to the office.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-09-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct routine hazardous waste inspection. Cameron Okamoto granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage areas. I did not observe any hazardous waste in trash cans throughout

MCLAREN UNIBODY INC (Continued) **S109282016**

	the facility. Nineteen fluorescent lights were in the trash dumpster. According to Mr. Okomto, Filter Plus Recycling, who replaced the spray booth filters in the morning also replaced the lights and contact thought that the lights were transported off site by them. Facility contact was not aware that Filters Plus does not take the lights for proper disposal. The fluorescent lights were removed from the trash dumpster, placed in a box and labeled during the inspection. Management of universal waste, such as fluorescent lights, was discussed with Mr. Okamoto. Waste paint (1), spent waterborne cleaning solution (1), waste oil (1) and waste antifreeze (1) drums are stored closed and [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	07-26-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct routine hazardous waste inspection. Alec Okamoto granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage areas. I did not observe any hazardous waste in municipal trash or trash cans throughout the facility. Waste paint (1), spent waterborne cleaning solution (1), waste oil (1) and waste antifreeze (1) drums are stored closed and labeled. Manifests were reviewed. Emergency card is posted on the wall in the shop by the door leading into the reception area.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	09-04-2018
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted annual certifications documents submitted to CERS on 8/30/18.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	06-24-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Not reported
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	07-16-2013
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Follow up on outstanding violation. Sp
Eval Division:	Orange County Environmental Health

MCLAREN UNIBODY INC (Continued) **S109282016**

Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	07-30-2019
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct hazardous materials chemical inventory and business emergency plan inspection. Alec Okamoto granted consent to conduct inspection. I walked through the facility and inspected hazardous material storage areas. There has been changes in types of hazardous material stored on site since last inspection or previous reporting period. Facility is now storing oxygen gas at disclosure threshold. Inventory form for oxygen was added in CERS during inspection. Facility stores the following hazardous materials at disclosure threshold: - 245 cubic feet of acetylene - 249 cubic feet of oxygen - 55 gallons of Compliant Cleaning Solution 2085B Hazardous materials management training is provided annually and training records are available on site. Emergency Plan and site map (showing location of cleaning solution) were updated and uploaded to CERS during inspection.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	08-14-2017
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Mary Davis granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage areas. I did not observe any hazardous waste in municipal trash or trash cans throughout the facility. Waste paint (1) and spent waterborne cleaning solution (1) drums are stored closed and labeled. Waste oil (1) and waste antifreeze (1) drums are labeled but not stored closed. Bung holes on both drums were closed during the inspection. Please be advised that hazardous waste drums must be stored closed unless in active use. Manifests for were reviewed. Manifests dated in 2016 are not available on site. Missing manifests will be submitted to this agency within 72 hours of this inspection. Emergency card is posted on the wall in the shop by the door leading into the reception area.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS

Enforcement Action:

Site ID:	411774
Site Name:	MCLAREN UNIBODY INC
Site Address:	20781 CANADA RD
Site City:	LAKE FOREST
Site Zip:	92630
Enf Action Date:	06-24-2015
Enf Action Type:	Notice of Violation (Unified Program)
Enf Action Description:	Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:	HMD/BEP NOV ISSUED 6-24-15.
Enf Action Division:	Orange County Environmental Health

MCLAREN UNIBODY INC (Continued) **S109282016**

Enf Action Program: UNSPEC
Enf Action Source: CERS

Coordinates:
Site ID: 411774
Facility Name: MCLAREN UNIBODY INC
Env Int Type Code: HMBP
Program ID: 10542040
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 33.660350
Longitude: -117.673000

Affiliation:
Affiliation Type Desc: CUPA District
Entity Name: Orange County Env Health
Entity Title: Not reported
Affiliation Address: 1241 East Dyer RoadSuite 120
Affiliation City: Santa Ana
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92705-5611
Affiliation Phone: (714) 433-6406

Affiliation Type Desc: Document Preparer
Entity Name: MARY ANNE DAVIS
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Environmental Contact
Entity Name: MARY ANNE DAVIS
Entity Title: Not reported
Affiliation Address: 20781 CANADA ROAD
Affiliation City: LAKE FOREST
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92630
Affiliation Phone: Not reported

Affiliation Type Desc: Identification Signer
Entity Name: MARY ANNE DAVIS
Entity Title: CORPORATE OFFICER
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Parent Corporation
Entity Name: MCLAREN UNIBODY INC

MCLAREN UNIBODY INC (Continued) **S109282016**

Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	20781 CANADA RD
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92630
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	MCLAREN UNIBODY INC
Entity Title:	Not reported
Affiliation Address:	20781 CANADA RD
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92630
Affiliation Phone:	(949) 855-0145
Affiliation Type Desc:	Operator
Entity Name:	MCLAREN UNIBODY INC
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(949) 855-0145

C17 **MCLAREN UNIBODY INCORPORATED** **RCRA NonGen / NLR** **1024814575**
East **20781 CANADA RD** **CAL000309583**
< 1/8 **LAKE FOREST, CA 92630**
0.072 mi.
380 ft. **Site 5 of 5 in cluster C**

Relative:
Higher

Actual:
654 ft.

RCRA NonGen / NLR:

Date form received by agency:	2006-07-27 00:00:00.0
Facility name:	MCLAREN UNIBODY INCORPORATED
Facility address:	20781 CANADA RD LAKE FOREST, CA 92630
EPA ID:	CAL000309583
Contact:	MARY DAVIS
Contact address:	20781 CANADA RD LAKE FOREST, CA 92630
Contact country:	Not reported
Contact telephone:	949-855-0145
Contact email:	MARY.DAVIS113@GMAIL.COM
EPA Region:	09

MCLAREN UNIBODY INCORPORATED (Continued) **1024814575**

Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: MARY DAVIS
Owner/operator address: 20781 CANADA RD
LAKE FOREST, CA 92630
Owner/operator country: Not reported
Owner/operator telephone: 949-855-0145
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: MCLAREN UNIBODY INC
Owner/operator address: 20781 CANADA RD
LAKE FOREST, CA 92630
Owner/operator country: Not reported
Owner/operator telephone: 949-855-0145
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

E18 **ELECSYS INC** **CERS HAZ WASTE** **S113084122**
North **20611 PRISM PLACE** **HAZNET** **N/A**
< 1/8 **LAKE FOREST, CA 92630** **CERS**
0.072 mi. **HWTS**
382 ft. **Site 1 of 2 in cluster E**

Relative:
Higher

Actual:
658 ft.

CERS HAZ WASTE:
Name: SEA COUNTRY TOWING/S&C PRO AUTOMOTIVE
Address: 20611 PRISM PL
City,State,Zip: LAKE FOREST, CA 92630
Site ID: 420164
CERS ID: 10573777
CERS Description: Hazardous Waste Generator

HAZNET:
Name: ELECSYS INC
Address: 20611 PRISM PLACE
Address 2: Not reported
City,State,Zip: LAKE FOREST, CA 926300000
Contact: LESTER VOGT-MGR RND
Telephone: 7144610100
Mailing Name: Not reported
Mailing Address: 23272 ARROYO VISTA

Year: 1999
Gepaid: CAL000157473
TSD EPA ID: TND000772186
CA Waste Code: 211 - Halogenated solvents (chloroforms, methyl chloride, perchloroethylene, etc)
Disposal Method: T03 - Treatment, Incineration
Tons: 0.008

Year: 1999
Gepaid: CAL000157473
TSD EPA ID: TND000772186
CA Waste Code: 214 - Unspecified solvent mixture
Disposal Method: D99 - Disposal, Other
Tons: 0.018

Year: 1999
Gepaid: CAL000157473
TSD EPA ID: TND000772186
CA Waste Code: 343 - Unspecified organic liquid mixture
Disposal Method: T03 - Treatment, Incineration
Tons: 0.006

Year: 1999
Gepaid: CAL000157473
TSD EPA ID: TND000772186
CA Waste Code: 792 - Liquids with pH <= 2 with metals
Disposal Method: D99 - Disposal, Other
Tons: 0.0075

Additional Info:
Year: 1999
Gen EPA ID: CAL000157473

ELECSYS INC (Continued) **S113084122**

Shipment Date:	19991101
Creation Date:	Not reported
Receipt Date:	Not reported
Manifest ID:	99151889
Trans EPA ID:	CAR000053405
Trans Name:	Not reported
Trans 2 EPA ID:	CAL931024038
Trans 2 Name:	Not reported
TSDF EPA ID:	TND000772186
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	791 - Liquids with pH < 2 792 Liquids with pH < 2 with metals
RCRA Code:	D001
Meth Code:	D99 - Disposal, Other
Quantity Tons:	0.0125
Waste Quantity:	3
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	19991101
Creation Date:	Not reported
Receipt Date:	Not reported
Manifest ID:	99151889
Trans EPA ID:	CAR000053405
Trans Name:	Not reported
Trans 2 EPA ID:	CAL931024038
Trans 2 Name:	Not reported
TSDF EPA ID:	TND000772186
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	Not reported
Meth Code:	T03 - Treatment, Incineration
Quantity Tons:	0.005
Waste Quantity:	10
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	19991101
Creation Date:	4/4/2000 0:00:00
Receipt Date:	19991210
Manifest ID:	99151889
Trans EPA ID:	CAR000053405
Trans Name:	Not reported
Trans 2 EPA ID:	CAL931024038
Trans 2 Name:	Not reported
TSDF EPA ID:	TND000772186

ELECSYS INC (Continued) **S113084122**

Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	Not reported
Meth Code:	T03 - Treatment, Incineration
Quantity Tons:	0.006
Waste Quantity:	12
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19991101
Creation Date:	4/4/2000 0:00:00
Receipt Date:	19991210
Manifest ID:	99151889
Trans EPA ID:	CAR000053405
Trans Name:	Not reported
Trans 2 EPA ID:	CAL931024038
Trans 2 Name:	Not reported
TSDF EPA ID:	TND000772186
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	792 - Not reported
RCRA Code:	D002
Meth Code:	D99 - Disposal, Other
Quantity Tons:	0.0075
Waste Quantity:	15
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19991101
Creation Date:	4/4/2000 0:00:00
Receipt Date:	19991210
Manifest ID:	99151889
Trans EPA ID:	CAR000053405
Trans Name:	Not reported
Trans 2 EPA ID:	CAL931024038
Trans 2 Name:	Not reported
TSDF EPA ID:	TND000772186
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	211 - Halogenated solvents (chloroform, methyl chloride, perchloroethylene, etc.
RCRA Code:	F002
Meth Code:	T03 - Treatment, Incineration
Quantity Tons:	0.008
Waste Quantity:	16

ELECSYS INC (Continued) **S113084122**

Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19991101
Creation Date:	4/4/2000 0:00:00
Receipt Date:	19991210
Manifest ID:	99151889
Trans EPA ID:	CAR000053405
Trans Name:	Not reported
Trans 2 EPA ID:	CAL931024038
Trans 2 Name:	Not reported
TSDF EPA ID:	TND000772186
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	D99 - Disposal, Other
Quantity Tons:	0.018
Waste Quantity:	5
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

CERS:

Name:	SEA COUNTRY TOWING/S&C PRO AUTOMOTIVE
Address:	20611 PRISM PL
City,State,Zip:	LAKE FOREST, CA 92630
Site ID:	420164
CERS ID:	10573777
CERS Description:	Chemical Storage Facilities

Violations:

Site ID:	420164
Site Name:	SEA COUNTRY TOWING/S&C PRO AUTOMOTIVE
Violation Date:	02-09-2015
Citation:	22 CCR 12 66262.34(f) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(f)
Violation Description:	Failure to properly label hazardous waste accumulation containers with the following requirements: "Hazardous Waste", name and address of the generator, physical and chemical characteristics of the Hazardous Waste, and starting accumulation date.
Violation Notes:	Returned to compliance on 02/09/2015. Labels on all waste drums have faded. New labels were placed on drums and violation was corrected during the inspection.
Violation Division:	Orange County Environmental Health
Violation Program:	HW
Violation Source:	CERS

ELECSYS INC (Continued) **S113084122**

Evaluation:

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-13-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Abed Pirnazar granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area in the shop. I did not observe any hazardous waste in trash cans throughout the facility. Waste oil (2), used oil filters (1) and waste antifreeze (1) drums are stored closed. Manifests were reviewed. Emergency card is posted in waiting area.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-26-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct routine hazardous waste inspection. Abed Pirnazar granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans throughout the facility. Waste oil (2), used oil filters (1) and waste antifreeze (1) drums are stored closed. Waste antifreeze has not been generated and drum is empty. Manifests were reviewed. Emergency card is posted in waiting area.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	02-06-2014
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Abed Pirnazar granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area. I did not observe hazardous waste in trash cans. Waste oil (2) and used oil filter (1) drums are stored closed and labeled. New labels were provided for waste oil drums since the existing ones have faded. Emergency card is posted in shop area.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-13-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Sea Country Towing 20611 Prism Pl. Lake Forest, CA 92630 On site to conduct new hazardous materials chemical inventory and business emergency plan inspection. Abed Pirnazar granted consent to conduct inspection. I walked through the facility and inspected hazardous materials storage area. Facility stores 110 gallons of waste oil that meet required disclosure quantities. Employees are trained in

ELECSYS INC (Continued) **S113084122**

hazardous materials management annually and records are available for review. I assisted facility contacnt with creating account in CERS and the follwoing documents were uploaded during the inspection: - Business Activities form - Owner/Operator Identification form - Hazardous Material Chemical Inventory forms - Facility Site Map - Business Emergency Plan

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 02-09-2015
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector Comments: On site to conduct routine hazardous waste inspection. Zahra Moghaddam granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans. Waste oil (2), used oil filters (1) and waste antifreeze (1) drums are stored closed with faded labels. New labels were placed on drums during the inspection. Manifests were reviewed. Emergency card is posted in waiting area.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-02-2018
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: I walked through the facility, perimeter and inspected waste storage area in the shop. I did not observe any hazardous waste in trash cans throughout the facility. Waste oil (2), used oil filters (1) and waste antifreeze (1) drums are stored closed. Manifests were reviewed. Emergency card is posted in waiting area.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-31-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed and accepted documents submitted to CERS on 3/13/17.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-01-2019
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to conduct routine hazardous waste inspection. Darius Pirnazar granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area in the shop. I did not observe any hazardous waste in municipal trash or trash cans throughout the facility. Waste oil (2), used oil filters (1) and waste

ELECSYS INC (Continued) **S113084122**

antifreeze (1) drums are stored closed and labeled. Manifests were reviewed. Emergency card is posted in waiting area.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Coordinates:
Site ID: 420164
Facility Name: SEA COUNTRY TOWING/S&C PRO AUTOMOTIVE
Env Int Type Code: HMBP
Program ID: 10573777
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 33.663000
Longitude: -117.675240

Affiliation:
Affiliation Type Desc: Operator
Entity Name: SEA COUNTRY TOWING & RECOVERY INC
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (949) 770-2617

Affiliation Type Desc: Property Owner
Entity Name: Abed Pirnazar
Entity Title: Not reported
Affiliation Address: 20611 Prism Place
Affiliation City: Lake Forest
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 92630
Affiliation Phone: (949) 770-2617

Affiliation Type Desc: CUPA District
Entity Name: Orange County Env Health
Entity Title: Not reported
Affiliation Address: 1241 East Dyer RoadSuite 120
Affiliation City: Santa Ana
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92705-5611
Affiliation Phone: (714) 433-6406

Affiliation Type Desc: Environmental Contact
Entity Name: DARIUS PIRNAZAR
Entity Title: Not reported
Affiliation Address: 20611 PRISM PL
Affiliation City: LAKE FOREST
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92630
Affiliation Phone: Not reported

ELECSYS INC (Continued) **S113084122**

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	20611 PRISM PL
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92630
Affiliation Phone:	Not reported

Affiliation Type Desc:	Legal Owner
Entity Name:	ABED PIRNAZAR
Entity Title:	Not reported
Affiliation Address:	20611 PRISM PLACE
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92630
Affiliation Phone:	(949) 770-2617

Affiliation Type Desc:	Document Preparer
Entity Name:	Zahra Moghadam
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Identification Signer
Entity Name:	Zahra Moghadam
Entity Title:	ADMIN
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Parent Corporation
Entity Name:	SEA COUNTRY TOWING/S&C PRO AUTOMOTIVE
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

HWTS:

Name:	ELECSYS INC
Address:	20611 PRISM PLACE
Address 2:	Not reported
City,State,Zip:	LAKE FOREST, CA 926300000
EPA ID:	CAL000157473

ELECSYS INC (Continued) **S113084122**

Inactive Date:	06/30/2000
Create Date:	05/01/1996
Last Act Date:	09/21/2000
Mailing Name:	Not reported
Mailing Address:	23272 ARROYO VISTA
Mailing Address 2:	Not reported
Mailing City,State,Zip:	RANCHO SANTA MARGARI, CA 926887803
Owner Name:	CORPORATE HEADQUARTERS
Owner Address:	8800 N ALLEN RD
Owner Address 2:	Not reported
Owner City,State,Zip:	PEORIA, IL 616150000
Contact Name:	LESTER VOGT-MGR RND
Contact Address:	INACTIVE PER VQ00 - BMI
Contact Address 2:	Not reported
City,State,Zip:	LAKE FOREST, CA 926300000

E19 **SEA COUNTRY TOWING & RECOVERY INC** **RCRA NonGen / NLR** **1024832698**
North **20611 PRISM PL** **CAL000371066**
< 1/8 **LAKE FOREST, CA 92630**
0.072 mi.
382 ft. **Site 2 of 2 in cluster E**

Relative:
Higher

Actual:
658 ft.

RCRA NonGen / NLR:

Date form received by agency:	2012-01-26 00:00:00.0
Facility name:	SEA COUNTRY TOWING & RECOVERY INC
Facility address:	20611 PRISM PL LAKE FOREST, CA 92630
EPA ID:	CAL000371066
Contact:	DARIUS PIRNAZAR
Contact address:	20611 PRISM PL LAKE FOREST, CA 92630
Contact country:	Not reported
Contact telephone:	949-770-2617
Contact email:	PIRNAZAR@GMAIL.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	DARIUS PIRNAZAR
Owner/operator address:	20611 PRISM PL LAKE FOREST, CA 92630
Owner/operator country:	Not reported
Owner/operator telephone:	949-770-2617
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	SEA COUNTRY TOWING & RECOVERY INC
Owner/operator address:	20611 PRISM PL LAKE FOREST, CA 92630
Owner/operator country:	Not reported
Owner/operator telephone:	949-770-2617

SEA COUNTRY TOWING & RECOVERY INC (Continued) **1024832698**

Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

F20 **SHMAZE CUSTOM COATINGS** **CERS HAZ WASTE** **S113746989**
ESE **20792 CANADA RD** **EMI** **N/A**
< 1/8 **LAKE FOREST, CA 92630** **CERS**
0.084 mi.
446 ft. **Site 1 of 3 in cluster F**

Relative: Higher
Actual: 654 ft.

CERS HAZ WASTE:
Name: SHMAZE CUSTOM COATINGS
Address: 20792 CANADA RD
City,State,Zip: LAKE FOREST, CA 92630
Site ID: 412279
CERS ID: 10547632
CERS Description: Hazardous Waste Generator

EMI:
Name: SHMAZE CUSTOM COATINGS
Address: 20792 CANADA RD
City,State,Zip: LAKE FOREST, CA 92630
Year: 2010
County Code: 30
Air Basin: SC
Facility ID: 122519
Air District Name: SC
SIC Code: 3479
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 2.9204959210617099
Reactive Organic Gases Tons/Yr: 2.88422
Carbon Monoxide Emissions Tons/Yr: 3.5100000000000001E-3
NOX - Oxides of Nitrogen Tons/Yr: 0.01306

SHMAZE CUSTOM COATINGS (Continued) **S113746989**

SOX - Oxides of Sulphur Tons/Yr: 6.0000000000000002E-5
Particulate Matter Tons/Yr: 7.5000000000000002E-4
Part. Matter 10 Micrometers and Smllr Tons/Yr: 7.5000000000000002E-4

Name: SHMAZE CUSTOM COATINGS
Address: 20792 CANADA RD
City,State,Zip: LAKE FOREST, CA 92630
Year: 2011
County Code: 30
Air Basin: SC
Facility ID: 122519
Air District Name: SC
SIC Code: 3479
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 3.5630024121
Reactive Organic Gases Tons/Yr: 3.51851
Carbon Monoxide Emissions Tons/Yr: 0.00516
NOX - Oxides of Nitrogen Tons/Yr: 0.01917
SOX - Oxides of Sulphur Tons/Yr: 8e-005
Particulate Matter Tons/Yr: 0.0011
Part. Matter 10 Micrometers and Smllr Tons/Yr: 0.0011

Name: SHMAZE CUSTOM COATINGS
Address: 20792 CANADA RD
City,State,Zip: LAKE FOREST, CA 92630
Year: 2012
County Code: 30
Air Basin: SC
Facility ID: 122519
Air District Name: SC
SIC Code: 9999
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 3.2684756324
Reactive Organic Gases Tons/Yr: 3.22748
Carbon Monoxide Emissions Tons/Yr: 0.00543
NOX - Oxides of Nitrogen Tons/Yr: 0.02017
SOX - Oxides of Sulphur Tons/Yr: 9e-005
Particulate Matter Tons/Yr: 0.00116
Part. Matter 10 Micrometers and Smllr Tons/Yr: 0.00116

Name: SHMAZE CUSTOM COATINGS
Address: 20792 CANADA RD
City,State,Zip: LAKE FOREST, CA 92630
Year: 2013
County Code: 30
Air Basin: SC
Facility ID: 122519
Air District Name: SC
SIC Code: 3479
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 3.8436391637

SHMAZE CUSTOM COATINGS (Continued) **S113746989**

Reactive Organic Gases Tons/Yr:	3.77509
Carbon Monoxide Emissions Tons/Yr:	0.08225
NOX - Oxides of Nitrogen Tons/Yr:	0.3055
SOX - Oxides of Sulphur Tons/Yr:	0.00141
Particulate Matter Tons/Yr:	0.01762
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0.01762

Name:	SHMAZE CUSTOM COATINGS
Address:	20792 CANADA RD
City,State,Zip:	LAKE FOREST, CA 92630
Year:	2014
County Code:	30
Air Basin:	SC
Facility ID:	122519
Air District Name:	SC
SIC Code:	3089
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	3.3631896309
Reactive Organic Gases Tons/Yr:	3.3212
Carbon Monoxide Emissions Tons/Yr:	0.00524
NOX - Oxides of Nitrogen Tons/Yr:	0.0195
SOX - Oxides of Sulphur Tons/Yr:	9e-005
Particulate Matter Tons/Yr:	0.10245
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0.0983972

Name:	SHMAZE CUSTOM COATINGS
Address:	20792 CANADA RD
City,State,Zip:	LAKE FOREST, CA 92630
Year:	2015
County Code:	30
Air Basin:	SC
Facility ID:	122519
Air District Name:	SC
SIC Code:	3089
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	3.8673632123
Reactive Organic Gases Tons/Yr:	3.82013666
Carbon Monoxide Emissions Tons/Yr:	0.00595
NOX - Oxides of Nitrogen Tons/Yr:	0.0300505
SOX - Oxides of Sulphur Tons/Yr:	0.000102
Particulate Matter Tons/Yr:	0.1393892
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0.133864632

Name:	SHMAZE CUSTOM COATINGS
Address:	20792 CANADA RD
City,State,Zip:	LAKE FOREST, CA 92630
Year:	2016
County Code:	30
Air Basin:	SC
Facility ID:	122519
Air District Name:	SC
SIC Code:	3089
Air District Name:	SOUTH COAST AQMD

SHMAZE CUSTOM COATINGS (Continued) **S113746989**

Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	3.4146468995
Reactive Organic Gases Tons/Yr:	3.371483
Carbon Monoxide Emissions Tons/Yr:	0.00742
NOX - Oxides of Nitrogen Tons/Yr:	0.02
SOX - Oxides of Sulphur Tons/Yr:	0.0001271
Particulate Matter Tons/Yr:	0.097479
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0.0936434

Name:	SHMAZE CUSTOM COATINGS
Address:	20792 CANADA RD
City,State,Zip:	LAKE FOREST, CA 92630
Year:	2017
County Code:	30
Air Basin:	SC
Facility ID:	122519
Air District Name:	SC
SIC Code:	3089
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0.56087805427
Reactive Organic Gases Tons/Yr:	0.40535
Carbon Monoxide Emissions Tons/Yr:	0.17356
NOX - Oxides of Nitrogen Tons/Yr:	0.67
SOX - Oxides of Sulphur Tons/Yr:	0.0031423
Particulate Matter Tons/Yr:	0.10826
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0.105246

CERS:

Name:	SHMAZE CUSTOM COATINGS
Address:	20792 CANADA RD
City,State,Zip:	LAKE FOREST, CA 92630
Site ID:	412279
CERS ID:	110058370837
CERS Description:	US EPA Air Emission Inventory System (EIS)

Evaluation:

Eval General Type:	Other/Unknown
Eval Date:	03-09-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted on 2/27/16 was reviewed and declined with the following considerations: One Hazardous Materials Inventory form reporting 240 gallons of G Various Paints, Reducers, and Hardners (small quantities)G has been submitted. Please be advised that chemicals/materials cannot be combined and reported on one form. If there is 55 gallons or greater of any one of the material stored on site, then a Hazardous Materials Inventory form for that material must be submitted. The G Hazardous WasteG Hazardous Materials Inventory form is missing G Chemical NameG , G Common NameG , G Annual Waste AmountG and G Hazardous ComponentG information such as %WT and the CAS# for at least one of the chemicals. The following chemicals are not reportable since the volume stored on site is not equal to or greater than 55 gallons and must be removed: - 255C259 (Thinner 259) - 25J13830 (Charcoal Metallic Paint) - 455S0503 (Matte Clear) - 82C11890

SHMAZE CUSTOM COATINGS (Continued) **S113746989**

	(High Gloss Clear) - 82C13634 UV [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-11-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Went to site to conduct inspection. Owner and environmental contact were not on site.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	04-11-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to E-submit on 4/10/15 were reviewed and accepted.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-03-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct routine hazardous waste inspection. Mike Shamassian granted consent to conduct inspection. I walked through the facility and inspected waste storage area. I did not observe any hazardous waste in trash cans throughout the facility. Waste acetone/paint (3) drums are stored closed and labeled. Manifests were reviewed. A new emergency card was provided to be filled out and posted.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	06-03-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	On site to discuss the HMBP documents that were declined. Owner was not aware that the submittal was declined since facility consultant had submitted it. I explained that what needed to be corrected. I assisted on correcting the document and resubmitting it.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	09-30-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Started reviewing documents in E-submit.
Eval Division:	Orange County Environmental Health

SHMAZE CUSTOM COATINGS (Continued) **S113746989**

Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	12-11-2013
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Called facility to find out if I could conduct inspection today. Steve Greenwood, general manager, requested that the inspection be conducted at a later date due audits being conducted today.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-15-2014
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct new hazardous materials chemical inventory and business emergency plan inspection. I walked through the facility and inspected hazardous materials storage area. Facility has hazardous materials (waste paint and new acetone) that meet required disclosure quantities. Facility is required and has been notified to electronically submit the following documents within 60 days of this inspection: - Business Activities form - Owner/Operator Identification form - Hazardous Material Chemical Inventory forms - Facility Site Map - Business Emergency Plan Documents must be electronically submitted by going to www.esubmit.ocgov.com and requesting a username and password. User guides and tutorials are located on the home page to help you get started. If you are having trouble, please call (714) 433-6000 and request to speak to the portal administrator.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-09-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Received calls and emails from Lisa Babbit at the facility. She needed assistance getting to inventory forms in E-submit. She also said that she has corrected and submitted forms. I also discussed what needs to be added to the map.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-10-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed annual certification documents submitted on 2/19/17. Hazardous materials inventory was not accepted since 18 reported material are under disclosure quantity. Also, Fire Code Hazard Classes were not listed for Acetone and Waste Acetone.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP

SHMAZE CUSTOM COATINGS (Continued) **S113746989**

Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-03-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I emailed Steve at the facility to find out if I could conduct inspection on 1/8/14.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-15-2014
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Steve Greenwood granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans. Waste paint drums are stored closed and labeled. Manifests were reviewed. Emergency card is posted in the shop.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-04-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct routine hazardous waste inspection. Mike Shamassian granted consent to conduct inspection. I walked through the facility and inspected waste storage area. I did not observe any hazardous waste in trash cans throughout the facility. Waste acetone/paint drums are stored closed and labeled. Manifests were reviewed. Emergency card is posted.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-04-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector Comments: On site for follow up inspection to discuss documents submitted electronically and the necessary corrections. I met with Mike Shamassian. We walked through the facility and verified that the only reportable material stored on site are new acetone and waste acetone/paint. Also discussed adding the locations of water shutoff, spill kit/containers, loading area and storm drain(s) to site map.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-10-2015

SHMAZE CUSTOM COATINGS (Continued) **S113746989**

Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Checked E-submit for submission since facility contact has notified that she had updated and submitted acetone forms. She has not uploaded them to E-submit, only emailed them to me. I highlighted areas that need corrections and send email back that they need to be electronically submitted.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	04-04-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct hazardous materials chemical inventory and business emergency plan inspection. Mike Shamassian granted consent to conduct inspection. I walked through the facility and inspected hazardous material storage area. There has been no changes in types of the hazardous material stored on site since last inspection or previous reporting period but the volume of waste acetone has increased from 110 to 165 gallons. Inventory form will be updated in CERS. Annual hazardous materials management is provided for the employees and training records are available on site. Emergency card is posted on a bulletin board in the shop.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	04-04-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Mike Shamassian granted consent to conduct inspection. I walked through the facility and inspected waste storage area. I did not observe any hazardous waste in trash cans throughout the facility. Waste acetone/paint (3) drums are stored closed and labeled. Manifests were reviewed. Emergency card is posted on a bulletin board in the shop.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	04-05-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed two sets of revised documents submitted to CERS on 4/4/17 and accepted the second one with comment that Fire Code Hazard Classes must be added to inventory forms in next submissions. Also sent an email to facility contact regarding consultant not adding Fire Code Hazardous Classes as requested.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown

SHMAZE CUSTOM COATINGS (Continued) **S113746989**

Eval Date:	07-17-2013
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Received copies of waste disposal invoices from Pacific Resource Recovery Services for review and to abate the outstanding violation. Also, in a phone call yesterday with Mike, he indicated that they have a Business plan and the emergency numbers are posted. Violations W029 and W038 are abated. No HW violations remaining this date.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	11-15-2013
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Shmaze Industries FA0039574 Shmaze Industries 20792 Canada Rd. Lake Forest, 92630 Enter into HMDBP 5-10 Chemicals
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	04-04-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. I walked through the facility and inspected waste storage area. I did not observe any hazardous waste in trash cans throughout the facility. Waste acetone/paint (4) drums are stored closed and labeled. Manifests were reviewed. Emergency card is posted on a bulletin board in the shop by the time card machine.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	10-01-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted on 4/20/14 have been reviewed and declined with the following considerations: One Hazardous Materials Inventory form reporting 40 gallons of G Various Paints, Reducers, and Hardners (small quantities)G has been submitted. Please be advised that chemicals/materials cannot be combined and reported on one form. If there is 55 gallons or greater of any one of the material stored on site, then a Hazardous Materials Inventory form for that material must be submitted. The G Hazardous WasteG Hazardous Materials Inventory form is missing G Chemical NameG , G Common NameG , G Annual Waste AmountG and G Hazardous ComponentG information such as %WT and the CAS# for at least one of the chemicals. The following chemicals are not reportable since the volume stored on site is not equal to or greater than 55 gallons and must be removed: - 255C259 (Thinner 259) - 25J13830 - 455S0503 (Matte Clear) - 82C1890 (High Gloss Clear) - 82C13634 (Matte UC Clear) - (Low [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP

SHMAZE CUSTOM COATINGS (Continued) **S113746989**

Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 11-21-2013
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Added site to program.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 11-25-2013
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Went to site to conduct routine hazardous waste inspection. Environmental contact was not on site. Inspection will be conducted at a later date.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 01-07-2014
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: I received voicemail from Steve G., stating the that environmental contact will still be on vacation this week and requested that the inspection be scheduled for the following week. I called Steve back and an appointment was scheduled for 1/15/14.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 12-20-2013
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Called general manager, Steve G., to find out if inspection could be conducted this date. Receptionist stated that he was in a meeting. I left a message for him to call back. He called back and requested that inspection be conducted between 1/6/14 and 1/15/14.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Coordinates:
Site ID: 412279
Facility Name: SHMAZE CUSTOM COATINGS
Env Int Type Code: HMBP
Program ID: 10547632
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 33.660120
Longitude: -117.673480

SHMAZE CUSTOM COATINGS (Continued) **S113746989**

Affiliation:

Affiliation Type Desc:	Identification Signer
Entity Name:	Craig Rysavy
Entity Title:	Operations Director
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Document Preparer
Entity Name:	D.S.R.K. Srinvias
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	20792 CANADA RD
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92630
Affiliation Phone:	Not reported

Affiliation Type Desc:	Legal Owner
Entity Name:	SHMAZE INDUSTRIES INC
Entity Title:	Not reported
Affiliation Address:	20792 CANADA RD
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92630
Affiliation Phone:	(949) 583-1448

Affiliation Type Desc:	Operator
Entity Name:	Shmaze Custom Coatings
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(949) 583-1448

Affiliation Type Desc:	Parent Corporation
Entity Name:	Shmaze Custom Coatings
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported

SHMAZE CUSTOM COATINGS (Continued) **S113746989**

Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	CUPA District
Entity Name:	Orange County Env Health
Entity Title:	Not reported
Affiliation Address:	1241 East Dyer RoadSuite 120
Affiliation City:	Santa Ana
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92705-5611
Affiliation Phone:	(714) 433-6406
Affiliation Type Desc:	Environmental Contact
Entity Name:	Mike Shamassian
Entity Title:	Not reported
Affiliation Address:	20792 Canada Rd
Affiliation City:	Lake Forest
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92630
Affiliation Phone:	Not reported
Name:	SHMAZE CUSTOM COATINGS
Address:	20792 CANADA RD
City,State,Zip:	LAKE FOREST, CA 92630
Site ID:	412279
CERS ID:	10547632
CERS Description:	Chemical Storage Facilities

Evaluation:

Eval General Type:	Other/Unknown
Eval Date:	03-09-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted on 2/27/16 was reviewed and declined with the following considerations: One Hazardous Materials Inventory form reporting 240 gallons of G Various Paints, Reducers, and Hardners (small quantities)G has been submitted. Please be advised that chemicals/materials cannot be combined and reported on one form. If there is 55 gallons or greater of any one of the material stored on site, then a Hazardous Materials Inventory form for that material must be submitted. The G Hazardous WasteG Hazardous Materials Inventory form is missing G Chemical NameG , G Common NameG , G Annual Waste AmountG and G Hazardous ComponentG information such as %WT and the CAS# for at least one of the chemicals. The following chemicals are not reportable since the volume stored on site is not equal to or greater than 55 gallons and must be removed: - 255C259 (Thinner 259) - 25J13830 (Charcoal Metallic Paint) - 455S0503 (Matte Clear) - 82C11890 (High Gloss Clear) - 82C13634 UV [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-11-2016

SHMAZE CUSTOM COATINGS (Continued) **S113746989**

Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Went to site to conduct inspection. Owner and environmental contact were not on site.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	04-11-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to E-submit on 4/10/15 were reviewed and accepted.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-03-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct routine hazardous waste inspection. Mike Shamassian granted consent to conduct inspection. I walked through the facility and inspected waste storage area. I did not observe any hazardous waste in trash cans throughout the facility. Waste acetone/paint (3) drums are stored closed and labeled. Manifests were reviewed. A new emergency card was provided to be filled out and posted.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	06-03-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	On site to discuss the HMBP documents that were declined. Owner was not aware that the submittal was declined since facility consultant had submitted it. I explained that what needed to be corrected. I assisted on correcting the document and resubmitting it.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	09-30-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Started reviewing documents in E-submit.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	12-11-2013
Violations Found:	No
Eval Type:	Other, not routine, done by local agency

SHMAZE CUSTOM COATINGS (Continued) **S113746989**

Eval Notes:	Called facility to find out if I could conduct inspection today. Steve Greenwood, general manager, requested that the inspection be conducted at a later date due audits being conducted today.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-15-2014
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct new hazardous materials chemical inventory and business emergency plan inspection. I walked through the facility and inspected hazardous materials storage area. Facility has hazardous materials (waste paint and new acetone) that meet required disclosure quantities. Facility is required and has been notified to electronically submit the following documents within 60 days of this inspection: - Business Activities form - Owner/Operator Identification form - Hazardous Material Chemical Inventory forms - Facility Site Map - Business Emergency Plan Documents must be electronically submitted by going to www.esubmit.ocgov.com and requesting a username and password. User guides and tutorials are located on the home page to help you get started. If you are having trouble, please call (714) 433-6000 and request to speak to the portal administrator.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-09-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Received calls and emails from Lisa Babbit at the facility. She needed assistance getting to inventory forms in E-submit. She also said that she has corrected and submitted forms. I also discussed what needs to be added to the map.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-10-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed annual certification documents submitted on 2/19/17. Hazardous materials inventory was not accepted since 18 reported material are under disclosure quantity. Also, Fire Code Hazard Classes were not listed for Acetone and Waste Acetone.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-03-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I emailed Steve at the facility to find out if I could conduct

SHMAZE CUSTOM COATINGS (Continued) **S113746989**

	inspection on 1/8/14.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-15-2014
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Steve Greenwood granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans. Waste paint drums are stored closed and labeled. Manifests were reviewed. Emergency card is posted in the shop.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-04-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct routine hazardous waste inspection. Mike Shamassian granted consent to conduct inspection. I walked through the facility and inspected waste storage area. I did not observe any hazardous waste in trash cans throughout the facility. Waste acetone/paint drums are stored closed and labeled. Manifests were reviewed. Emergency card is posted.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-04-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector Comments: On site for follow up inspection to discuss documents submitted electronically and the necessary corrections. I met with Mike Shamassian. We walked through the facility and verified that the only reportable material stored on site are new acetone and waste acetone/paint. Also discussed adding the locations of water shutoff, spill kit/containers, loading area and storm drain(s) to site map.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-10-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Checked E-submit for submission since facility contact has notified that she had updated and submitted acetone forms. She has not uploaded them to E-submit, only emailed them to me. I highlighted areas that need corrections and send email back that they need to be electronically submitted.

SHMAZE CUSTOM COATINGS (Continued) **S113746989**

Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	04-04-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct hazardous materials chemical inventory and business emergency plan inspection. Mike Shamassian granted consent to conduct inspection. I walked through the facility and inspected hazardous material storage area. There has been no changes in types of the hazardous material stored on site since last inspection or previous reporting period but the volume of waste acetone has increased from 110 to 165 gallons. Inventory form will be updated in CERS. Annual hazardous materials management is provided for the employees and training records are available on site. Emergency card is posted on a bulletin board in the shop.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	04-04-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Mike Shamassian granted consent to conduct inspection. I walked through the facility and inspected waste storage area. I did not observe any hazardous waste in trash cans throughout the facility. Waste acetone/paint (3) drums are stored closed and labeled. Manifests were reviewed. Emergency card is posted on a bulletin board in the shop.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	04-05-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed two sets of revised documents submitted to CERS on 4/4/17 and accepted the second one with comment that Fire Code Hazard Classes must be added to inventory forms in next submissions. Also sent an email to facility contact regarding consultant not adding Fire Code Hazardous Classes as requested.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	07-17-2013
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Received copies of waste disposal invoices from Pacific Resource Recovery Services for review and to abate the outstanding violation. Also, in a phone call yesterday with Mike, he indicated that they have a Business plan and the emergency numbers are posted. Violations W029

SHMAZE CUSTOM COATINGS (Continued) **S113746989**

	and W038 are abated. No HW violations remaining this date.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	11-15-2013
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Shmaze Industries FA0039574 Shmaze Industries 20792 Canada Rd. Lake Forest, 92630 Enter into HMDBP 5-10 Chemicals
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	04-04-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. I walked through the facility and inspected waste storage area. I did not observe any hazardous waste in trash cans throughout the facility. Waste acetone/paint (4) drums are stored closed and labeled. Manifests were reviewed. Emergency card is posted on a bulletin board in the shop by the time card machine.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	10-01-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted on 4/20/14 have been reviewed and declined with the following considerations: One Hazardous Materials Inventory form reporting 40 gallons of G Various Paints, Reducers, and Hardners (small quantities)G has been submitted. Please be advised that chemicals/materials cannot be combined and reported on one form. If there is 55 gallons or greater of any one of the material stored on site, then a Hazardous Materials Inventory form for that material must be submitted. The G Hazardous WasteG Hazardous Materials Inventory form is missing G Chemical NameG , G Common NameG , G Annual Waste AmountG and G Hazardous ComponentG information such as %WT and the CAS# for at least one of the chemicals. The following chemicals are not reportable since the volume stored on site is not equal to or greater than 55 gallons and must be removed: - 255C259 (Thinner 259) - 25J13830 - 455S0503 (Matte Clear) - 82C1890 (High Gloss Clear) - 82C13634 (Matte UC Clear) - (Low [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	11-21-2013
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Added site to program.

SHMAZE CUSTOM COATINGS (Continued) **S113746989**

Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	11-25-2013
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Went to site to conduct routine hazardous waste inspection. Environmental contact was not on site. Inspection will be conducted at a later date.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-07-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I received voicemail from Steve G., stating the that environmental contact will still be on vacation this week and requested that the inspection be scheduled for the following week. I called Steve back and an appointment was scheduled for 1/15/14.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	12-20-2013
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Called general manager, Steve G., to find out if inspection could be conducted this date. Receptionist stated that he was in a meeting. I left a message for him to call back. He called back and requested that inspection be conducted between 1/6/14 and 1/15/14.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS

Coordinates:

Site ID:	412279
Facility Name:	SHMAZE CUSTOM COATINGS
Env Int Type Code:	HMBP
Program ID:	10547632
Coord Name:	Not reported
Ref Point Type Desc:	Center of a facility or station.
Latitude:	33.660120
Longitude:	-117.673480

Affiliation:

Affiliation Type Desc:	Identification Signer
Entity Name:	Craig Rysavy
Entity Title:	Operations Director
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported

SHMAZE CUSTOM COATINGS (Continued) **S113746989**

Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Document Preparer
Entity Name:	D.S.R.K. Srinvias
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	20792 CANADA RD
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92630
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	SHMAZE INDUSTRIES INC
Entity Title:	Not reported
Affiliation Address:	20792 CANADA RD
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92630
Affiliation Phone:	(949) 583-1448
Affiliation Type Desc:	Operator
Entity Name:	Shmaze Custom Coatings
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(949) 583-1448
Affiliation Type Desc:	Parent Corporation
Entity Name:	Shmaze Custom Coatings
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	CUPA District
Entity Name:	Orange County Env Health
Entity Title:	Not reported

SHMAZE CUSTOM COATINGS (Continued) **S113746989**

Affiliation Address:	1241 East Dyer RoadSuite 120
Affiliation City:	Santa Ana
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92705-5611
Affiliation Phone:	(714) 433-6406
Affiliation Type Desc:	Environmental Contact
Entity Name:	Mike Shamassian
Entity Title:	Not reported
Affiliation Address:	20792 Canada Rd
Affiliation City:	Lake Forest
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92630
Affiliation Phone:	Not reported

F21 **SHAMAZE CUSTOM COATINGS** **RCRA NonGen / NLR** **1024797242**
ESE **20792 CANADA RD** **CAL000183275**
< 1/8 **LAKE FOREST, CA 92630**
0.084 mi.
446 ft. **Site 2 of 3 in cluster F**

Relative:
Higher

Actual:
654 ft.

RCRA NonGen / NLR:

Date form received by agency:	2000-10-20 00:00:00.0
Facility name:	SHAMAZE CUSTOM COATINGS
Facility address:	20792 CANADA RD LAKE FOREST, CA 92630-0000
EPA ID:	CAL000183275
Contact:	CRAIG RYSAVY
Contact address:	20792 CANADA ROAD LAKE FOREST, CA 92630
Contact country:	Not reported
Contact telephone:	949-583-1448
Contact email:	CRYSAVY@SHMAZE.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	MICHAEL SHAMASSIAN
Owner/operator address:	20792 CANADA RD LAKE FOREST, CA 92630
Owner/operator country:	Not reported
Owner/operator telephone:	949-583-1448
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported
Owner/operator name:	CRAIG RYSAVY
Owner/operator address:	20792 CANADA ROAD LAKE FOREST, CA 92630

SHAMAZE CUSTOM COATINGS (Continued) **1024797242**

Owner/operator country:	Not reported
Owner/operator telephone:	949-583-1448
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

F22 **SHMAZE INDUSTRIES INC** **RCRA-SQG** **1012210420**
ESE **20792 CANADA RD** **CAR000204040**
< 1/8 **LAKE FOREST, CA 92630**
0.084 mi.
446 ft. **Site 3 of 3 in cluster F**

Relative: **Higher**

Actual: **654 ft.**

RCRA-SQG:

Date form received by agency:	2009-12-09 00:00:00.0
Facility name:	SHMAZE INDUSTRIES INC
Facility address:	20792 CANADA RD LAKE FOREST, CA 92630
EPA ID:	CAR000204040
Contact:	JON G GYPSYN
Contact address:	20792 CANADA RD LAKE FOREST, CA 92630
Contact country:	US
Contact telephone:	949-583-1448
Contact email:	JGYPSYN@GYANTGROUP.COM
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	SHMAZE INDUSTRIES INC
Owner/operator address:	Not reported

SHMAZE INDUSTRIES INC (Continued) **1012210420**

Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 2000-02-01 00:00:00.
Owner/Op end date: Not reported

Owner/operator name: MATTE BLACK LLC
Owner/operator address: 50729
HENDERSON, NV 89016
Owner/operator country: US
Owner/operator telephone: Not reported
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 2009-04-01 00:00:00.
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Hazardous Waste Summary:

. Waste code: D001
. Waste name: IGNITABLE WASTE

Violation Status: No violations found

23
WNW
< 1/8
0.088 mi.
465 ft.

GREENWASTE COMPOSTING
20712 INDIAN OCEAN DR
LAKE FOREST CA, CA 92630

WMUDS/SWAT **S104384477**
N/A

Relative:
Higher

Actual:
664 ft.

WMUDS/SWAT:

Edit Date:	Not reported
Complexity:	Not reported
Primary Waste:	SLDWST
Primary Waste Type:	Nonhazardous Solid Wastes/Influent or Solid Wastes that contain nonhazardous putrescible and non putrescible solid, semisolid, and liquid wastes (E.G., garbage, trash, refuse, paper, demolition and construction wastes, manure, vegetable or animal solid and semisolid waste).
Secondary Waste:	Not reported
Secondary Waste Type:	Not reported
Base Meridian:	Not reported
NPID:	Not reported
Tonnage:	0
Regional Board ID:	Not reported
Municipal Solid Waste:	False
Superorder:	False
Open To Public:	False
Waste List:	False
Agency Type:	Private
Agency Name:	PACIFIC WASTE MANAGEMENT
Agency Department:	Not reported
Agency Address:	20712 INDIAN OCEAN DR.
Agency City,St,Zip:	LAKE FOREST CA 92630
Agency Contact:	GARY PLUMLEY
Agency Telephone:	7145988181
Land Owner Name:	Not reported
Land Owner Address:	Not reported
Land Owner City,St,Zip:	Not reported
Land Owner Contact:	Not reported
Land Owner Phone:	Not reported
Region:	8
Facility Type:	Other - Does not fall into the category of Municipal/Domestic, Industrial, Agricultural or Solid Waste (Class I, II or III)
Facility Description:	Not reported
Facility Telephone:	Not reported
SWAT Facility Name:	Not reported
Primary SIC:	2875
Secondary SIC:	Not reported
Comments:	Not reported
Last Facility Editors:	Not reported
Waste Discharge System:	True
Solid Waste Assessment Test Program:	False
Toxic Pits Cleanup Act Program:	False
Resource Conservation Recovery Act:	False
Department of Defence:	False
Solid Waste Assessment Test Program:	Not reported
Threat to Water Quality:	Not reported
Sub Chapter 15:	True
Regional Board Project Officer:	JPL
Number of WMUDS at Facility:	0
Section Range:	Not reported
RCRA Facility:	No

GREENWASTE COMPOSTING (Continued) **S104384477**

Waste Discharge Requirements:	H
Self-Monitoring Rept. Frequency:	No Reporting Requirements
Waste Discharge System ID:	8 303062001
Solid Waste Information ID:	Not reported

D24 **SUNSTATE EQUIPMENT CO** **AST** **A100425014**
WNW **20772 INDIAN OCEAN DR** **N/A**
< 1/8 **LAKE FOREST, CA 92630**
0.093 mi.
489 ft. **Site 2 of 4 in cluster D**

Relative: **Higher**
Actual: **631 ft.**

AST:

Name:	SUNSTATE EQUIPMENT CO
Address:	20772 INDIAN OCEAN DR
City/Zip:	LAKE FOREST,92630
Certified Unified Program Agencies:	Not reported
Owner:	Sunstate Equipment Co., LLC.
Total Gallons:	Not reported
CERSID:	10540978
Facility ID:	FA0028626
Business Name:	SUNSTATE EQUIPMENT CO
Phone:	6026832268
Fax:	6027975681
Mailing Address:	5552 E Washington St
Mailing Address City:	Phoenix
Mailing Address State:	AZ
Mailing Address Zip Code:	85034
Operator Name:	Sunstate Equipment Co., L.L.C.
Operator Phone:	6026832268
Owner Phone:	(602) 275-2398
Owner Mail Address:	5552 E. Washington Street
Owner State:	AZ
Owner Zip Code:	85034
Owner Country:	United States
Property Owner Name:	Sukut Real Properties, LP
Property Owner Phone:	(714) 460-1016
Property Owner Mailing Address:	4010 W. Chandler Ave.
Property Owner City:	Santa Ana
Property Owner Stat :	CA
Property Owner Zip Code:	Not reported
Property Owner Country:	United States
EPAID:	CAL000194793

D25 **AST** **A100184607**
WNW **20772 INDIAN OCEAN DR** **N/A**
< 1/8 **LAKE FOREST, CA**
0.093 mi.
489 ft. **Site 3 of 4 in cluster D**

Relative: **Higher**
Actual: **631 ft.**

AST:

Name:	Not reported
Address:	20772 INDIAN OCEAN DR
City/Zip:	LAKE FOREST,
Certified Unified Program Agencies:	Orange
Owner:	SUNSTATE EQUIPMENT CO
Total Gallons:	1,320

(Continued) **A100184607**

CERSID:	Not reported
Facility ID:	Not reported
Business Name:	Not reported
Phone:	Not reported
Fax:	Not reported
Mailing Address:	Not reported
Mailing Address City:	Not reported
Mailing Address State:	Not reported
Mailing Address Zip Code:	Not reported
Operator Name:	Not reported
Operator Phone:	Not reported
Owner Phone:	Not reported
Owner Mail Address:	Not reported
Owner State:	Not reported
Owner Zip Code:	Not reported
Owner Country:	Not reported
Property Owner Name:	Not reported
Property Owner Phone:	Not reported
Property Owner Mailing Address:	Not reported
Property Owner City:	Not reported
Property Owner Stat :	Not reported
Property Owner Zip Code:	Not reported
Property Owner Country:	Not reported
EPAID:	Not reported

D26 **SUNSTATE EQUIPMENT CO LLC** **RCRA NonGen / NLR** **1024797965**
WNW **20772 INDIAN OCEAN DR** **CAL000194793**
< 1/8 **LAKE FOREST, CA 92630**
0.093 mi.
489 ft. **Site 4 of 4 in cluster D**

Relative:
Higher

Actual:
631 ft.

RCRA NonGen / NLR:

Date form received by agency:	1999-01-07 00:00:00.0
Facility name:	SUNSTATE EQUIPMENT CO LLC
Facility address:	20772 INDIAN OCEAN DR LAKE FOREST, CA 92630-0000
EPA ID:	CAL000194793
Mailing address:	5552 E WASHINGTON ST PHOENIX, AZ 85034-2134
Contact:	ANNIE BODELL
Contact address:	5552 E WASHINGTON ST PHOENIX, AZ 85034
Contact country:	Not reported
Contact telephone:	602-683-2268
Contact email:	ABODELL@SUNSTATEEQUIP.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	ANNIE BODELL
Owner/operator address:	5552 E WASHINGTON ST PHOENIX, AZ 85034
Owner/operator country:	Not reported
Owner/operator telephone:	602-683-2268
Owner/operator email:	Not reported
Owner/operator fax:	Not reported

SUNSTATE EQUIPMENT CO LLC (Continued) **1024797965**

Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: SUNSTATE EQUIPMENT
Owner/operator address: 5552 E WASHINGTON ST
PHOENIX, AZ 85034
Owner/operator country: Not reported
Owner/operator telephone: 602-683-2268
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

G27 **IMEX VISION** **RCRA NonGen / NLR** **1024858867**
East **20761 CANADA RD** **CAL000425449**
< 1/8 **LAKE FOREST, CA 92630**
0.097 mi.
514 ft. **Site 1 of 2 in cluster G**

Relative:
Higher

Actual:
658 ft.

RCRA NonGen / NLR:
Date form received by agency: 2017-03-07 00:00:00.0
Facility name: IMEX VISION
Facility address: 20761 CANADA RD
LAKE FOREST, CA 92630
EPA ID: CAL000425449
Contact: JINELLE SMITH
Contact address: 20761 CANADA RD
LAKE FOREST, CA 92630
Contact country: Not reported
Contact telephone: 949-681-8280
Contact email: JSMITH@IMEXVISION.COM
EPA Region: 09
Classification: Non-Generator

IMEX VISION (Continued) **1024858867**

Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	NATAN BEN EZRI
Owner/operator address:	65 EAGLE CREEK RD IRVINE, CA 92618
Owner/operator country:	Not reported
Owner/operator telephone:	949-681-8280
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	JINELLE SMITH
Owner/operator address:	20761 CANADA RD LAKE FOREST, CA 92630
Owner/operator country:	Not reported
Owner/operator telephone:	949-681-8280
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

G28 **V P BAKER RANCH** **SWEEPS UST** **S101589532**
East **20745 CANADA RD** **CA FID UST** **N/A**
< 1/8 **EL TORO, CA 92630**
0.100 mi.
527 ft. **Site 2 of 2 in cluster G**

Relative:
Higher

Actual:
658 ft.

SWEEPS UST:

Name:	V P BAKER RANCH
Address:	20745 CANADA RD
City:	EL TORO
Status:	Active
Comp Number:	10
Number:	9
Board Of Equalization:	44-015743
Referral Date:	09-30-92
Action Date:	04-03-92
Created Date:	02-29-88
Owner Tank Id:	Not reported
SWRCB Tank Id:	30-000-000010-000001
Tank Status:	A
Capacity:	10000
Active Date:	Not reported
Tank Use:	M.V. FUEL
STG:	P
Content:	REG UNLEADED
Number Of Tanks:	1

CA FID UST:

Facility ID:	30017405
Regulated By:	UTNKA
Regulated ID:	Not reported
Cortese Code:	Not reported
SIC Code:	Not reported
Facility Phone:	7148300595
Mail To:	Not reported
Mailing Address:	4000 BARRANCA PKY
Mailing Address 2:	Not reported
Mailing City,St,Zip:	EL TORO 92630
Contact:	Not reported
Contact Phone:	Not reported
DUNs Number:	Not reported
NPDES Number:	Not reported
EPA ID:	Not reported
Comments:	Not reported
Status:	Active

H29 **BLAIR'S TOWING INC** **RCRA NonGen / NLR** **1024813210**
North **26100 DIMENSION DR** **CAL000302939**
< 1/8 **LAKE FOREST, CA 92630**
0.102 mi.
540 ft. **Site 1 of 3 in cluster H**

Relative:
Higher

Actual:
654 ft.

RCRA NonGen / NLR:

Date form received by agency:	2006-02-02 00:00:00.0
Facility name:	BLAIR'S TOWING INC
Facility address:	26100 DIMENSION DR LAKE FOREST, CA 92630-7808
EPA ID:	CAL000302939
Contact:	STEVE ALBRIGHT

BLAIR'S TOWING INC (Continued) **1024813210**

Contact address: 26100 DIMENSION DR
LAKE FOREST, CA 92630-7808
Contact country: Not reported
Contact telephone: 949-588-8000
Contact email: STEVE@BLAIRS.NET
EPA Region: 09
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: BLAIR'S TOWING INC
Owner/operator address: 26100 DIMENSION DR
LAKE FOREST, CA 92630
Owner/operator country: Not reported
Owner/operator telephone: 949-588-8000
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: STEVE ALBRIGHT
Owner/operator address: 26100 DIMENSION DR
LAKE FOREST, CA 92630
Owner/operator country: Not reported
Owner/operator telephone: 949-588-8000
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

H30 **CALIBER COLLISION CENTERS** **RCRA NonGen / NLR** **1025877034**
North **26100 DIMENSION DR** **CAL000450170**
< 1/8 **LAKE FOREST, CA 92630**
0.102 mi.
540 ft. **Site 2 of 3 in cluster H**

Relative:
Higher

Actual:
654 ft.

RCRA NonGen / NLR:

Date form received by agency:	2019-10-22 00:00:00.0
Facility name:	CALIBER COLLISION CENTERS
Facility address:	26100 DIMENSION DR LAKE FOREST, CA 92630
EPA ID:	CAL000450170
Mailing address:	401 E CORPORATE DR STE 150 LEWISVILLE, TX 75057
Contact:	SHARON LAWRENCE
Contact address:	401 E CORPORATE DR STE 150 LEWISVILLE, TX 75057
Contact country:	Not reported
Contact telephone:	469-948-9500
Contact email:	LICENSEANDPERMITS@CALIBERCOLLISION.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	CALIBER BODYWORKS INC
Owner/operator address:	401 E CORPORATE DR STE 150 LEWISVILLE, TX 75057
Owner/operator country:	Not reported
Owner/operator telephone:	469-948-9500
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	SHARON LAWRENCE
Owner/operator address:	401 E CORPORATE DR STE 150 LEWISVILLE, TX 75057
Owner/operator country:	Not reported
Owner/operator telephone:	469-948-9500
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	Not reported
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No

CALIBER COLLISION CENTERS (Continued) **1025877034**

On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

H31 **CALIBER COLLISION CENTER - BAKER RANCH 1156** **CERS HAZ WASTE** **S113466003**
North **26100 DIMENSION DR** **HAZNET** **N/A**
< 1/8 **LAKE FOREST, CA 92630** **HWTS**
0.102 mi.
540 ft. **Site 3 of 3 in cluster H**

Relative: **Higher**
Actual: **654 ft.**

CERS HAZ WASTE:
Name: CALIBER COLLISION CENTER - BAKER RANCH 1156
Address: 26100 DIMENSION DR
City,State,Zip: LAKE FOREST, CA 92630
Site ID: 413204
CERS ID: 10547929
CERS Description: Hazardous Waste Generator

Violations:
Site ID: 413204
Site Name: Caliber Collision Center - Baker Ranch 1156
Violation Date: 10-10-2014
Citation: HSC 6.95 25508(d) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(d)
Violation Description: Failure to complete and/or electronically submit a business plan when storing/handling a hazardous material at or above reportable quantities.
Violation Notes: Returned to compliance on 02/25/2015.
Violation Division: Orange County Environmental Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 413204
Site Name: Caliber Collision Center - Baker Ranch 1156
Violation Date: 10-10-2014
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description: Failure to complete and electronically submit hazardous material inventory information for all reportable hazardous materials on site at or above reportable quantities.
Violation Notes: Returned to compliance on 02/25/2015.
Violation Division: Orange County Environmental Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 413204
Site Name: Caliber Collision Center - Baker Ranch 1156
Violation Date: 01-15-2015
Citation: 22 CCR 12 66262.34(d) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(d)
Violation Description: Failure to dispose of hazardous waste within 180 days (or 270 if waste

CALIBER COLLISION CENTER - BAKER RANCH 1156 (Continued) **S113466003**

	is transported over 200 miles) for the generator who generates less than 1000 kilogram per month, but more than 100 kilograms per month.
Violation Notes:	Returned to compliance on 02/10/2015. Waste accumulation time for waste antifreeze has been exceeded. There is approximately 40/45 gallons stored on site. Waste antifreeze must be disposed of within 30 days of this inspection.
Violation Division:	Orange County Environmental Health
Violation Program:	HW
Violation Source:	CERS
Site ID:	413204
Site Name:	Caliber Collision Center - Baker Ranch 1156
Violation Date:	01-05-2018
Citation:	22 CCR 12 66262.12 - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.12
Violation Description:	Failure to obtain an Identification Number prior to treating, storing, disposing of, transporting or offering for transportation any hazardous waste.
Violation Notes:	Returned to compliance on 01/05/2018. EPA ID# for this business is inactive. An EPA ID# application was completed and submitted to DTSC to reactivate number. Violation has been corrected.
Violation Division:	Orange County Environmental Health
Violation Program:	HW
Violation Source:	CERS

Evaluation:

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-05-2018
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	I walked through facility and perimeter. I did not observe any hazardous waste in trash cans throughout facility. Emergency card is posted in operations manager's office Assisted business with completion and submission of EPA ID# application to reactivate number.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-08-2014
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Blair's Towing 26100 Dimension Lake Forest, CA 92630 On site to conduct new hazardous materials chemical inventory and business emergency plan inspection. I walked through the facility and inspected hazardous materials storage areas. The facility has the following hazardous materials that meet required disclosure quantities: - New oil - Waste oil - Waste antifreeze - Diesel - Carbon/Argon compressed gas Facility is required and has been notified to electronically submit the following documents within 60 days of this inspection: - Business Activities form - Owner/Operator Identification form - Hazardous Material Chemical Inventory forms - Facility Site Map - Business Emergency Plan Documents must be electronically submitted by going to www.esubmit.ocgov.com and requesting a username and password. User guides and tutorials are located on the home page to help you get started. If you are having trouble, please call (714) 433-6000 and request to [Truncated]

CALIBER COLLISION CENTER - BAKER RANCH 1156 (Continued) **S113466003**

Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-18-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct hazardous materials chemical inventory and business emergency plan inspection. Jim Middleton granted consent to conduct inspection. I walked through the facility and inspected hazardous material storage areas, inside building and outside where the diesel aboveground tank is located. There has been no changes in types and/or volumes of the hazardous material stored on site since last inspection or previous reporting period, except one of the diesel aboveground tank has been removed from the facility. Diesel inventory and site map were updated to reflect removal of aboveground tank from the facility. Emergency card is posted in dispatch office and an additional card was provided to be posted on the main bulletin board in the shop. Evacuation site maps are posted throughout the facility. I assisted him in correcting inventory forms, upload new site map and submitted annual certification documents for 2017.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-18-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Jim Middleton granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans or municipal trash. Waste oil is stored in an aboveground tank that is kept closed and is labeled. Waste antifreeze (1) and used oil filter (1) drums are stored closed and labeled. Manifests were reviewed. Emergency card is posted in dispatch office. An additional emergency card was provided to be posted on main bulletin board in the shop.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-20-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Discussed facility's request to waive penalty and their history in paying invoices. Emailed accounting department to them know penalties cannot be waived.
Eval Division:	Orange County Environmental Health
Eval Program:	APSA
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	04-08-2015
Violations Found:	No

CALIBER COLLISION CENTER - BAKER RANCH 1156 (Continued) **S113466003**

Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted documents submitted to E-submit on 4/6/15.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	09-12-2013
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Received email from accounting department asking if the APST charge should be refunded since they wrote there is less than 1000 gallon of petroleum products in aboveground storage tanks. I called and left message for Steve Albright at the facility to make sure that the information provided on 8/1/13 regarding APST inventory (2400 total capacity) is still correct. I emailed accounting and let them know not refund APST fee. Steve A. called back and left message stating that the APST capacity is still 2400 and there was miscommunication at their facility.
Eval Division:	Orange County Environmental Health
Eval Program:	APSA
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	10-10-2014
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector Comments: Orange County Environmental Health as the Certified Unified Program Agency (OC CUPA) is the administrating agency for the Hazardous Materials Disclosure and Business Emergency Plan programs (HMD/BEP) previously administered by the Orange County Fire Authority. During the months of August and December of 2013, the OC CUPA sent out letters to regulated businesses requesting them to electronically submit their HMD/BEP forms. In addition, during the onsite inspection conducted on 1/8/14, your facility was notified again to submit HMD/BEP electronically. Electronic submission of these forms is a legal requirement. Failure to submit HMD/BEP forms is in violation of the California Health & Safety Code Chapter 6.95. According to our records there is no electronic submission for this facility. Please go to www.esubmit.ocgov.com to request a username and password and submit the following HMD/BEP forms within the next 30 days: - Business Activities [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-11-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct routine hazardous waste inspection. Mike Paroske granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans or municipal trash. Waste oil is stored in an aboveground tank that is kept closed and is labeled. Waste antifreeze (1) and used oil filter (1) drums are stored closed and labeled. Manifests were reviewed. Emergency card is

CALIBER COLLISION CENTER - BAKER RANCH 1156 (Continued) **S113466003**

posted in dispatch area.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 01-15-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Inspector Comments: On site for follow up inspection since facility was notified to electronically submit HMBP documents during the onsite inspection conducted on 1/8/14 and inspection report dated 10/10/14 that included violations for failure to submit documents electronically. Facility has the following hazardous materials that meet the required disclosure quantities: - 200 gallons of waste oil - 55 gallons of waste antifreeze - 110 gallons of new motor oil - 2000 gallons diesel The following documents must be electronically submitted immediately to comply with outstanding violations and avoid further enforcement action: - Business Activities form - Owner/Operator Identification form - Hazardous Material Chemical Inventory forms - Facility Site Map - Business Emergency Plan Provided copy of 10/10/14 inspection report.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 12-12-2019
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Went to site after receiving notification that business has moved out of this facility. New business, Caliber Collision, has moved into facility and is in process of beginning operation. I walked through shop. Drums to store hazardous waste have not been delivered to site yet. New owner inspection will be conducted when new business begins operating at this site.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 08-01-2013
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: I received an updated Aboveground Petroleum Storage Tank (APST) Facility Statement. The total APST capacity for all tanks at the facility is 2400 gallons.
Eval Division: Orange County Environmental Health
Eval Program: APSA
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 12-12-2019
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Went to site after receiving notification that business has moved out of this facility. New business, Caliber Collision, has moved into

CALIBER COLLISION CENTER - BAKER RANCH 1156 (Continued) **S113466003**

facility and is in process of beginning operation. I walked through shop. Drums to store hazardous waste and not all new material/products have been delivered to site yet. New owner inspection will be conducted when new business begins operating at this site.

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 12-21-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Went to site to conduct inspection. Facility contact was not on site.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 01-09-2014
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Processed A21.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-11-2016
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector Comments: On site for aboveground petroleum storage tank (APST) inspection. Mike Paroske assisted with the inspection. I walked through the facility and verified APSTs currently on site: - 1000 gallons diesel - 200 gallons of waste oil - 110 new motor oil Please be advised that this agency will remove this business from the APST inspection program since facility has been storing less than 1320 gallons of petroleum products on site for over a year.
Eval Division: Orange County Environmental Health
Eval Program: APSA
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 01-11-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed and accepted annual certification documents submitted to E-submit on 1/11/16. Business Activities was updated since facility is not in the APST program anymore.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 01-16-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: I emailed example chemical inventory forms to facility so he can

CALIBER COLLISION CENTER - BAKER RANCH 1156 (Continued) **S113466003**

	submit HMBP documents.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-16-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Received email from accounting sent to them by collection department. Facility was requesting explanation as to why they are being billed for APST program and request that penalty on unpaid invoice for 2014/2015 be waived. Facility has over 1320 gallons of petroleum products on site. I emailed accounting back stating that they are in the APST program, therefore the bill needs to be paid and that I need to discuss waiving penalty with supervisor.
Eval Division:	Orange County Environmental Health
Eval Program:	APSA
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-28-2019
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Jim Middleton granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans or municipal trash. Waste oil is stored in an aboveground tank that is kept closed and is labeled. Waste antifreeze (1) and used oil filter (1) drums are stored closed and labeled. Manifests were reviewed. Emergency card is posted in dispatch area.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-10-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector Comments: I received a copy of manifest documenting removal of 50 gallons of waste antifreeze from the facility on 1/22/15. Violation I053, regarding waste accumulation time being exceeded, cited during the routine inspection conducted on1/15/15, has been corrected.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-08-2014
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Steve Albright granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans or municipal trash. Waste oil is stored

CALIBER COLLISION CENTER - BAKER RANCH 1156 (Continued) **S113466003**

in an aboveground storage tank and is labeled. Used oil filter (1) and waste antifreeze (1) drums are stored closed and labeled. Manifests were reviewed. Emergency card is posted in the shop by the supervisor's office.

Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-15-2015
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector Comments: On site to conduct routine hazardous waste inspection. James Middleton granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans or municipal trash. Waste oil is stored in an aboveground tank and is labeled. Waste antifreeze (1) and used oil filter (1) drums are stored closed and labeled. Manifests were reviewed. Waste accumulation time for waste antifreeze has been exceeded. There is approximately 40/45 gallons stored on site. Waste antifreeze must be disposed of within 30 days of this inspection. An emergency card was provided to be filled out and posted.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 01-22-2018
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed and accepted annual certification documents submitted to CERS on 1/5/18.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 02-25-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Documents submitted to E-submit on 2/11/15 were reviewed and declined with the following considerations: Waste Antifreeze form must be revised as follows: - CAS# listed at the top of the page under G Common NameG must be removed since this is not pure/new material. - G Maximum Daily AmountG should be changed from G 5.0G to G 55.G - Name for waste in the G Hazardous ComponentG section should be change to waste G antifreeze.G Waste Oil form must be revised as follows: - CAS# listed at the top of the page under G Common NameG must be removed since this is not pure/new material. - G Maximum Daily AmountG should be changed from G 16.0G to G 200.G Employee Training section, G III. Employee Training ProgramG must be completed. The site map does not contain locations of the emergency shutoffs (water, electricity and natural gas) and hazardous materials handling (spill containment products) storage areas. (Verified with facility contact that Business Owner/Operator [Truncated]
Eval Division: Orange County Environmental Health

CALIBER COLLISION CENTER - BAKER RANCH 1156 (Continued) **S113466003**

Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-06-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to E-submit on 3/5/15 were reviewed and declined with the following considerations: Waste Antifreeze form must be revised as follows: - CAS# listed at the top of the page under G Common NameG must be removed since this is not pure/new material. - G Maximum Daily AmountG should be changed from G 5.0G to G 55.G - Name for waste in the G Hazardous ComponentG section should be change to waste G antifreeze.G Waste Oil form must be revised as follows: - CAS# listed at the top of the page under G Common NameG must be removed since this is not pure/new material. - G Maximum Daily AmountG should be changed from G 16.0G to G 200.G Employee Training section, G III. Employee Training ProgramG must be completed. The site map does not contain locations of the emergency shutoffs (water, electricity and natural gas) and hazardous materials handling (spill containment products) storage areas.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	04-06-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents to E-submit submitted on 3/20/15 were reviewed and declined with the following consideration: This Agency had requested that CAS#s listed at the top of the page under G Common NameG for waste oil and waste antifreeze be removed since they are not pure/new material. However, CAS#s listed at the bottom of the form in the G Hazardous ComponentG section for both waste oil and waste antifreeze have been removed and should be listed again. Please delete CAS#s listed at the top of the form under G Common NameG for waste oil and waste antifreeze and list them at the bottom of the form in the G Hazardous ComponentG section.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	07-30-2013
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct Aboveground Petroleum Storage Tank (APSTs) inspection. The facility has the following APSTs: 1 - 150 gallon new oil 1 - 250 gallon waste oil 2 - 1000 gallon diesel tanks Facility has SPCC plan.
Eval Division:	Orange County Environmental Health
Eval Program:	APSA
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	07-31-2013

CALIBER COLLISION CENTER - BAKER RANCH 1156 (Continued) **S113466003**

Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: I copied and emailed the APST Facility Statement submitted in 2010 and a blank form to Steve at the facility so he can review and submit an updated form if necessary.
Eval Division: Orange County Environmental Health
Eval Program: APSA
Eval Source: CERS

Coordinates:
Site ID: 413204
Facility Name: Caliber Collision Center - Baker Ranch 1156
Env Int Type Code: HMBP
Program ID: 10547929
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 33.663520
Longitude: -117.675020

Affiliation:
Affiliation Type Desc: Environmental Contact
Entity Name: GMG Envirosafe
Entity Title: Not reported
Affiliation Address: 1658 N Milwaukee Avenue - Suite 287
Affiliation City: Chicago
Affiliation State: IL
Affiliation Country: Not reported
Affiliation Zip: 60647
Affiliation Phone: Not reported

Affiliation Type Desc: Operator
Entity Name: CALIBER COLLISION CENTER
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (949) 656-3942

Affiliation Type Desc: Parent Corporation
Entity Name: Caliber Bodyworks, Inc. dba Caliber Collision Centers
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: CUPA District
Entity Name: Orange County Env Health
Entity Title: Not reported
Affiliation Address: 1241 East Dyer RoadSuite 120
Affiliation City: Santa Ana
Affiliation State: CA

CALIBER COLLISION CENTER - BAKER RANCH 1156 (Continued) **S113466003**

Affiliation Country: Not reported
Affiliation Zip: 92705-5611
Affiliation Phone: (714) 433-6406

Affiliation Type Desc: Identification Signer
Entity Name: Matthew Hurtado
Entity Title: Manager
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner
Entity Name: Caliber Bodyworks, Inc.
Entity Title: Not reported
Affiliation Address: 2941 Lake Vista Drive
Affiliation City: Lewisville
Affiliation State: TX
Affiliation Country: United States
Affiliation Zip: 75067
Affiliation Phone: (469) 948-9500

Affiliation Type Desc: Document Preparer
Entity Name: Allison Kahl
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 26100 DIMENSION DR
Affiliation City: LAKE FOREST
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92630
Affiliation Phone: Not reported

HAZNET:
Name: BLAIR'S TOWING INC
Address: 26100 DIMENSION DR
Address 2: Not reported
City,State,Zip: LAKE FOREST, CA 926307808
Contact: STEVE ALBRIGHT
Telephone: 9495888000
Mailing Name: Not reported
Mailing Address: 26100 DIMENSION DR

Year: 2019
Gepaid: CAL000302939

CALIBER COLLISION CENTER - BAKER RANCH 1156 (Continued) **S113466003**

TSD EPA ID: CAD008252405
CA Waste Code: 352 - Other organic solids
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.10000

Year: 2012
Gepaid: CAL000302939
TSD EPA ID: NVT330010000
CA Waste Code: 352 - Other organic solids
Disposal Method: H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Tons: 0.2

Year: 2010
Gepaid: CAL000302939
TSD EPA ID: CAD097030993
CA Waste Code: 352 - Other organic solids
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.02

Additional Info:
Year: 2010
Gen EPA ID: CAL000302939

Shipment Date: 20100728
Creation Date: 9/30/2010 18:30:40
Receipt Date: 20100729
Manifest ID: 007098075JJK
Trans EPA ID: CAD028277036
Trans Name: ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID: Not reported
Trans 2 Name: Not reported
TSDF EPA ID: CAD097030993
Trans Name: SIEMENS WATER TECHNOLOGIES CORP
TSDF Alt EPA ID: Not reported
TSDF Alt Name: Not reported
Waste Code Description: 352 - Other organic solids
RCRA Code: Not reported
Meth Code: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons: 0.02
Waste Quantity: 40
Quantity Unit: P
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Additional Info:
Year: 2012
Gen EPA ID: CAL000302939

CALIBER COLLISION CENTER - BAKER RANCH 1156 (Continued) **S113466003**

Shipment Date:	20120723
Creation Date:	5/31/2013 22:15:16
Receipt Date:	20120726
Manifest ID:	003293153SKS
Trans EPA ID:	TXR000050930
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVT330010000
Trans Name:	US ECOLOGY NEVADA
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	0.2
Waste Quantity:	400
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

HWTS:

Name:	BLAIR'S TOWING INC
Address:	26100 DIMENSION DR
Address 2:	Not reported
City,State,Zip:	LAKE FOREST, CA 926307808
EPA ID:	CAL000302939
Inactive Date:	Not reported
Create Date:	02/02/2006
Last Act Date:	02/07/2018
Mailing Name:	Not reported
Mailing Address:	26100 DIMENSION DR
Mailing Address 2:	Not reported
Mailing City,State,Zip:	LAKE FOREST, CA 926307808
Owner Name:	BLAIR'S TOWING INC
Owner Address:	26100 DIMENSION DR
Owner Address 2:	Not reported
Owner City,State,Zip:	LAKE FOREST, CA 926307808
Contact Name:	STEVE ALBRIGHT
Contact Address:	26100 DIMENSION DR
Contact Address 2:	Not reported
City,State,Zip:	LAKE FOREST, CA 926307808

NAICS:

EPA ID:	CAL000302939
Create Date:	2012-05-03 08:41:49
NAICS Code:	541614
NAICS Description:	Process, Physical Distribution, and Logistics Consulting Services
Issued EPA ID Date:	2006-02-02 12:35:28
Inactive Date:	Not reported
Facility Name:	BLAIR'S TOWING INC
Facility Address:	26100 DIMENSION DR
Facility Address 2:	Not reported

CALIBER COLLISION CENTER - BAKER RANCH 1156 (Continued) **S113466003**

Facility City:	LAKE FOREST
Facility County:	30
Facility State:	CA
Facility Zip:	926307808
EPA ID:	CAL000302939
Create Date:	2014-12-16 05:37:51
NAICS Code:	48851
NAICS Description:	Freight Transportation Arrangement
Issued EPA ID Date:	2006-02-02 12:35:28
Inactive Date:	Not reported
Facility Name:	BLAIR'S TOWING INC
Facility Address:	26100 DIMENSION DR
Facility Address 2:	Not reported
Facility City:	LAKE FOREST
Facility County:	30
Facility State:	CA
Facility Zip:	926307808

I32 **FOREVER GREEN ART INC** **RCRA-SQG** **1001195438**
ENE **20611 CANADA RD** **FINDS** **CAR000020172**
< 1/8 **LAKE FOREST, CA 92630** **ECHO**
0.110 mi. **HAZNET**
581 ft. **Site 1 of 9 in cluster I** **HWTS**

Relative: Higher
Actual: 668 ft.

RCRA-SQG:

Date form received by agency:	1997-06-05 00:00:00.0
Facility name:	FOREVER GREEN ART INC
Facility address:	20611 CANADA RD LAKE FOREST, CA 92630
EPA ID:	CAR000020172
Mailing address:	BARENTS SEA CIRCLE LAKE FOREST, CA 92630
Contact:	MIKE REEDER
Contact address:	20382 BARENTS SEA CIRCLE LAKE FOREST, CA 92630
Contact country:	US
Contact telephone:	714-768-3005
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	FOREVER GREEN ART INC
Owner/operator address:	20382 BARENTS SEA CIR LAKE FOREST, CA 92630
Owner/operator country:	Not reported
Owner/operator telephone:	714-768-3005
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported

FOREVER GREEN ART INC (Continued) **1001195438**

Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

FINDS:
Registry ID: 110070324923

Click Here:

Environmental Interest/Information System:
OSHA ESTABLISHMENT
Registry ID: 110002917611

Click Here:

Environmental Interest/Information System:
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:
Envid: 1001195438
Registry ID: 110002917611
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110002917611
Name: FOREVER GREEN ART INC
Address: 20611 CANADA RD
City,State,Zip: LAKE FOREST, CA 92630

HAZNET:
Name: FOREVER GREEN ART INC
Address: 20611 CANADA RD
Address 2: Not reported

FOREVER GREEN ART INC (Continued) **1001195438**

City,State,Zip: LAKE FOREST, CA 926300000
Contact: ALFRED L DAVIS COO
Telephone: 9497683005
Mailing Name: Not reported
Mailing Address: 20382 BARENTS SEA CIRCLE

Year: 1999
Gepaid: CAR000020172
TSD EPA ID: CAD008302903
CA Waste Code: 331 - Off-specification, aged or surplus organics
Disposal Method: R01 - Recycler
Tons: 0.165

Year: 1997
Gepaid: CAR000020172
TSD EPA ID: CAD000088252
CA Waste Code: 791 - Liquids with pH <= 2
Disposal Method: H01 - Transfer Station
Tons: 0.0417

Year: 1997
Gepaid: CAR000020172
TSD EPA ID: CAD000088252
CA Waste Code: 551 - Laboratory waste chemicals
Disposal Method: H01 - Transfer Station
Tons: 1.098

Year: 1997
Gepaid: CAR000020172
TSD EPA ID: CAD000088252
CA Waste Code: 343 - Unspecified organic liquid mixture
Disposal Method: H01 - Transfer Station
Tons: 0.374

Year: 1997
Gepaid: CAR000020172
TSD EPA ID: CAD050806850
CA Waste Code: 551 - Laboratory waste chemicals
Disposal Method: -
Tons: 0.01

Year: 1997
Gepaid: CAR000020172
TSD EPA ID: CAD000088252
CA Waste Code: 331 - Off-specification, aged or surplus organics
Disposal Method: H01 - Transfer Station
Tons: 0.15

Additional Info:
Year: 1999
Gen EPA ID: CAR000020172

Shipment Date: 19990715
Creation Date: 9/21/1999 0:00:00
Receipt Date: 19990722
Manifest ID: 99173853

FOREVER GREEN ART INC (Continued) **1001195438**

Trans EPA ID:	CAD047782560
Trans Name:	Not reported
Trans 2 EPA ID:	CAD009230244
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008302903
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD008302903
TSDF Alt Name:	Not reported
Waste Code Description:	331 - Off-specification, aged, or surplus organics
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	0.165
Waste Quantity:	50
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	1997
Gen EPA ID:	CAR000020172
Shipment Date:	19970609
Creation Date:	12/4/1997 0:00:00
Receipt Date:	19970609
Manifest ID:	96726735
Trans EPA ID:	CAD983615287
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD000088252
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	791 - Liquids with pH < 2 792 Liquids with pH < 2 with metals
RCRA Code:	D002
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.0417
Waste Quantity:	10
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19970609
Creation Date:	12/4/1997 0:00:00
Receipt Date:	19970609
Manifest ID:	96726735
Trans EPA ID:	CAD983615287
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD000088252

FOREVER GREEN ART INC (Continued) **1001195438**

Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	551 - Laboratory waste chemicals 561 Detergent and soap
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.8428
Waste Quantity:	1
Quantity Unit:	Y
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19970609
Creation Date:	12/4/1997 0:00:00
Receipt Date:	19970609
Manifest ID:	96726735
Trans EPA ID:	CAD983615287
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD000088252
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	551 - Laboratory waste chemicals 561 Detergent and soap
RCRA Code:	D001
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.0834
Waste Quantity:	20
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19970609
Creation Date:	12/4/1997 0:00:00
Receipt Date:	19970617
Manifest ID:	96726738
Trans EPA ID:	CAD983615287
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD050806850
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	551 - Laboratory waste chemicals 561 Detergent and soap
RCRA Code:	D001
Meth Code:	- Not reported
Quantity Tons:	0.01
Waste Quantity:	20
Quantity Unit:	P

FOREVER GREEN ART INC (Continued) **1001195438**

Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19970609
Creation Date:	12/4/1997 0:00:00
Receipt Date:	19970609
Manifest ID:	96726737
Trans EPA ID:	CAD983615287
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD000088252
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.374
Waste Quantity:	110
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19970609
Creation Date:	12/4/1997 0:00:00
Receipt Date:	19970609
Manifest ID:	96726737
Trans EPA ID:	CAD983615287
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD000088252
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	551 - Laboratory waste chemicals 561 Detergent and soap
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.1668
Waste Quantity:	40
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19970609
Creation Date:	12/4/1997 0:00:00
Receipt Date:	19970609

FOREVER GREEN ART INC (Continued) **1001195438**

Manifest ID:	96726737
Trans EPA ID:	CAD983615287
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD000088252
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	551 - Laboratory waste chemicals 561 Detergent and soap
RCRA Code:	D001
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.005
Waste Quantity:	10
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	19970609
Creation Date:	12/4/1997 0:00:00
Receipt Date:	19970609
Manifest ID:	96726737
Trans EPA ID:	CAD983615287
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD000088252
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	331 - Off-specification, aged, or surplus organics
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.15
Waste Quantity:	300
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

HWTS:

Name:	FOREVER GREEN ART INC
Address:	20611 CANADA RD
Address 2:	Not reported
City,State,Zip:	LAKE FOREST, CA 926300000
EPA ID:	CAR000020172
Inactive Date:	06/30/2003
Create Date:	06/19/1997
Last Act Date:	07/06/2010
Mailing Name:	Not reported
Mailing Address:	20382 BARENTS SEA CIRCLE
Mailing Address 2:	Not reported

FOREVER GREEN ART INC (Continued) **1001195438**

Mailing City,State,Zip:	LAKE FOREST, CA 926300000
Owner Name:	FOREVER GREEN ART INC
Owner Address:	20382 BARENTS SEA CIR
Owner Address 2:	Not reported
Owner City,State,Zip:	LAKE FOREST, CA 926300000
Contact Name:	ALFRED L DAVIS COO
Contact Address:	20382 BARENTS SEA CIR
Contact Address 2:	Not reported
City,State,Zip:	LAKE FOREST, CA 926300000

I33 **LOS ALISOS RANCH** **HIST UST** **U001577229**
ENE **20571 CANADA RD** **N/A**
< 1/8 **EL TORO, CA 92646**
0.119 mi.
630 ft. **Site 2 of 9 in cluster I**

Relative:
Higher

Actual:
668 ft.

HIST UST:

Name:	LOS ALISOS RANCH
Address:	20571 CANADA RD
City,State,Zip:	EL TORO, CA 92646
File Number:	0002EBFF
URL:	http://geotracker.waterboards.ca.gov/ustpdfs/pdf/0002EBFF.pdf
Region:	STATE
Facility ID:	00000023543
Facility Type:	Other
Other Type:	NURSERY/FARMING
Contact Name:	S. NAKASE
Telephone:	7149626604
Owner Name:	NAKASE BROTHERS WHOLESALE NURS
Owner Address:	9441 KREPP DR.
Owner City,St,Zip:	HUNTINGTON BEACH, CA 92646
Total Tanks:	0003
Tank Num:	001
Container Num:	001
Year Installed:	Not reported
Tank Capacity:	00000200
Tank Used for:	PRODUCT
Type of Fuel:	DIESEL
Container Construction Thickness:	Not reported
Leak Detection:	Stock Inventor
Tank Num:	002
Container Num:	G735150
Year Installed:	Not reported
Tank Capacity:	00001000
Tank Used for:	PRODUCT
Type of Fuel:	REGULAR
Container Construction Thickness:	10
Leak Detection:	Stock Inventor
Tank Num:	003
Container Num:	002
Year Installed:	Not reported
Tank Capacity:	00000280
Tank Used for:	PRODUCT
Type of Fuel:	DIESEL
Container Construction Thickness:	Not reported

LOS ALISOS RANCH (Continued) **U001577229**

Leak Detection: Stock Inventor

Click here for Geo Tracker PDF:

I34 **POWER PROF CLEANERS CORP DBA POWER CLEAN** **RCRA-SQG** **1000597738**
ENE **20562 CANADA RD** **FINDS** **CAD983617648**
1/8-1/4 **EL TORO, CA 92630**
0.127 mi.
668 ft. **Site 3 of 9 in cluster I**

Relative:
Higher

Actual:
669 ft.

RCRA-SQG:

Date form received by agency:	1992-02-04 00:00:00.0
Facility name:	POWER CLEANERS
Facility address:	20562 CANADA RD EL TORO, CA 92630
EPA ID:	CAD983617648
Mailing address:	CANADA RD EL TORO, CA 92630
Contact:	DOAIFI KHODER
Contact address:	20562 CANADA RD EL TORO, CA 92630
Contact country:	US
Contact telephone:	714-472-6088
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	DOAIFI KHODER
Owner/operator address:	20562 CANADA RD EL TORO, CA 92630
Owner/operator country:	Not reported
Owner/operator telephone:	714-472-6088
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No

POWER PROF CLEANERS CORP DBA POWER CLEAN (Continued) **1000597738**

User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

FINDS:
Registry ID: 110002867951

Click Here:

Environmental Interest/Information System:
California Hazardous Waste Tracking System - Datamart (HWTS-DATAMART) provides California with information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

I35 **SALEEN ALLEN R R R SPEEDLAB INC** **RCRA-SQG** **1004676851**
ENE **20622 CANADA RD** **FINDS** **CAR000090308**
1/8-1/4 **LAKE FOREST, CA 92630** **ECHO**
0.129 mi.
681 ft. **Site 4 of 9 in cluster I**

Relative:
Higher

Actual:
668 ft.

RCRA-SQG:
Date form received by agency: 2001-01-17 00:00:00.0
Facility name: SALEEN ALLEN R R R SPEEDLAB INC
Facility address: 20622 CANADA RD
LAKE FOREST, CA 92630
EPA ID: CAR000090308
Mailing address: 9 WHATNEY
IRVINE, CA 92618
Contact: MARNI JOHNSON
Contact address: 9 WHATNEY
IRVINE, CA 92618
Contact country: US
Contact telephone: 949-829-8704
Contact email: Not reported
EPA Region: 09
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: SALEEN INC
Owner/operator address: 9 WHATNEY

SALEEN ALLEN R R R SPEEDLAB INC (Continued) **1004676851**

IRVINE, CA 92618
Owner/operator country: Not reported
Owner/operator telephone: 949-597-4900
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Hazardous Waste Summary:

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: F001
. Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLORETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Violation Status: No violations found

FINDS:
Registry ID: 110012211748

Click Here:

Environmental Interest/Information System:
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport,

SALEEN ALLEN R R R SPEEDLAB INC (Continued) **1004676851**

and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid:	1004676851
Registry ID:	110012211748
DFR URL:	http://echo.epa.gov/detailed-facility-report?fid=110012211748
Name:	SALEEN ALLEN R R R SPEEDLAB INC
Address:	20622 CANADA RD
City,State,Zip:	LAKE FOREST, CA 92630

J36 **ARB INC** **UST** **U004282450**
NNW **20602 CIVIC CENTER** **N/A**
1/8-1/4 **LAKE FOREST, CA 92630**
0.135 mi.
713 ft. **Site 1 of 4 in cluster J**

Relative:
Higher

Actual:
677 ft.

ORANGE CO. UST:

Name:	ARB INC
Address:	20602 CIVIC CENTER
City,State,Zip:	LAKE FOREST, CA 92630
Facility ID:	FA0024287

UST:

Name:	ARB INC
Address:	20602 CIVIC CENTER DR
City,State,Zip:	LAKE FOREST, CA 92630
Facility ID:	FA0024287
Permitting Agency:	Orange County Environmental Health
Latitude:	33.66284
Longitude:	-117.67637

J37 **ARB INC** **CERS HAZ WASTE** **S123518081**
NNW **20602 CIVIC CENTER DR** **CERS TANKS** **N/A**
1/8-1/4 **LAKE FOREST, CA 92630** **CERS**
0.135 mi.
713 ft. **Site 2 of 4 in cluster J**

Relative:
Higher

Actual:
677 ft.

CERS HAZ WASTE:

Name:	ARB INC
Address:	20602 CIVIC CENTER DR
City,State,Zip:	LAKE FOREST, CA 92630
Site ID:	415084
CERS ID:	10721305
CERS Description:	Hazardous Waste Generator

CERS TANKS:

Name:	ARB INC
Address:	20602 CIVIC CENTER DR
City,State,Zip:	LAKE FOREST, CA 92630
Site ID:	415084
CERS ID:	10721305

ARB INC (Continued) **S123518081**

CERS Description: Underground Storage Tank

CERS:
Name: ARB INC
Address: 20602 CIVIC CENTER DR
City,State,Zip: LAKE FOREST, CA 92630
Site ID: 415084
CERS ID: 10721305
CERS Description: Chemical Storage Facilities

Violations:
Site ID: 415084
Site Name: ARB INC
Violation Date: 01-19-2018
Citation: HSC 6.75 25299.30-25299.34 - California Health and Safety Code, Chapter 6.75, Section(s) 25299.30-25299.34
Violation Description: Failure to submit and maintain complete and current Certification of Financial Responsibility or other mechanism of financial assurance.
Violation Notes: Returned to compliance on 01/31/2018. Certification of financial responsibility (CFR) expired on 1/13/18. Valid CFR must be obtained and a copy be electronically submitted within 30 days of this inspection.
Violation Division: Orange County Environmental Health
Violation Program: UST
Violation Source: CERS

Site ID: 415084
Site Name: ARB INC
Violation Date: 02-01-2019
Citation: 23 CCR 16 2637(f) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2637(f)
Violation Description: Failure to submit a copy of the secondary containment test results on the G Secondary Containment Testing report FormG to the UPA within 30 days after the test.
Violation Notes: Returned to compliance on 03/15/2019. This agency received notification to conduct secondary containment test at this facility on 11/15/18. To date, a copy of the secondary containment report has not been received by this agency. Copies of test results must be submitted to this agency within 30 days of testing. A copy of the report must be submitted by 2/15/19.
Violation Division: Orange County Environmental Health
Violation Program: UST
Violation Source: CERS

Site ID: 415084
Site Name: ARB INC
Violation Date: 12-22-2015
Citation: 23 CCR 16 2637(e) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2637(e)
Violation Description: Failure to submit a copy of the secondary containment test results to the CUPA within 30 days after the test.
Violation Notes: Returned to compliance on 01/25/2016. This agency has not received results for secondary containment test conducted at the site on 11/5/15. Test results must be submitted to this agency within 30 days of testing. A copy of the test results must be submitted to this agency by 1/5/16 to avoid enforcement action.
Violation Division: Orange County Environmental Health

ARB INC (Continued) **S123518081**

Violation Program: UST
Violation Source: CERS

Site ID: 415084
Site Name: ARB INC
Violation Date: 01-19-2018
Citation: 23 CCR 16 2632(c)(2)(A)&(B) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2632(c)(2)(A)&(B)
Violation Description: Failure to continuously monitor the interstitial space of a double-walled tank with an audible and visual alarm system.
Violation Notes: Returned to compliance on 01/19/2018. Annular sensor for UST supplying fuel for dispensers 1,2 and 7 was stuck in riser and could not be removed. A new sensor, "like for like", was installed (ensuring that sensor is at bottom of tank) and passed when retested. This violation has been corrected.
Violation Division: Orange County Environmental Health
Violation Program: UST
Violation Source: CERS

Site ID: 415084
Site Name: ARB INC
Violation Date: 01-30-2020
Citation: HSC 6.75 25299.30-25299.34 - California Health and Safety Code, Chapter 6.75, Section(s) 25299.30-25299.34
Violation Description: Failure to submit and maintain complete and current Certification of Financial Responsibility or other mechanism of financial assurance.
Violation Notes: Returned to compliance on 02/04/2020. Certification of financial responsibility (CFR) expired on 1/25/20. Valid/current copy of CFR must be obtained and be available on site and be submitted electronically within 30 days of this inspection.
Violation Division: Orange County Environmental Health
Violation Program: UST
Violation Source: CERS

Evaluation:
Eval General Type: Other/Unknown
Eval Date: 01-23-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Inspector Comments: On site for follow up inspection since facility was notified to electronically submit HMBP documents during the onsite inspection conducted on 1/24/14 and inspection report dated 10/1/14 that included violations for failure to submit documents electronically. Facility has the following hazardous materials that meet the required disclosure quantities: - 40,000 gallons Diesel - 275 gallons of DEF - 16 propane tanks for forklift The following documents must be electronically submitted immediately to comply with outstanding violations and avoid further enforcement action: - Business Activities form - Owner/Operator Identification form - Hazardous Material Chemical Inventory forms - Facility Site Map - Business Emergency Plan
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 01-24-2017

ARB INC (Continued) **S123518081**

Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I received a copy of Monitoring System Certification, Spill Bucket Testing Report Form and Product Line Test Result Sheets for activities conducted on 1/20/17. All components passed test.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-24-2018
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I received a copy of Monitoring System Certification, Spill Bucket Testing Report Form and Product Line Test Result Sheets for activities conducted on 1/19/18. All components passed test.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-25-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector Comments: Reviewed Secondary Containment Testing Report Form (3 year SB989) for activities conducted on 11/5/15. All components passed test. Violation I296 regarding failure to submit secondary test results within 30 days of testing, cited in this agency's inspection report dated 12/22/15, has been corrected.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-25-2019
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to witness monitoring system certification testing activities and to conduct routine UST inspection. Annular and sump sensors alarmed properly (visual and audible) and shut down all turbines when submerged in water. UDCs have float and chain mechanism. Water was poured in all UDCs and all float and chains functioned properly. Line leak detectors were tested and passed. Line test was conducted since tank system does not have fail safe. Both lines passed. Site has flappers for overfill prevention. Drop tubes (with flappers) were replaced in Tanks 1 and 3 since they failed test conducted in November 2018. A copy of the Overfill Prevention Equipment Inspection Report Form for activities conducted in November 2018 must be submitted to this agency within 30 days of this inspection. Spill buckets were tested visually without any changes in water level. Valid permit (posted behind front counter in glass covered bulletin board), designated operator [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown

ARB INC (Continued) **S123518081**

Eval Date:	02-17-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed annual certification documents (2 submittals) submitted to CERS on 2/6/17. Submittal was not accepted since Fire Code Hazard Classes was not listed for DEF and physical state for propane is not correct, reported as gas.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	04-14-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Accepted revised documents submitted to CERS on 3/7/17 with comment regarding adding Fire Code Hazard Classes for DEF in the next submission.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	12-19-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed facility’s Designated Operator form on E-submit. Form was accepted.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	12-29-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Monitor cert reschedule notification
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	12-15-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Not reported
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-06-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Monitor cert notification
Eval Division:	Orange County Environmental Health
Eval Program:	UST

ARB INC (Continued) **S123518081**

Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-17-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Monitor cert reschedule notification
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-20-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to witness monitoring system certification testing activities and to conduct routine UST inspection. All annular and sump sensors alarmed properly (visual and audible) and shut down all turbines when submerged in water. UDCs have float and chain mechanism. Water was poured in all UDCs and all float and chains functioned properly. Line leak detectors (4) were tested and passed. Line test was conducted since tank system does not have fail safe. Both line passed. Site has flappers for overfill prevention. Spill buckets were tested visually without any changes in water level. Valid permit, designated operator documentation, monthly inspection reports, monitoring plan, response plans, employee training records, tank pages, certification of financial responsibility (CFR) dated 1/13/17, copies of monitoring system certification and secondary containment reports are available for review. A copy of CFR must be submitted electronically within 30 of [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-22-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to witness monitoring system certification testing activities and to conduct routine UST inspection. All annular and sump sensors alarmed properly (visual and audible) and shut down all turbines when submerged in water. UDCs have float and chain mechanism. Water was poured in all UDCs and all float and chains functioned properly. Line leak detectors were tested and passed. The tank system does not have fail safe. Therefore, line test was conducted and passed. Site has flappers for overfill prevention. Spill buckets were tested visually without any changes in water level. Valid permit is posted in a glass covered bulletin board behind warehouse counter. Designated operator documentation, monthly inspection reports, monitoring plan, response plans, employee training records, tank pages, certification of financial responsibility, copies of monitoring system certification and secondary containment reports are available for [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS

ARB INC (Continued) **S123518081**

Eval General Type:	Other/Unknown
Eval Date:	01-27-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted Certification Of Financial Responsibility with coverage period from 1/19/16 to 1/19/16, submitted to E-submit on 1/27/16.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-31-2018
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted annual certification documents submitted to CERS on 1/30/18 with comment regarding Inventory forms being conditionally accepted and requesting that Federal Hazard Categories be updated in next submission.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-31-2018
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted documents submitted to CERS on 1/30/18, which included certification of updated financial responsibility with coverage period from 1/19/18 to 1/19/19. Violation I583 regarding failure to submit and maintain current Certification of Financial Responsibility, cited during routine inspection conducted on 1/19/18, has been corrected.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-01-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I reviewed and accepted certification of financial responsibility submitted to E-submit on 1/27/16, with coverage period from 1/19/16 to 1/19/17. Submittal was accepted even though the Letter Of Credit amount listed on E-submit form is $1,000 rather $10,000 but the actual signed copy of the State Form and attached CEO letter has correct amount listed.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-17-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted documents submitted to CERS on 2/6/17 that included Certification of Financial Responsibility with coverage

ARB INC (Continued) **S123518081**

	period from 1/13/17 to 1/13/18.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-23-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted on 2/7/15 have been reviewed and declined with the following considerations: Waste oil tank chemical inventory form must be removed from this submittal since it is located at 20632 Indian Ocean Dr. (FA0036625). State Waste Code must be changed to G 221.G Site map does not show adjacent streets, storm drain, access and exit points, emergency shutoffs (water, electricity and natural gas), evacuation staging areas and emergency response equipment (fire extinguishers).
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	10-30-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	SB 989 test notification
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-09-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Facility information page submitted to CERS on 1/3/17 was not acceted since EPA ID# CAL000076760 listed for this facility is assigned to "Sacramento Occupational Medical GR" and is inactive. Correct EPA ID# for this facility is CAR000076760.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-12-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Monitor Certification Notification
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-19-2018
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	All annular and sump sensors, except for annular sensor for UST supplying fuel for dispensers 1,2 and 7, alarmed properly (visual and

ARB INC (Continued) **S123518081**

audible) and shut down all turbines when submerged in water. The annular sensor was stuck in riser and could not be removed. A new sensor, "like for like", was installed (ensuring that sensor is at bottom of tank) and passed when retested. UDCs have float and chain mechanism. Water was poured in all UDCs and all float and chains functioned properly. Line leak detectors (4) were tested and passed. Line test was conducted since tank system does not have fail safe. Lines passed test. Site has flappers for overfill prevention. Spill buckets were tested visually without any changes in water level. Valid permit (posted in glass covered bulleting board), designated operator documentation, monthly inspection reports, monitoring plan, response plans, employee training records, tank pages, certification of financial responsibility (CFR) [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-30-2020
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: On site to witness monitoring system certification testing activities and to conduct routine UST inspection. Annular and sump sensors alarmed properly (visual and audible) and shut down all turbines when submerged in water. UDCs have float and chain mechanism. Water was poured in all UDCs and all float and chains functioned properly. Line leak detectors were tested and passed. Line test was conducted since tank system does not have fail safe. Both lines passed. Overfill prevention for this site is Fill Tube Shut-off Valves. Overfill Prevention Equipment Inspection was conducted on 1/25/19. Spill buckets were tested visually without any changes in water level. Valid permit (posted behind front counter in glass covered bulletin board), designated operator documentation, monthly inspection reports, monitoring plan, response plans, employee training records, tank pages, certification of financial responsibility (expired 1/25/20), copies of monitoring [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 02-23-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed and accepted annual certification documents submitted to E-submit on 2/16/16.

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-15-2019
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: I received a copy of Secondary Containment Testing Report Form (3 year SB989) for activities conducted on 11/12/18. All components passed test. Violation I296 regarding failure to submit a copy of secondary

ARB INC (Continued) **S123518081**

containment testing report form cited on 2/1/19, has been corrected.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 05-15-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed and accepted updated site map submitted to E-submit on 3/2/15.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 07-31-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Documents submitted on 7/30/15 were reviewed and declined with the following considerations: Since the Aboveground Petroleum Storage Tanks (AST) are located at 20632 Indian Ocean Dr., box D on the Business Activities form should be unchecked. Diesel #2: This material is reported as G mixtureG with CAS# 86478-34-6 for diesel listed in the mixture table. This CAS# does not exist. However, CAS# (68476-34-6) listed under G Common NameG is correct. If this material is a G mixtureG , then the correct CAS# must be removed from box under G Common NameG and be placed in the mixture table. You may also, report this material as G pureG by changing hazardous material type box, leaving the CAS# under G Common NameG and deleting information in mixture table. DEF: Since this material is not G pureG , CAS# listed under G Common NameG should be removed. Site map does not show adjacent streets, storm drain, access and exit points, emergency shutoffs (water, electricity and natural gas), [Truncated]
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 02-01-2019
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: I received and reviewed the following documents: - Overfill Prevention Equipment Inspection Report Form for activities conducted on 11/12/18. The 15000 gallon and 20000 gallon tanks failed test due to shut off valve being activated at 98%. - Overfill Prevention Equipment Inspection Report Form for activities conducted on 1/25/19. Failed drop tubes were replaced and passed test with shut off valve being activated at 95%. - Monitoring System Certification Form, Line Leak Detector Test Form and Spill Container Testing Report Form for activities conducted on 1/25/19. All components passed test. Please be advised that this agency received notification to conduct secondary containment test at this facility on 11/15/18. To date, a copy of the secondary containment report has not been received by this agency. Copies of test results must be submitted to this agency within 30 days of testing. A copy of the report must be submitted by 2/15/19 to avoid enforcement action. [Truncated]

ARB INC (Continued) **S123518081**

Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-23-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Certification of Financial Responsibility with coverage period from 1/16/15 to 1/5/16 was submitted to E-submit. Site map submitted to E-submit on 2/7/15 was not accepted since locations of piping and ESO are not shown on map.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-24-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Violations regarding not submitting HMBP documents were corrected. Duplicate submittal (2/7/15) was deleted.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	08-20-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted documents submitted to E-submit on 7/31/15.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	12-22-2015
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector Comments: This agency received notification for conducting secondary containment testing at the site on 11/5/15. To date, this agency has not received a copy of the secondary containment test report form. Test results must be submitted to this agency within 30 days of testing. A copy of the test results must be submitted to this agency by 1/5/16.
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-03-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Lance York called and requested that both account for this business be linked in CERS. Linked sites in CERS.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP

ARB INC (Continued) **S123518081**

Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-09-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	In preparation for onsite inspection, I checked CERS. Hazmat and UST data has not been transferred from E-submit to CERS. Discussed issue with Mike P. so data can be transferred. The site map did nottransfer when data was moved to CERS. I emailed facility contact, Lance York, and notified him that data was transferred and for him to upload site map into CERS>
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-20-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct hazardous materials chemical inventory and business emergency plan inspection. Ron Sutherland granted consent to conduct inspection. I inspected hazardous material storage area (fuel island). There has been no changes in types and/or volumes of the hazardous material stored on site since last inspection or previous reporting period. Training that includes hazardous material management is provided annually. Evacuation site map is posted in shop. Emergency plan is available on site.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-23-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to witness monitoring system certification testing activities and to conduct routine UST inspection. All annular and sump sensors alarmed properly (visual and audible) and shut down all turbines when submerged in water. UDCs have float and chain mechanism. Water was poured in all UDCs and all float and chains functioned properly. Line leak detectors were tested and passed. The tank system does not have fail safe. Therefore, line test was conducted and passed. Site has flappers for overfill prevention. Spill buckets were tested visually without any changes in water level. Valid permit is posted in a glass covered bulletin board behind warehouse counter. Designated operator documentation, monthly inspection reports, monitoring plan, response plans, employee training records, tank pages, certification of financial responsibility (expires 1/16/16), copies of monitoring system certification and secondary containment reports [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-28-2016

ARB INC (Continued) **S123518081**

Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Inspector Comments: I received and reviewed a copy of the Monitoring System Certification, Mechanical Line Leak Detector, Product Line Test Result Sheet and Spill Bucket Testing Report Form for activities conducted 1/22/16. All components passed test.
Eval Division: Orange County Environmental Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-30-2020
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to conduct hazardous materials chemical inventory and business emergency plan inspection. Ron Sutherland granted consent to conduct inspection. I walked through facility and inspected hazardous material storage areas throughout facility, both inside and outside building. There has been changes in types of the hazardous material stored on site since last inspection or previous reporting period. Propane cylinders are now stored at the adjacent building/property at (20632 Civic Center Dr.). Propane must be deleted from reporting during annual certification period. Facility stores diesel in underground storage tanks at disclosure threshold. Hazardous materials management training is provided annually and training records are available. Emergency contact information is posted in shop.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Affiliation:
Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: PO BOX 5166
Affiliation City: LAKE FOREST
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92630
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner
Entity Name: ARB Inc
Entity Title: Not reported
Affiliation Address: PO BOX 5166
Affiliation City: LAKE FOREST
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 92630
Affiliation Phone: (949) 454-7177

Affiliation Type Desc: Operator
Entity Name: ARB Inc
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported

ARB INC (Continued) **S123518081**

Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(949) 454-7177
Affiliation Type Desc:	Parent Corporation
Entity Name:	ARB Inc
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	UST Tank Operator
Entity Name:	ARB, INC.
Entity Title:	Not reported
Affiliation Address:	20602 CIVIC CENTER DR.
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92630
Affiliation Phone:	(949) 454-7177
Affiliation Type Desc:	Document Preparer
Entity Name:	LANCE YORK
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	RON SUTHERLAND
Entity Title:	MAINTENANCE MANAGER
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	CUPA District
Entity Name:	Orange County Env Health
Entity Title:	Not reported
Affiliation Address:	1241 East Dyer RoadSuite 120
Affiliation City:	Santa Ana
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92705-5611
Affiliation Phone:	(714) 433-6406
Affiliation Type Desc:	Environmental Contact
Entity Name:	RON SUTHERLAND
Entity Title:	Not reported

ARB INC (Continued) **S123518081**

Affiliation Address:	20602 CIVIC CENTER DR.
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92630
Affiliation Phone:	Not reported
Affiliation Type Desc:	Property Owner
Entity Name:	BIXBY-LAKE FOREST PROPERTYCO., LP
Entity Title:	Not reported
Affiliation Address:	9777 WILSHIRE BLVD.
Affiliation City:	BEVERLY HILLS
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	90212
Affiliation Phone:	(323) 272-7777
Affiliation Type Desc:	UST Tank Owner
Entity Name:	ARB, INC.
Entity Title:	Not reported
Affiliation Address:	20602 CIVIC CENTER DR.
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92630
Affiliation Phone:	(949) 454-7177
Affiliation Type Desc:	UST Permit Applicant
Entity Name:	LANCE YORK
Entity Title:	OWNERS AUTHORIZED AGENT
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(949) 230-8931
Affiliation Type Desc:	UST Property Owner Name
Entity Name:	BIXBY-LAKE FOREST PROPERTY CO., LP.
Entity Title:	Not reported
Affiliation Address:	9777 WILSHIRE BLVD
Affiliation City:	BEVERLY HILLS
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	90212
Affiliation Phone:	(323) 272-7777

J38 **ARB INC** **RCRA NonGen / NLR** **1024798277**
NW **20632 INDIAN OCEAN DR** **CAL000197256**
1/8-1/4 **LAKE FOREST, CA 92630**
0.139 mi.
732 ft. **Site 3 of 4 in cluster J**

Relative:
Higher

Actual:
713 ft.

RCRA NonGen / NLR:

Date form received by agency:	1999-06-09 00:00:00.0
Facility name:	ARB INC
Facility address:	20632 INDIAN OCEAN DR LAKE FOREST, CA 92630-0000
EPA ID:	CAL000197256
Mailing address:	26000 COMMERCENTRE DR LAKE FOREST, CA 92630-8816
Contact:	GEORGE LOCKWOOD
Contact address:	20602 INDIAN OCEAN DR LAKE FOREST, CA 92630
Contact country:	Not reported
Contact telephone:	949-465-7302
Contact email:	FLOCKWOOD@PRIM.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	ARB, INC.
Owner/operator address:	26000 COMMERCENTRE DR LAKE FOREST, CA 92630
Owner/operator country:	Not reported
Owner/operator telephone:	949-598-9242
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	GEORGE LOCKWOOD
Owner/operator address:	20602 INDIAN OCEAN DR LAKE FOREST, CA 92630
Owner/operator country:	Not reported
Owner/operator telephone:	949-465-7302
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No

ARB INC (Continued) **1024798277**

On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

I39 **BOKKES IND MERCEDES SVC** **RCRA-SQG 1000594482**
NE **20591 CANADA RD** **FINDS CAD983583121**
1/8-1/4 **LAKE FOREST, CA 92630** **ECHO**
0.139 mi.
733 ft. **Site 5 of 9 in cluster I**

Relative:
Higher

Actual:
671 ft.

RCRA-SQG:

Date form received by agency:	1991-05-20 00:00:00.0
Facility name:	BOKKES IND MERCEDES SVC
Facility address:	20591 CANADA RD LAKE FOREST, CA 92630
EPA ID:	CAD983583121
Contact:	BOKKES TOM
Contact address:	20591 CANADA RD LAKE FOREST, CA 92630
Contact country:	US
Contact telephone:	714-830-3411
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	TOM J BOKKES
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	415-555-1212
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported
Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	415-555-1212
Owner/operator email:	Not reported

BOKKES IND MERCEDES SVC (Continued) **1000594482**

Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: Yes
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

FINDS:
Registry ID: 110006481137

Click Here:

Environmental Interest/Information System:
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:
Envid: 1000594482
Registry ID: 110006481137
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110006481137
Name: BOKKES IND MERCEDES SVC
Address: 20591 CANADA RD
City,State,Zip: LAKE FOREST, CA 92630

I40 **COX COMMERCIAL FLEET SERVICES** **CERS HAZ WASTE** **S123517743**
NE **20591 CANADA** **CERS** **N/A**
1/8-1/4 **LAKE FOREST, CA 92630**
0.139 mi.
733 ft. **Site 6 of 9 in cluster I**

Relative:
Higher

Actual:
671 ft.

CERS HAZ WASTE:
Name: COX COMMERCIAL FLEET SERVICES
Address: 20591 CANADA
City,State,Zip: LAKE FOREST, CA 92630
Site ID: 413270
CERS ID: 10579000
CERS Description: Hazardous Waste Generator

CERS:
Name: COX COMMERCIAL FLEET SERVICES
Address: 20591 CANADA
City,State,Zip: LAKE FOREST, CA 92630
Site ID: 413270
CERS ID: 10579000
CERS Description: Chemical Storage Facilities

Violations:
Site ID: 413270
Site Name: COX COMMERCIAL FLEET SERVICES
Violation Date: 07-17-2019
Citation: HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Description: Failure to annually review and electronically certify that the business plan is complete and accurate on or before the annual due date.
Violation Notes: Returned to compliance on 07/23/2019. Please be advised that Hazardous Materials Business Plan (HMBP) must be certified annually by March 1st of every year. HMBP for this facility have not been reviewed annually and electronically certified that they are complete, accurate, and up-to-date. HMBP documents must be electronically certified within 30 days of this inspection by going to California Environmental Reporting System (CERS) at http//cers.calepa.ca.gov
Violation Division: Orange County Environmental Health
Violation Program: HMRRP
Violation Source: CERS

Evaluation:
Eval General Type: Other/Unknown
Eval Date: 03-02-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Accepted documents submitted to E-submit on 3/1/15.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 04-28-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed and accepted annual certification documents submitted to E-submit on 4/27/16.
Eval Division: Orange County Environmental Health

COX COMMERCIAL FLEET SERVICES (Continued) **S123517743**

Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	07-17-2019
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct hazardous materials chemical inventory and business emergency plan inspection. Rudy Campos granted consent to conduct inspection. I walked through the facility and inspected hazardous material storage area. There has been changes in volumes of some hazardous material (new oil, waste oil and ATF) stored on site since last inspection or previous reporting period. Inventory forms for new oil, waste oil and ATF must be updated with new volumes. Diesel Exhaust Fluid must be deleted from reporting since volume stored on site is below disclosure threshold of (550 gallons) for this material. Facility stores the following hazardous material at disclosure threshold: - 55 gallons of new antifreeze - 55 gallons of waste antifreeze - 165 gallons of waste oil - 275 gallons of new oil - 110 gallons of ATF Hazardous materials management training is provided annually and records are maintained electronically. Emergency contact information is [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	07-20-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. I walked through the facility, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans throughout the facility or in municipal trash. Waste oil (3), used oil filters/metal (1), used oil filters/paper (1) and waste antifreeze (1) drums are stored closed and labeled. Manifests were reviewed. Emergency card is posted on a bulletin board on the wall at the main entrance.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	08-03-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct hazardous materials chemical inventory and business emergency plan inspection. Rudy Campos assisted with inspection I walked through the facility and inspected hazardous material storage areas. Reported material was reviewed and there has been no change in chemical inventory. Business Emergency Plan and disclosure information is available electronically. Employee training is conducted on line and records are available electronically. Emergency contact information is posted on the wall above the phone in the shop.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS

COX COMMERCIAL FLEET SERVICES (Continued) **S123517743**

Eval General Type:	Other/Unknown
Eval Date:	09-25-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	New motor oil and waste oil volumes were updated and accepted in E-submit.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	10-15-2013
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I received voice mail from Javier Rodriguez stating that he first had problems requesting username/password. He still has not received the username/password and is worried that he will not make the deadline. I called and let him know that he will not receive violation and to upload data as soon as he gets username/password.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-10-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed Facility Information documents submitted to CERS on 2/1/17. Did not accept submittal since EPA ID# is inactive.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	07-17-2019
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Rudy Campos granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans throughout the facility or in municipal trash. Waste oil (3), used oil filters/metal (1), used oil filters/paper (1), waste antifreeze (1) and oily absorbent (1) drums are stored closed and labeled. Manifests were reviewed. Emergency contact information is posted on the bulletin board on the wall at front entrance and evacuation site map is posted in employee break room.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	07-25-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Ken Slaughter granted consent to conduct inspection. I walked through the facility,

COX COMMERCIAL FLEET SERVICES (Continued) **S123517743**

perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans throughout the facility or in municipal trash. Waste oil (3), used oil filters/metal (1), used oil filters/paper (1) and waste antifreeze (1) drums are stored closed and labeled. Manifests were reviewed. Emergency card is posted on a bulletin board on the wall at the main entrance.

Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 08-28-2014
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Documents submitted on 8/28/14 have been reviewed and declined with the following considerations: CAS# listed under G Common NameG for spent antifreeze must be removed and %WT (100) be added in the Hazardous Component" sectionG since this material is not G pure.G CAS# for new motor oil is 64742-65-0 and should be added to the form in the section below G Common Name.G CAS# for used oil is 64742-65-0 and should be added to the form in the Hazardous Component" section of the form. CAS# for transmission fluid is 64743-57-0 and should be added to the form in the section below G Common Name.G

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-22-2014
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector Comments: On site to conduct routine hazardous waste inspection. Rudy Campos granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans throughout the facility. Waste oil (2), used oil filter (1) and waste antifreeze (1) drums are stored closed and labeled. Manifests were reviewed. Emergency card is posted on the wall at the main entrance.

Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 09-22-2014
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: On site for follow up inspection to verify reported chemicals on site. Please be advised that the volume of the following chemicals reported in E-submit should be updated: - The volume of new motor oil stored on site should be changed from 55 gallons to 220 gallons. - The volume of used oil stored on site should be changed from 55 gallons to 110 gallons.

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection

COX COMMERCIAL FLEET SERVICES (Continued) **S123517743**

Eval Date:	10-05-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct routine hazardous waste inspection. Ken Slaughter granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans throughout the facility or in municipal trash. Waste oil (2), used oil filter (1) and waste antifreeze (1) drums are stored closed and labeled. Manifests were reviewed. Emergency card is posted on a bulletin board on the wall at the main entrance.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-14-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted revised documents submitted to CERS 2/10/17.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	08-26-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted on 4/8/14 have been reviewed and declined with the following considerations: EPA ID# (CAL000370584) must be listed at the top of the G Business ActivitiesG form. The G YesG box in Section A. Hazardous Materials on the Business Activities form must be checked. The G YesG box in Section E. Hazardous Waste G G Generate Hazardous Waste?G on the Business Activities from must be checked. G Antifreeze, (Flammable Liquid)G is not a chemical name. The chemical name for antifreeze is G Ethylene GlycolG and the common name is G antifreeze.G The CAS#s for the following material must be added to the Hazardous Materials Inventory forms: - Antifreeze - Diesel Exhaust Fluid - Petroleum Lubricating Oil - Transmission Oil All waste (antifreeze and oil) stored in containers that are equal to or greater than 55 gallons must also be reported. The site map does not include north orientation, loading areas, adjacent streets, emergency shut offs (water, [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	08-29-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted on 8/29/14 was initially declined since the CAS# listed in the G Hazardous Component" section of the spent antifreeze form had been removed. It was corrected and accepted.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS

COX COMMERCIAL FLEET SERVICES (Continued) **S123517743**

Eval General Type:	Other/Unknown
Eval Date:	09-04-2013
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Went to site to conduct routine hazardous waste inspection. There facility was locked up. I called environmental contact and he said that they were at another facility today.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	09-11-2013
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct new hazardous materials chemical inventory and business emergency plan inspection. Javier Rodriguez granted consent to conduct inspection. I walked through the facility and inspected hazardous materials storage area. The facility has hazardous materials and hazardous waste that meet the required disclosure quantities such as new oil, new antifreeze, new automatic transmission fluid, waste oil and waste antifreeze. Facility is required and has been notified to electronically submit the following documents within 30 days of this inspection: - Business Activities form - Owner/Operator Identification form - Hazardous Material Chemical Inventory forms - Facility Site Map - Business Emergency Plan Documents must be electronically submitted by going to www.esubmit.ocgov.com and requesting a username and password. User guides and tutorials are located on the home page to help you get started. If you are having trouble, please call (714) 433-6000 [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-10-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed documents submitted to CERS on 2/1/17. Hazardous Materials Inventory was not accepted since Fire Code Hazard Classes is not listed on the forms. Sent email to CERS contact explaining that Fire Code Hazard Classes did not transfer from E-submit to CERS.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	08-03-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct routine hazardous waste inspection. Rudy Campos granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans throughout the facility or in municipal trash. Waste oil (3), used oil filter (1) and waste antifreeze (1) drums are stored closed and labeled. Manifests were reviewed. Emergency card is posted on a bulletin board

COX COMMERCIAL FLEET SERVICES (Continued) **S123517743**

on the wall at the main entrance.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-11-2013
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to conduct routine hazardous waste inspection. I walked through the facility, perimeter and inspected waste storage area. Waste oil (2), waste antifreeze (1) and used oil filter (1) drums are stored closed and labeled. Manifests were reviewed. Emergency card is posted at the main entrance.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Affiliation:
Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 20591 CANADA
Affiliation City: LAKE FOREST
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92630
Affiliation Phone: Not reported

Affiliation Type Desc: Identification Signer
Entity Name: Javier Rodriguez
Entity Title: Area Manager
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner
Entity Name: COX COMMERCIAL FLEET SERVICES LLC
Entity Title: Not reported
Affiliation Address: 5159 FEDERAL BLVD
Affiliation City: Atlanta
Affiliation State: GA
Affiliation Country: United States
Affiliation Zip: 30328
Affiliation Phone: (678) 645-0835

Affiliation Type Desc: Environmental Contact
Entity Name: Rudy Campos
Entity Title: Not reported
Affiliation Address: 20591 Canada Road
Affiliation City: Lake Forest
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92630

COX COMMERCIAL FLEET SERVICES (Continued) **S123517743**

Affiliation Phone:	Not reported
Affiliation Type Desc:	Document Preparer
Entity Name:	Javier Rodriguez
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Parent Corporation
Entity Name:	COX COMMERCIAL FLEET SERVICES
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	CUPA District
Entity Name:	Orange County Env Health
Entity Title:	Not reported
Affiliation Address:	1241 East Dyer RoadSuite 120
Affiliation City:	Santa Ana
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92705-5611
Affiliation Phone:	(714) 433-6406
Affiliation Type Desc:	Operator
Entity Name:	Rudy Campos
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(949) 215-0690

I41 **COX COMMERCIAL FLEET SERVICES LLC** **RCRA NonGen / NLR** **1024832481**
NE **20591 CANADA RD** **CAL000370584**
1/8-1/4 **LAKE FOREST, CA 92630**
0.139 mi.
733 ft. **Site 7 of 9 in cluster I**

Relative:
Higher

Actual:
671 ft.

RCRA NonGen / NLR:

Date form received by agency:	2012-01-06 00:00:00.0
Facility name:	COX COMMERCIAL FLEET SERVICES LLC
Facility address:	20591 CANADA RD LAKE FOREST, CA 92630
EPA ID:	CAL000370584
Contact:	JAVIER RODRIGUEZ
Contact address:	20591 CANADA RD LAKE FOREST, CA 92630

COX COMMERCIAL FLEET SERVICES LLC (Continued) **1024832481**

Contact country: Not reported
Contact telephone: 619-279-3367
Contact email: JAVIER.RODRIGUEZ@COXAUTOINC.COM
EPA Region: 09
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: JAVIER RODRIGUEZ
Owner/operator address: 20591 CANADA RD
LAKE FOREST, CA 92630
Owner/operator country: Not reported
Owner/operator telephone: 619-279-3367
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: COX COMMERCIAL FLEET SERVICES LLC
Owner/operator address: 6205 PEACHTREE DUNWOODY RD NE
ATLANTA, GA 30328
Owner/operator country: Not reported
Owner/operator telephone: 678-645-0835
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

K42 **BROTHER INTERNATIONAL CORPORATION** **RCRA NonGen / NLR** **1024840409**
North **26250 ENTERPRISE CT STE 250** **CAL000389108**
1/8-1/4 **LAKE FOREST, CA 92630**
0.156 mi.
823 ft. **Site 1 of 2 in cluster K**

Relative:
Higher

Actual:
658 ft.

RCRA NonGen / NLR:

Date form received by agency:	2013-08-29 00:00:00.0
Facility name:	BROTHER INTERNATIONAL CORPORATION
Facility address:	26250 ENTERPRISE CT STE 250 LAKE FOREST, CA 92630
EPA ID:	CAL000389108
Mailing address:	200 CROSSING BLVD BRIDGEWATER, NJ 08807-0000
Contact:	JAMES DELAHAY
Contact address:	200 CROSSING BLVD BRIDGEWATER, NJ 08807-0000
Contact country:	Not reported
Contact telephone:	908-655-9197
Contact email:	JAMES.DELAHAY@BROTHER.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	BROTHER INTERNATIONAL CORPORATION
Owner/operator address:	200 CROSSING BLVD BRIDGEWATER, NJ 08807
Owner/operator country:	Not reported
Owner/operator telephone:	908-655-9197
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	JAMES DELAHAY
Owner/operator address:	200 CROSSING BLVD BRIDGEWATER, NJ 08807
Owner/operator country:	Not reported
Owner/operator telephone:	908-655-9197
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No

BROTHER INTERNATIONAL CORPORATION (Continued) **1024840409**

On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

I43 **HERGESHEIMER MOTORSPORTS** **RCRA NonGen / NLR** **1025859284**
ENE **20612 CANADA RD** **CAC003039839**
1/8-1/4 **LAKE FOREST, CA 92630**
0.157 mi.
831 ft. **Site 8 of 9 in cluster I**

Relative:
Higher

Actual:
671 ft.

RCRA NonGen / NLR:

Date form received by agency:	2019-10-22 00:00:00.0
Facility name:	HERGESHEIMER MOTORSPORTS
Facility address:	20612 CANADA RD LAKE FOREST, CA 92630
EPA ID:	CAC003039839
Contact:	M. HERGESHEIMER
Contact address:	20612 CANADA RD LAKE FOREST, CA 92630
Contact country:	Not reported
Contact telephone:	949-458-7223
Contact email:	LAURA@HERG.NET
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	M. HERGESHEIMER
Owner/operator address:	20612 CANADA RD LAKE FOREST, CA 92630
Owner/operator country:	Not reported
Owner/operator telephone:	949-458-7223
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	M. HERGESHEIMER
Owner/operator address:	20612 CANADA RD LAKE FOREST, CA 92630
Owner/operator country:	Not reported
Owner/operator telephone:	949-458-7223
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner

HERGESHEIMER MOTORSPORTS (Continued) **1025859284**

Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): Not reported
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

I44 **HERGESHEIMER MOTORSPORTS** **CERS HAZ WASTE** **S113127387**
ENE **20612 CANADA RD** **HAZNET** **N/A**
1/8-1/4 **LAKE FOREST, CA 92630** **CERS**
0.157 mi. **HWTS**
831 ft. **Site 9 of 9 in cluster I**

Relative:
Higher

Actual:
671 ft.

CERS HAZ WASTE:
Name: HERGESHEIMER MOTORSPORTS
Address: 20612 CANADA RD
City,State,Zip: LAKE FOREST, CA 92630
Site ID: 446507
CERS ID: 10550428
CERS Description: Hazardous Waste Generator

HAZNET:
Name: HERGESHEIMER MOTOR SPORTS
Address: 20612 CANADA RD
Address 2: Not reported
City,State,Zip: LAKE FOREST, CA 92630
Contact: MARK HERGESHEIMER-OWNER
Telephone: 9494587223
Mailing Name: Not reported
Mailing Address: 20612 CANADA RD

Year: 2007
Gepaid: CAL000272623
TSD EPA ID: CAD099452708
CA Waste Code: 221 - Waste oil and mixed oil
Disposal Method: H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons: 0.912

Year: 2004
Gepaid: CAL000272623
TSD EPA ID: CAT080013352
CA Waste Code: 223 - Unspecified oil-containing waste

HERGESHEIMER MOTORSPORTS (Continued) **S113127387**

Disposal Method: -
Tons: 0.1668

Additional Info:
Year: 2004
Gen EPA ID: CAL000272623

Shipment Date: 20040824
Creation Date: 1/6/2005 18:32:03
Receipt Date: 20040907
Manifest ID: 23422644
Trans EPA ID: CAL000027707
Trans Name: INSTA CLEAN WASTE RECYCLING
Trans 2 EPA ID: Not reported
Trans 2 Name: Not reported
TSDF EPA ID: CAT080013352
Trans Name: DEMENNO KERDOON
TSDF Alt EPA ID: CAT080013352
TSDF Alt Name: Not reported
Waste Code Description: 223 - Unspecified oil-containing waste
RCRA Code: NON
Meth Code: - Not reported
Quantity Tons: 0.1668
Waste Quantity: 40
Quantity Unit: G
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Additional Info:
Year: 2007
Gen EPA ID: CAL000272623

Shipment Date: 20070801
Creation Date: 12/28/2007 18:31:22
Receipt Date: 20070806
Manifest ID: 000315678GBF
Trans EPA ID: CAD983615501
Trans Name: PACIFIC OIL COMPANY
Trans 2 EPA ID: Not reported
Trans 2 Name: Not reported
TSDF EPA ID: CAD099452708
Trans Name: INDSTRIAL SERVICE OIL COMPANY
TSDF Alt EPA ID: Not reported
TSDF Alt Name: Not reported
Waste Code Description: 221 - Waste oil and mixed oil
RCRA Code: Not reported
Meth Code: H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons: 0.912
Waste Quantity: 240
Quantity Unit: G
Additional Code 1: Not reported

HERGESHEIMER MOTORSPORTS (Continued) **S113127387**

Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

CERS:
Name: HERGESHEIMER MOTORSPORTS
Address: 20612 CANADA RD
City,State,Zip: LAKE FOREST, CA 92630
Site ID: 446507
CERS ID: 10550428
CERS Description: Chemical Storage Facilities

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 02-19-2019
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to conduct routine hazardous waste inspection. Laura Hergesheimer granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area by roll up door. I did not observe any hazardous waste in trash cans throughout the facility or municipal trash. Waste oil is stored in an aboveground tank that is kept closed and labeled. Used oil filter drum is stored closed and labeled. Business does not store waste antifreeze since it is placed back in vehicle if drained. Manifests were reviewed. Emergency card is posted in reception/front desk area.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 02-27-2018
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: I walked through the facility, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans or municipal trash. Waste oil is stored in an aboveground storage tanks and is labeled. Used oil filter drum is stored closed and labeled. Manifests were reviewed. Emergency card is posted in available in reception/front desk area. A new emergency card was provided to be posted in the shop.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-11-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Went to site to conduct inspection. Owners requested that the inspection be conducted at a later date since they were busy.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection

HERGESHEIMER MOTORSPORTS (Continued) **S113127387**

Eval Date:	04-27-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct routine hazardous waste inspection. Mark Hergesheimer granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans throughout the facility or municipal trash. Waste oil is stored in two aboveground storage tanks and are both kept closed and labeled. Used oil filter drum is stored closed and labeled. Manifests were reviewed. Emergency card is posted in reception/front desk area.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	12-03-2013
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Went to site to conduct routine hazardous waste inspection. Owner stated that they were really busy and requested that inspection be conducted at a later date.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	12-05-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Went to site to conduct inspection. Owner was not on site.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	02-01-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Laura Hergesheimer granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans throughout the facility or municipal trash. Waste oil is stored in an aboveground storage tank that is kept closed and labeled. Used oil filter drum is stored closed and labeled. Manifests were reviewed. Emergency card is posted in reception/front desk area.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-10-2020
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Went to site to conduct final inspection after receiving notification that business has closed. New business that stores hazardous materials

HERGESHEIMER MOTORSPORTS (Continued) **S113127387**

at disclosure threshold has moved in. Owner of new business was not on site to conduct inspection. Inspection to add new business will be conducted at a later date.

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 12-11-2013
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to conduct routine hazardous waste inspection. Mark Hergesheimer granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage areas. I did not observe any hazardous waste in trash cans. Waste oil is stored in an aboveground tank and is labeled. Used oil filter drum is stored closed and labeled. Manifests were reviewed. Emergency card is posted in the reception area.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 02-09-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector Comments: On site to conduct routine hazardous waste inspection. Mark Hergesheimer granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans or municipal trash. Waste oil is stored in two aboveground storage tanks and are both labeled. Used oil filter drum is stored closed and labeled. Manifests were reviewed. Emergency card is posted in reception/front desk area.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 02-10-2020
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Went to site to conduct final inspection after receiving notification that business has closed. New business that has moved in generates hazardous waste. Owner of new business was not on site to conduct inspection. Inspection to add new business will be conducted at a later date.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 02-27-2018
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Hergesheimer Motorsports 20612 Canada Rd. Lake Forest, CA 92630 On site to conduct new hazardous materials chemical inventory and

HERGESHEIMER MOTORSPORTS (Continued) **S113127387**

business emergency plan inspection. I walked through the facility and inspected hazardous materials storage areas. Facility has the following hazardous materials that meet required disclosure quantities: - 292 cubic feet Oxygen gas - 110 gallons of Sunoco 260 GTX Gasoline - 24 gallons of Propane - 110 gallons of waste oil All other compressed gas cylinders (Nitrogen, Carbon dioxide/Argon, Argon/Helium, Argon) observed on site are below reporting threshold. Please be advised that you must provide annual employee training in hazardous materials management and maintain records that include topics covered and date of training. Facility is required and has been notified to electronically submit the following documents within 30 days of this inspection: - Business Activities form - Owner/Operator Identification form - [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Coordinates:
Site ID: 446507
Facility Name: HERGESHEIMER MOTORSPORTS
Env Int Type Code: HMBP
Program ID: 10550428
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 33.662510
Longitude: -117.670500

Affiliation:
Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 20612 CANADA RD
Affiliation City: LAKE FOREST
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92630
Affiliation Phone: Not reported

Affiliation Type Desc: CUPA District
Entity Name: Orange County Env Health
Entity Title: Not reported
Affiliation Address: 1241 East Dyer RoadSuite 120
Affiliation City: Santa Ana
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92705-5611
Affiliation Phone: (714) 433-6406

Affiliation Type Desc: Document Preparer
Entity Name: Laura Hergesheimer
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported

HERGESHEIMER MOTORSPORTS (Continued) **S113127387**

Affiliation Phone: Not reported

Affiliation Type Desc: Environmental Contact
Entity Name: Laura Hergesheimer
Entity Title: Not reported
Affiliation Address: 20612 Canada Road
Affiliation City: Lake Forest
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92630
Affiliation Phone: Not reported

Affiliation Type Desc: Identification Signer
Entity Name: Laura Hergesheimer
Entity Title: Manager
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner
Entity Name: M. Hergesheimer
Entity Title: Not reported
Affiliation Address: 20612 CANADA RD
Affiliation City: LAKE FOREST
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 92630
Affiliation Phone: (949) 458-7223

Affiliation Type Desc: Operator
Entity Name: Hergesheimer Motorsports
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (949) 458-7223

Affiliation Type Desc: Parent Corporation
Entity Name: Hergesheimer Motorsports
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

HWTS:
Name: HERGESHEIMER MOTORSPORTS
Address: 20612 CANADA RD
Address 2: Not reported

HERGESHEIMER MOTORSPORTS (Continued) **S113127387**

City,State,Zip: LAKE FOREST, CA 92630
EPA ID: CAC003039839
Inactive Date: 01/21/2020
Create Date: 10/22/2019
Last Act Date: 01/22/2020
Mailing Name: Not reported
Mailing Address: 20612 CANADA RD
Mailing Address 2: Not reported
Mailing City,State,Zip: LAKE FOREST, CA 92630
Owner Name: M. HERGESHEIMER
Owner Address: 20612 CANADA RD
Owner Address 2: Not reported
Owner City,State,Zip: LAKE FOREST, CA 92630
Contact Name: M. HERGESHEIMER
Contact Address: 20612 CANADA RD
Contact Address 2: Not reported
City,State,Zip: LAKE FOREST, CA 92630

Name: HERGESHEIMER MOTOR SPORTS
Address: 20612 CANADA RD
Address 2: Not reported
City,State,Zip: LAKE FOREST, CA 92630
EPA ID: CAL000272623
Inactive Date: 06/30/2017
Create Date: 06/30/2003
Last Act Date: 10/04/2019
Mailing Name: Not reported
Mailing Address: 20612 CANADA RD
Mailing Address 2: Not reported
Mailing City,State,Zip: LAKE FOREST, CA 92630
Owner Name: MARK HERGESHEIMER
Owner Address: 20612 CANADA RD
Owner Address 2: Not reported
Owner City,State,Zip: LAKE FOREST, CA 92630
Contact Name: MARK HERGESHEIMER-OWNER
Contact Address: 20612 CANADA RD
Contact Address 2: Not reported
City,State,Zip: LAKE FOREST, CA 92630

NAICS:
EPA ID: CAL000272623
Create Date: 2003-06-30 15:06:18
NAICS Code: 811111
NAICS Description: General Automotive Repair
Issued EPA ID Date: 2003-06-30 15:06:18
Inactive Date: 2017-06-30 00:00:00
Facility Name: HERGESHEIMER MOTOR SPORTS
Facility Address: 20612 CANADA RD
Facility Address 2: Not reported
Facility City: LAKE FOREST
Facility County: 30
Facility State: CA
Facility Zip: 92630

J45 **ARB INC** **RCRA-SQG** **1004675755**
NNW **20602 INDIAN OCEAN** **UST** **CAR000076760**
1/8-1/4 **LAKE FOREST, CA 92630** **AST**
0.161 mi. **FINDS**
850 ft. **Site 4 of 4 in cluster J** **ECHO**

Relative: Higher

Actual: 715 ft.

RCRA-SQG:

Date form received by agency:	2004-03-03 00:00:00.0
Facility name:	ARB INC
Facility address:	20602 INDIAN OCEAN LAKE FOREST, CA 92630
EPA ID:	CAR000076760
Contact:	JERRY J CLEGHORN
Contact address:	20602 INDIAN OCEAN LAKE FOREST, CA 92630
Contact country:	US
Contact telephone:	949-465-7302
Contact email:	JCLEGHORN@ARBINC.COM
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	JERRY CLEGHORN
Owner/operator address:	Not reported Not reported
Owner/operator country:	US
Owner/operator telephone:	Not reported
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	1998-06-15 00:00:00.
Owner/Op end date:	Not reported

Owner/operator name:	ARB INC
Owner/operator address:	26000 COMMERCENTRE DRIVE LAKE FOREST, CA 92630
Owner/operator country:	US
Owner/operator telephone:	Not reported
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	1996-01-01 00:00:00.
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No

ARB INC (Continued) **1004675755**

Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 2004-02-17 00:00:00.0
Site name: ARB INC
Classification: Small Quantity Generator

Date form received by agency: 2000-07-03 00:00:00.0
Site name: A R B INC
Classification: Small Quantity Generator

Hazardous Waste Summary:

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D018
. Waste name: BENZENE

. Waste code: D039
. Waste name: TETRACHLOROETHYLENE

Violation Status: No violations found

UST:
Name: ARB INC
Address: 20602 INDIAN OCEAN DR
City,State,Zip: LAKE FOREST, CA 92630
Facility ID: Not reported
Permitting Agency: Orange County Environmental Health
Latitude: 33.66284
Longitude: -117.67637

AST:
Name: Not reported
Address: 20602 INDIAN OCEAN
City/Zip: LAKE FOREST,
Certified Unified Program Agencies: Orange
Owner: ARB INC
Total Gallons: 1,320
CERSID: Not reported
Facility ID: Not reported
Business Name: Not reported
Phone: Not reported
Fax: Not reported
Mailing Address: Not reported

ARB INC (Continued) **1004675755**

Mailing Address City:	Not reported
Mailing Address State:	Not reported
Mailing Address Zip Code:	Not reported
Operator Name:	Not reported
Operator Phone:	Not reported
Owner Phone:	Not reported
Owner Mail Address:	Not reported
Owner State:	Not reported
Owner Zip Code:	Not reported
Owner Country:	Not reported
Property Owner Name:	Not reported
Property Owner Phone:	Not reported
Property Owner Mailing Address:	Not reported
Property Owner City:	Not reported
Property Owner Stat :	Not reported
Property Owner Zip Code:	Not reported
Property Owner Country:	Not reported
EPAID:	Not reported

FINDS:
Registry ID: 110002939447

Click Here:

Environmental Interest/Information System:
US National Pollutant Discharge Elimination System (NPDES) module of the Compliance Information System (ICIS) tracks surface water permits issued under the Clean Water Act. Under NPDES, all facilities that discharge pollutants from any point source into waters of the United States are required to obtain a permit. The permit will likely contain limits on what can be discharged, impose monitoring and reporting requirements, and include other provisions to ensure that the discharge does not adversely affect water quality.
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.
HAZARDOUS WASTE BIENNIAL REPORTER

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid:	1004675755
Registry ID:	110002939447
DFR URL:	http://echo.epa.gov/detailed-facility-report?fid=110002939447
Name:	ARB INC
Address:	20602 INDIAN OCEAN
City,State,Zip:	LAKE FOREST, CA 92630

K46 **HALABY RESTORATION & PAINTING INC** **RCRA NonGen / NLR** **1024821418**
NNE **26230 ENTERPRISE CT** **CAL000337125**
1/8-1/4 **LAKE FOREST, CA 92630**
0.174 mi.
917 ft. **Site 2 of 2 in cluster K**

Relative:
Higher

Actual:
670 ft.

RCRA NonGen / NLR:

Date form received by agency:	2008-10-10 00:00:00.0
Facility name:	HALABY RESTORATION & PAINTING INC
Facility address:	26230 ENTERPRISE CT LAKE FOREST, CA 92630
EPA ID:	CAL000337125
Contact:	MARC HALABY
Contact address:	26230 ENTERPRISE CT LAKE FOREST, CA 92630
Contact country:	Not reported
Contact telephone:	949-305-5571
Contact email:	MARC@HALABYRESTORATION.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	MARC A HALABY
Owner/operator address:	136 FINCH LAKE FOREST, CA 92630
Owner/operator country:	Not reported
Owner/operator telephone:	714-906-0473
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	MARC HALABY
Owner/operator address:	26230 ENTERPRISE CT LAKE FOREST, CA 92630
Owner/operator country:	Not reported
Owner/operator telephone:	949-305-5571
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No

HALABY RESTORATION & PAINTING INC (Continued) **1024821418**

Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

L47 **FABRICANTE AUTO BODY LLC** **CERS HAZ WASTE** **S113158556**
ENE **26341 DIMENSION DR** **EMI** **N/A**
1/8-1/4 **LAKE FOREST, CA 92630** **HAZNET**
0.177 mi. **CERS**
932 ft. **Site 1 of 4 in cluster L** **HWTS**

Relative: Higher
Actual: 672 ft.

CERS HAZ WASTE:
Name: FABRICANTE AUTO BODY
Address: 26341 DIMENSION DR
City,State,Zip: LAKE FOREST, CA 92630
Site ID: 421122
CERS ID: 10572484
CERS Description: Hazardous Waste Generator

EMI:
Name: FABRICANTE AUTO BODY, LLC
Address: 26341 DIMENSION DR
City,State,Zip: LAKE FOREST, CA 92630
Year: 2012
County Code: 30
Air Basin: SC
Facility ID: 164814
Air District Name: SC
SIC Code: 7532
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 0.18525187266
Reactive Organic Gases Tons/Yr: 0.18406
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0.01629
Part. Matter 10 Micrometers and Smllr Tons/Yr: 0.0156384

Name: FABRICANTE AUTO BODY, LLC
Address: 26341 DIMENSION DR
City,State,Zip: LAKE FOREST, CA 92630
Year: 2013
County Code: 30
Air Basin: SC
Facility ID: 164814
Air District Name: SC
SIC Code: 7532
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 0.53283902166

FABRICANTE AUTO BODY LLC (Continued) **S113158556**

Reactive Organic Gases Tons/Yr: 0.52202
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0.03318
Part. Matter 10 Micrometers and Smllr Tons/Yr: 0.0318528

Name: FABRICANTE AUTO BODY, LLC
Address: 26341 DIMENSION DR
City,State,Zip: LAKE FOREST, CA 92630
Year: 2016
County Code: 30
Air Basin: SC
Facility ID: 164814
Air District Name: SC
SIC Code: 7532
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 0.35422715138
Reactive Organic Gases Tons/Yr: 0.344075
Carbon Monoxide Emissions Tons/Yr: Not reported
NOX - Oxides of Nitrogen Tons/Yr: Not reported
SOX - Oxides of Sulphur Tons/Yr: Not reported
Particulate Matter Tons/Yr: 0.0224055
Part. Matter 10 Micrometers and Smllr Tons/Yr: 0.02150928

Name: FABRICANTE AUTO BODY, LLC
Address: 26341 DIMENSION DR
City,State,Zip: LAKE FOREST, CA 92630
Year: 2017
County Code: 30
Air Basin: SC
Facility ID: 164814
Air District Name: SC
SIC Code: 7532
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 1.1926738603
Reactive Organic Gases Tons/Yr: 1.172465
Carbon Monoxide Emissions Tons/Yr: Not reported
NOX - Oxides of Nitrogen Tons/Yr: Not reported
SOX - Oxides of Sulphur Tons/Yr: Not reported
Particulate Matter Tons/Yr: 0.0212969
Part. Matter 10 Micrometers and Smllr Tons/Yr: 0.020445024

HAZNET:
Name: FABRICANTE AUTO BODY LLC
Address: 26341 DIMENSION DR
Address 2: Not reported
City,State,Zip: LAKE FOREST, CA 926307806
Contact: LAURIE GATES
Telephone: 9498598639
Mailing Name: Not reported
Mailing Address: 26341 DIMENSION DR

FABRICANTE AUTO BODY LLC (Continued) **S113158556**

Year: 2019
Gepaid: CAL000352403
TSD EPA ID: CAD008252405
CA Waste Code: 214 - Unspecified solvent mixture
Disposal Method: H061 - Fuel Blending Prior To Energy Recovery At Another Site
Tons: 0.13680

Year: 2018
Gepaid: CAL000352403
TSD EPA ID: CAD008252405
CA Waste Code: 133 - Aqueous solution with total organic residues 10 percent or more
Disposal Method: H061 - Fuel Blending Prior To Energy Recovery At Another Site
Tons: 0.12510

Year: 2018
Gepaid: CAL000352403
TSD EPA ID: CAD008252405
CA Waste Code: 214 - Unspecified solvent mixture
Disposal Method: H061 - Fuel Blending Prior To Energy Recovery At Another Site
Tons: 0.12960

Year: 2017
Gepaid: CAL000352403
TSD EPA ID: CAD008252405
CA Waste Code: 214 - Unspecified solvent mixture
Disposal Method: H061 - Fuel Blending Prior To Energy Recovery At Another Site
Tons: 0.0288

Year: 2017
Gepaid: CAL000352403
TSD EPA ID: CAD008252405
CA Waste Code: 214 - Unspecified solvent mixture
Disposal Method: H061 - Fuel Blending Prior To Energy Recovery At Another Site
Tons: 0.0288

Year: 2017
Gepaid: CAL000352403
TSD EPA ID: CAD008252405
CA Waste Code: 133 - Aqueous solution with total organic residues 10 percent or more
Disposal Method: H061 - Fuel Blending Prior To Energy Recovery At Another Site
Tons: 0.1251

Year: 2016
Gepaid: CAL000352403
TSD EPA ID: CAD008252405
CA Waste Code: 214 - Unspecified solvent mixture
Disposal Method: H061 - Fuel Blending Prior To Energy Recovery At Another Site
Tons: 0.108

Year: 2016
Gepaid: CAL000352403
TSD EPA ID: CAD008252405
CA Waste Code: 133 - Aqueous solution with total organic residues 10 percent or more
Disposal Method: H061 - Fuel Blending Prior To Energy Recovery At Another Site
Tons: 0.1251

Year: 2014

FABRICANTE AUTO BODY LLC (Continued) **S113158556**

Gepaid: CAL000352403
TSD EPA ID: CAD008252405
CA Waste Code: 133 - Aqueous solution with total organic residues 10 percent or more
Disposal Method: H061 - Fuel Blending Prior To Energy Recovery At Another Site
Tons: 0.1251

Year: 2013
Gepaid: CAL000352403
TSD EPA ID: CAD008252405
CA Waste Code: 133 - Aqueous solution with total organic residues 10 percent or more
Disposal Method: H061 - Fuel Blending Prior To Energy Recovery At Another Site
Tons: 0.1251

Click this hyperlink while viewing on your computer to access
3 additional CA HAZNET: record(s) in the EDR Site Report.

Additional Info:
Year: 2013
Gen EPA ID: CAL000352403

Shipment Date: 20130916
Creation Date: 1/28/2014 22:15:31
Receipt Date: 20130916
Manifest ID: 011666357JJK
Trans EPA ID: CAD008252405
Trans Name: PACIFIC RESOURCE RECOVERY SERVICES
Trans 2 EPA ID: Not reported
Trans 2 Name: Not reported
TSDF EPA ID: CAD008252405
Trans Name: PACIFIC RESOURCE RECOVERY SERVICES
TSDF Alt EPA ID: Not reported
TSDF Alt Name: Not reported
Waste Code Description: 133 - Aqueous solution with 10% or more total organic residues
RCRA Code: Not reported
Meth Code: H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons: 0.1251
Waste Quantity: 30
Quantity Unit: G
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Additional Info:
Year: 2012
Gen EPA ID: CAL000352403

Shipment Date: 20121212
Creation Date: 4/30/2013 22:15:27
Receipt Date: 20121212
Manifest ID: 010799360JJK
Trans EPA ID: CAR000194837
Trans Name: PACIFIC COAST LACQUER
Trans 2 EPA ID: Not reported

FABRICANTE AUTO BODY LLC (Continued) **S113158556**

Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008252405
Trans Name:	PACIFIC RESOURCE RECOVERY
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	133 - Aqueous solution with 10% or more total organic residues
RCRA Code:	Not reported
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.1251
Waste Quantity:	30
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2017
Gen EPA ID:	CAL000352403
Shipment Date:	20171228
Creation Date:	10/16/2018 18:30:53
Receipt Date:	20171228
Manifest ID:	017895733JJK
Trans EPA ID:	CAD008252405
Trans Name:	PACIFIC RESOURCE RECOVERY SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008252405
Trans Name:	PACIFIC RESOURCE RECOVERY SERVICES
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	133 - Aqueous solution with 10% or more total organic residues
RCRA Code:	Not reported
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.1251
Waste Quantity:	30
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20170516
Creation Date:	7/18/2018 18:30:10
Receipt Date:	20170516
Manifest ID:	016997280JJK
Trans EPA ID:	CAD008252405
Trans Name:	PACIFIC RESOURCE RECOVERY SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008252405
Trans Name:	PACIFIC RESOURCE RECOVERY SERVICES
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported

FABRICANTE AUTO BODY LLC (Continued) **S113158556**

Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	F005
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.0288
Waste Quantity:	8
Quantity Unit:	G
Additional Code 1:	F003
Additional Code 2:	D001
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20170221
Creation Date:	5/10/2018 18:30:29
Receipt Date:	20170221
Manifest ID:	016240620JJK
Trans EPA ID:	CAD008252405
Trans Name:	PACIFIC RESOURCE RECOVERY SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008252405
Trans Name:	PACIFIC RESOURCE RECOVERY SERVICES
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	F005
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.0288
Waste Quantity:	8
Quantity Unit:	G
Additional Code 1:	F003
Additional Code 2:	D001
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20170124
Creation Date:	5/10/2018 18:30:29
Receipt Date:	20170124
Manifest ID:	016239238JJK
Trans EPA ID:	CAD008252405
Trans Name:	PACIFIC RESOURCE RECOVERY SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008252405
Trans Name:	PACIFIC RESOURCE RECOVERY SERVICES
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	133 - Aqueous solution with 10% or more total organic residues
RCRA Code:	Not reported
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.1251
Waste Quantity:	30
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported

FABRICANTE AUTO BODY LLC (Continued) **S113158556**

Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2014
Gen EPA ID:	CAL000352403
Shipment Date:	20140911
Creation Date:	2/13/2015 22:15:17
Receipt Date:	20140911
Manifest ID:	013234938JJK
Trans EPA ID:	CAD008252405
Trans Name:	PACIFIC RESOURCE RECOVERY SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008252405
Trans Name:	PACIFIC RESOURCE RECOVERY SERVICES
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	133 - Aqueous solution with 10% or more total organic residues
RCRA Code:	Not reported
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.1251
Waste Quantity:	30
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2011
Gen EPA ID:	CAL000352403
Shipment Date:	20110929
Creation Date:	3/22/2012 20:30:33
Receipt Date:	20110929
Manifest ID:	008713037JJK
Trans EPA ID:	CAR000194837
Trans Name:	PACIFIC COAST LACQUER
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008252405
Trans Name:	PACIFIC RESOURCE RECOVERY
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	133 - Aqueous solution with 10% or more total organic residues
RCRA Code:	Not reported
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.06672
Waste Quantity:	16
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported

FABRICANTE AUTO BODY LLC (Continued) **S113158556**

Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20110105
Creation Date:	6/24/2011 18:30:12
Receipt Date:	20110105
Manifest ID:	007417524JJK
Trans EPA ID:	CAR000194837
Trans Name:	PACIFIC COAST LACQUER
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008252405
Trans Name:	PACIFIC RESOURCE RECOVERY
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	F005
Meth Code:	H020 - Solvents Recovery
Quantity Tons:	0.0432
Waste Quantity:	12
Quantity Unit:	G
Additional Code 1:	F003
Additional Code 2:	D001
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

CERS:

Name:	FABRICANTE AUTO BODY
Address:	26341 DIMENSION DR
City,State,Zip:	LAKE FOREST, CA 92630
Site ID:	421122
CERS ID:	10572484
CERS Description:	Chemical Storage Facilities

Violations:

Site ID:	421122
Site Name:	FABRICANTE AUTO BODY
Violation Date:	07-30-2013
Citation:	22 CCR 12 66262.40(a) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.40(a)
Violation Description:	Failure to maintain uniform hazardous waste manifest, consolidated manifest, or bills of lading copies for three years.
Violation Notes:	Returned to compliance on 09/11/2013. Manifests are not available for review. Consolidated manifests and bills of lading must be available during normal business hours. Copies must be kept for a minimum of three years from date of disposal. Obtain a set of applicable copies for your files. Forward a set dated from 7/2012 to most current to this Agency for review within 30 days of this inspection.
Violation Division:	Orange County Environmental Health
Violation Program:	HW
Violation Source:	CERS

Evaluation:

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	04-01-2019
Violations Found:	No

FABRICANTE AUTO BODY LLC (Continued) **S113158556**

Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Laurie Gates granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage areas inside and outside building. I did not observe any hazardous waste in municipal trash or trash cans throughout the facility. Waste oil (1) and waste antifreeze (1) drums are stored closed outside building inside enclosures and are labeled. Waste paint (1) and waste waterborne cleaning solutions (1) drums inside paint mixing room, are stored closed and labeled. Manifests were reviewed. Emergency card is posted on wall in hallway leading into shop. Evacuation route site map is posted in shop.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	07-30-2013
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. I walked through the facility, perimeter and inspected waste storage areas. Waste paint (1), spent waterborne cleaning solution (1), waste oil (1) and waste antifreeze (1) drums are stored closed and labeled. Manifests are not available on site since the facility's environmental consultant has taken the file with him to prepare a report. Please be advised that copies of manifests must be available during business hours. Emergency card is posted in the office.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	08-09-2013
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I received a copy of manifest dated 12/12/12 for 30 gallons of waterborne cleaning solution. The email from Laurie Gates, owner, indicated that this is the only manifest since 2011. I emailed Laurie back stating that the facility may be storing the other waste past the permissible accumulation time and that I would go to site for follow up inspection.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	12-27-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted annual (2018) certification documents submitted to CERS on 12/21/17.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	04-13-2017

FABRICANTE AUTO BODY LLC (Continued) **S113158556**

Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Fabricante Auto Body 26431 Dimension Dr. Lake Forest, CA 92630 On site to conduct new hazardous materials chemical inventory and business emergency plan inspection. Eric Gates granted consent to conduct inspection. I walked through the facility and inspected hazardous materials storage areas inside and outside building. Facility has the following hazardous materials that meet the required disclosure quantities: - 55 gallons of new solvent - 55 gallons of waste solvent/paint - 55 gallons of waste antifreeze - 55 gallons of waste oil Business provides employee training and will begin maintaining training records. Emergency card is posted on wall in hallway leading into shop. I assisted facility contact in creating account in CERS, and uploaded the following documents during inspection: - Business Activities form - Owner/Operator Identification form - Hazardous Material Chemical Inventory forms - Business Emergency Plan A draft copy of site [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	07-30-2014
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct routine hazardous waste inspection. Eric Gates granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage areas. I did not observe any hazardous waste in trash cans throughout the facility. Waste paint (1), spent waterborne cleaning solution (1), waste oil (1) and waste antifreeze (1) drums are stored closed and labeled. Manifests were reviewed. Emergency card is posted in the hallway leading from the office into the shop.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	09-12-2013
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I received a copy of laboratory results for analysis of spray booth filters at this business's other facility in Mission Viejo, that use the same paints. Based on the submitted laboratory result, the spent spray booth filters are not considered hazardous and do not have to be managed as hazardous waste.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	04-13-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Eric Gates granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage areas inside and outside

FABRICANTE AUTO BODY LLC (Continued) **S113158556**

building. I did not observe any hazardous waste in trash cans throughout the facility. Waste oil (1) and waste antifreeze (1) drums are stored closed inside enclosures that are labeled. Waste paint (1) and waste waterborne cleaning solutions (1) drums are stored closed and labeled. Manifests were reviewed. Emergency card is posted on wall in hallway leading into shop.

Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 07-16-2013
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Follow up on outstanding violation from Lance Malis' 8/1/12 inspection. Spoke to Eric Gates who indicated that he forgot about having the testing done. So he will send out an exhaust filter tomorrow for testing, then email me a copy of the results.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-16-2018
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to conduct routine hazardous waste inspection. I walked through the facility, perimeter and inspected waste storage areas inside and outside building. I did not observe any hazardous waste in municipal trash or trash cans throughout the facility. Waste oil (1) and waste antifreeze (1) drums are stored closed inside enclosures that are labeled. Waste paint (1) and waste waterborne cleaning solutions (1) drums are stored closed and labeled. Manifests were reviewed. Emergency card and evacuation site are posted on wall in hallway leading into shop.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 05-16-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed and accepted documents submitted to CERS on 4/14/17.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 09-11-2013
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: On site for follow up inspection to review manifests, that were not available on site during the routine inspection conducted on 7/30/13, and correct the outstanding violation W038, regarding manifests not being available for review. All manifests are available for review. Violation W038 has been corrected. According to Eric Gates, facility

FABRICANTE AUTO BODY LLC (Continued) **S113158556**

manager, the spent spray booth filters are currently being managed as hazardous waste and have not been disposed of in the municipal trash. The spent spray booth filters were taken for storage (not disposed yet) to the other business, Prestige Auto Collision - 23726 Via Fabricante, Mission Viejo, owned by the same owner. This facility uses the same paints as the facility in Mission Viejo. A copy of this Agency's inspection report dated 6/4/07 for the other facility, indicating the that spray booth filters are not considered hazardous waste, after submittal of lab results, was provided this date. A copy of the laboratory results are [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Coordinates:
Site ID: 421122
Facility Name: FABRICANTE AUTO BODY
Env Int Type Code: HMBP
Program ID: 10572484
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 33.662010
Longitude: -117.670270

Affiliation:
Affiliation Type Desc: CUPA District
Entity Name: Orange County Env Health
Entity Title: Not reported
Affiliation Address: 1241 East Dyer RoadSuite 120
Affiliation City: Santa Ana
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92705-5611
Affiliation Phone: (714) 433-6406

Affiliation Type Desc: Environmental Contact
Entity Name: JON GYPSYN
Entity Title: Not reported
Affiliation Address: 29982 Ivy Glenn Dr SUITE #201
Affiliation City: LAGUNA NIGUEL
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92677
Affiliation Phone: Not reported

Affiliation Type Desc: Identification Signer
Entity Name: Jon Gypsyn
Entity Title: ENVIRONMENTAL ENGINEER
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Document Preparer

FABRICANTE AUTO BODY LLC (Continued) **S113158556**

Entity Name:	JON GYPSYN
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	26341 DIMENSION DR
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92630
Affiliation Phone:	Not reported

Affiliation Type Desc:	Legal Owner
Entity Name:	BERNIE & LAURIE GATES
Entity Title:	Not reported
Affiliation Address:	26341 DIMENSION DR
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92630
Affiliation Phone:	(949) 859-8639

Affiliation Type Desc:	Operator
Entity Name:	FABRICANTE AUTO BODY
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(949) 859-8639

Affiliation Type Desc:	Parent Corporation
Entity Name:	FABRICANTE AUTO BODY
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

HWTS:

Name:	FABRICANTE AUTO BODY LLC
Address:	26341 DIMENSION DR
Address 2:	Not reported
City,State,Zip:	LAKE FOREST, CA 926307806
EPA ID:	CAL000352403
Inactive Date:	Not reported

FABRICANTE AUTO BODY LLC (Continued) **S113158556**

Create Date:	05/17/2010
Last Act Date:	09/19/2019
Mailing Name:	Not reported
Mailing Address:	26341 DIMENSION DR
Mailing Address 2:	Not reported
Mailing City,State,Zip:	LAKE FOREST, CA 926307806
Owner Name:	FABRICANTE AUTO BODY LLC
Owner Address:	26341 DIMENSION DR
Owner Address 2:	Not reported
Owner City,State,Zip:	LAKE FOREST, CA 926307806
Contact Name:	LAURIE GATES
Contact Address:	26341 DIMENSION DR
Contact Address 2:	Not reported
City,State,Zip:	LAKE FOREST, CA 92630

NAICS:

EPA ID:	CAL000352403
Create Date:	2011-04-05 10:18:12
NAICS Code:	811121
NAICS Description:	Automotive Body, Paint, and Interior Repair and Maintenance
Issued EPA ID Date:	2010-05-17 10:38:11
Inactive Date:	Not reported
Facility Name:	FABRICANTE AUTO BODY LLC
Facility Address:	26341 DIMENSION DR
Facility Address 2:	Not reported
Facility City:	LAKE FOREST
Facility County:	30
Facility State:	CA
Facility Zip:	926307806

L48 **FABRICANTE AUTO BODY LLC** **RCRA NonGen / NLR** **1024825835**
ENE **26341 DIMENSION DR** **CAL000352403**
1/8-1/4 **LAKE FOREST, CA 92630**
0.177 mi.
932 ft. **Site 2 of 4 in cluster L**

Relative:
Higher

Actual:
672 ft.

RCRA NonGen / NLR:

Date form received by agency:	2010-05-17 00:00:00.0
Facility name:	FABRICANTE AUTO BODY LLC
Facility address:	26341 DIMENSION DR LAKE FOREST, CA 92630-7806
EPA ID:	CAL000352403
Contact:	LAURIE GATES
Contact address:	26341 DIMENSION DR LAKE FOREST, CA 92630
Contact country:	Not reported
Contact telephone:	949-859-8639
Contact email:	LAURIE@FABRICANTEAUTOBODY.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	FABRICANTE AUTO BODY LLC
Owner/operator address:	26341 DIMENSION DR LAKE FOREST, CA 92630
Owner/operator country:	Not reported

FABRICANTE AUTO BODY LLC (Continued) **1024825835**

Owner/operator telephone: 949-306-9106
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: LAURIE GATES
Owner/operator address: 26341 DIMENSION DR
LAKE FOREST, CA 92630
Owner/operator country: Not reported
Owner/operator telephone: 949-859-8639
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

M49 **ARB INC** **UST** **U003721263**
North **26032 COMMERCENTRE DR** **N/A**
1/8-1/4 **LAKE FOREST, CA 92630**
0.180 mi.
949 ft. **Site 1 of 2 in cluster M**

Relative: UST:
Higher
Name: ARB INC
Actual: Address: 26032 COMMERCENTRE DR
696 ft. City,State,Zip: LAKE FOREST, CA 92630
Facility ID: 18624
Permitting Agency: ORANGE COUNTY
Latitude: 33.663077
Longitude: -117.676481

L50 **TRABUCO CANYON WATER DISTRICT** **RCRA NonGen / NLR** **1026052953**
ENE **26342 DIMENSIONS DRIVE** **CAC003059849**
1/8-1/4 **LAKE FOREST, CA 92630**
0.183 mi.
966 ft. **Site 3 of 4 in cluster L**

Relative:
Higher

Actual:
673 ft.

RCRA NonGen / NLR:

Date form received by agency:	2020-03-12 00:00:00.0
Facility name:	TRABUCO CANYON WATER DISTRICT
Facility address:	26342 DIMENSIONS DRIVE LAKE FOREST, CA 92630
EPA ID:	CAC003059849
Mailing address:	32003 DOVE CANYON DRIVE TRABUCCO CANYON, CA 92679
Contact:	LISA MARIE SANGI
Contact address:	32003 DOVE CANYON DRIVE TRABUCCO CANYON, CA 92679
Contact country:	Not reported
Contact telephone:	949-858-0277
Contact email:	LSANGI@TCWD.CA.GOV
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	TRABUCO CANYON WATER DISTRICT
Owner/operator address:	32003 DOVE CANYON DRIVE TRABUCCO CANYON, CA 92679
Owner/operator country:	Not reported
Owner/operator telephone:	949-858-0277
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	LISA MARIE SANGI
Owner/operator address:	32003 DOVE CANYON DRIVE TRABUCCO CANYON, CA 92679
Owner/operator country:	Not reported
Owner/operator telephone:	949-858-0277
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	Not reported
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No

TRABUCO CANYON WATER DISTRICT (Continued) **1026052953**

On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

L51 **AMERICAN FLYER RACING** **RCRA NonGen / NLR** **1024808435**
ENE **26361 DIMENSION DR** **CAL000279781**
1/8-1/4 **LAKE FOREST, CA 92630**
0.195 mi.
1028 ft. **Site 4 of 4 in cluster L**

Relative:
Higher

Actual:
676 ft.

RCRA NonGen / NLR:

Date form received by agency:	2004-03-08 00:00:00.0
Facility name:	AMERICAN FLYER RACING
Facility address:	26361 DIMENSION DR LAKE FOREST, CA 92630
EPA ID:	CAL000279781
Mailing address:	64 MAXWELL IRVINE, CA 92618-0000
Contact:	NANCY ROBERTSON
Contact address:	64 MAXWELL IRVINE, CA 92618
Contact country:	Not reported
Contact telephone:	949-719-9040
Contact email:	NANCYR@OAKWOODCOMM.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	CARL RENEZEDER
Owner/operator address:	64 MAXWELL IRVINE, CA 92618
Owner/operator country:	Not reported
Owner/operator telephone:	949-719-9040
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	NANCY ROBERTSON
Owner/operator address:	64 MAXWELL IRVINE, CA 92618
Owner/operator country:	Not reported
Owner/operator telephone:	949-719-9040
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported

AMERICAN FLYER RACING (Continued) **1024808435**

Legal status: Other
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

N52 **WESCON DESIGNED SOLUTIONS INC** **CERS HAZ WASTE** **S113802589**
NE **20551 PASCAL WAY** **HAZNET** **N/A**
1/8-1/4 **LAKE FOREST, CA 92630** **CERS**
0.196 mi. **HWTS**
1034 ft. **Site 1 of 3 in cluster N**

Relative:
Higher

Actual:
674 ft.

CERS HAZ WASTE:
Name: WESCON
Address: 20551 PASCAL WAY
City,State,Zip: LAKE FOREST, CA 92630
Site ID: 412690
CERS ID: 10579726
CERS Description: Hazardous Waste Generator

HAZNET:
Name: WESCON DESIGNED SOLUTIONS INC
Address: 20551 PASCAL WAY
Address 2: Not reported
City,State,Zip: LAKE FOREST, CA 926300000
Contact: ROSE POER
Telephone: 9494443807
Mailing Name: Not reported
Mailing Address: 20551 PASCAL WAY

Year: 2019
Gepaid: CAL000378058
TSD EPA ID: CAD044429835
CA Waste Code: 213 - Hydrocarbon solvents (benzene, hexane, Stoddard, Etc.)
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.30000

Year: 2019
Gepaid: CAL000378058

WESCON DESIGNED SOLUTIONS INC (Continued) **S113802589**

TSD EPA ID: CAD980675276
CA Waste Code: 223 - Unspecified oil-containing waste
Disposal Method: H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Tons: 0.10000

Year: 2019
Gepaid: CAL000378058
TSD EPA ID: CAD044429835
CA Waste Code: 343 - Unspecified organic liquid mixture
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.45000

Year: 2018
Gepaid: CAL000378058
TSD EPA ID: NED981723513
CA Waste Code: 331 - Off-specification, aged or surplus organics
Disposal Method: H040 - Incineration--Thermal Destruction Other Than Use As A Fuel
Tons: 0.02500

Year: 2018
Gepaid: CAL000378058
TSD EPA ID: CAD044429835
CA Waste Code: 343 - Unspecified organic liquid mixture
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 1.52500

Year: 2018
Gepaid: CAL000378058
TSD EPA ID: CAD980675276
CA Waste Code: 223 - Unspecified oil-containing waste
Disposal Method: H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Tons: 0.15000

Year: 2017
Gepaid: CAL000378058
TSD EPA ID: CAD044429835
CA Waste Code: 343 - Unspecified organic liquid mixture
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.6

Year: 2017
Gepaid: CAL000378058
TSD EPA ID: NED981723513
CA Waste Code: 213 - Hydrocarbon solvents (benzene, hexane, Stoddard, Etc.)
Disposal Method: H040 - Incineration--Thermal Destruction Other Than Use As A Fuel
Tons: 0.15

Year: 2016
Gepaid: CAL000378058
TSD EPA ID: CAD044429835
CA Waste Code: 213 - Hydrocarbon solvents (benzene, hexane, Stoddard, Etc.)
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No

WESCON DESIGNED SOLUTIONS INC (Continued) **S113802589**

Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.15

Year: 2016
Gepaid: CAL000378058
TSD EPA ID: NED981723513
CA Waste Code: 213 - Hydrocarbon solvents (benzene, hexane, Stoddard, Etc.)
Disposal Method: H040 - Incineration--Thermal Destruction Other Than Use As A Fuel
Tons: 0.2

Click this hyperlink while viewing on your computer to access
9 additional CA HAZNET: record(s) in the EDR Site Report.

Additional Info:
Year: 2013
Gen EPA ID: CAL000378058

Shipment Date: 20130708
Creation Date: 11/27/2013 22:15:18
Receipt Date: 20130730
Manifest ID: 003840628SKS
Trans EPA ID: TXR000081205
Trans Name: SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID: AZR000508515
Trans 2 Name: SLT
TSDF EPA ID: NED981723513
Trans Name: CLEAN HARBORS ENVIRONMENTAL SERVICES IN
TSDF Alt EPA ID: Not reported
TSDF Alt Name: Not reported
Waste Code Description: 214 - Unspecified solvent mixture
RCRA Code: D001
Meth Code: H040 - Incineration--Thermal Destruction Other Than Use As A Fuel
Quantity Tons: 0.2
Waste Quantity: 400
Quantity Unit: P
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Shipment Date: 20130416
Creation Date: 8/25/2013 22:15:09
Receipt Date: 20130418
Manifest ID: 003800215SKS
Trans EPA ID: TXR000081205
Trans Name: SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID: Not reported
Trans 2 Name: Not reported
TSDF EPA ID: CAT000613893
Trans Name: SAFETY-KLEEN SYSTEMS INC
TSDF Alt EPA ID: Not reported
TSDF Alt Name: Not reported
Waste Code Description: 214 - Unspecified solvent mixture
RCRA Code: D001
Meth Code: H141 - Storage, Bulking, And/Or Transfer Off Site--No

WESCON DESIGNED SOLUTIONS INC (Continued) **S113802589**

	Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.15
Waste Quantity:	300
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20130226
Creation Date:	7/9/2013 22:15:05
Receipt Date:	20130228
Manifest ID:	003631666SKS
Trans EPA ID:	TXR000081205
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT000613893
Trans Name:	SAFETY-KLEEN SYSTEMS INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.1
Waste Quantity:	200
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2014
Gen EPA ID:	CAL000378058
Shipment Date:	20141125
Creation Date:	3/6/2015 22:15:05
Receipt Date:	20141206
Manifest ID:	004388057SKS
Trans EPA ID:	TXR000081205
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD044429835
Trans Name:	CLEAN HARBORS WILMINGTON LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.3
Waste Quantity:	600

WESCON DESIGNED SOLUTIONS INC (Continued) **S113802589**

Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20141110
Creation Date:	3/31/2015 22:15:12
Receipt Date:	20141110
Manifest ID:	004503044SKS
Trans EPA ID:	TXR000081205
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT000613976
Trans Name:	SAFETY-KLEEN SYSTEMS INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	134 - Aqueous solution with <10% total organic residues
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.063
Waste Quantity:	15
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20141110
Creation Date:	3/31/2015 22:15:12
Receipt Date:	20141110
Manifest ID:	004503044SKS
Trans EPA ID:	TXR000081205
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT000613976
Trans Name:	SAFETY-KLEEN SYSTEMS INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	134 - Aqueous solution with <10% total organic residues
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.063
Waste Quantity:	15
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

WESCON DESIGNED SOLUTIONS INC (Continued) **S113802589**

Shipment Date:	20140630
Creation Date:	9/13/2014 22:15:20
Receipt Date:	20140715
Manifest ID:	004387731SKS
Trans EPA ID:	TXR000081205
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD044429835
Trans Name:	CLEAN HARBORS WILMINGTON LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.175
Waste Quantity:	350
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20140519
Creation Date:	8/17/2014 22:15:06
Receipt Date:	20140606
Manifest ID:	004274688SKS
Trans EPA ID:	TXR000081205
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD044429835
Trans Name:	CLEAN HARBORS WILMINGTON LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.2
Waste Quantity:	400
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20140325
Creation Date:	6/6/2014 22:15:06
Receipt Date:	20140404
Manifest ID:	004218988SKS
Trans EPA ID:	TXR000081205
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	Not reported

WESCON DESIGNED SOLUTIONS INC (Continued) **S113802589**

Trans 2 Name:	Not reported
TSDF EPA ID:	CAD044429835
Trans Name:	CLEAN HARBORS WILMINGTON LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.2
Waste Quantity:	400
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2015
Gen EPA ID:	CAL000378058
Shipment Date:	20151022
Creation Date:	5/4/2016 22:16:02
Receipt Date:	20151102
Manifest ID:	005050131SKS
Trans EPA ID:	TXR000081205
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	MOR000501973
Trans 2 Name:	R & R TRUCKING INC
TSDF EPA ID:	NED981723513
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	H040 - Incineration--Thermal Destruction Other Than Use As A Fuel
Quantity Tons:	0.125
Waste Quantity:	250
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20150813
Creation Date:	10/6/2015 22:15:06
Receipt Date:	20150821
Manifest ID:	004833974SKS
Trans EPA ID:	TXR000081205
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD044429835
Trans Name:	CLEAN HARBORS WILMINGTON LLC
TSDF Alt EPA ID:	Not reported

WESCON DESIGNED SOLUTIONS INC (Continued) **S113802589**

TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.35
Waste Quantity:	700
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20150623
Creation Date:	1/19/2016 22:15:36
Receipt Date:	20150701
Manifest ID:	014527664JJK
Trans EPA ID:	CAR000201095
Trans Name:	PHOENIX ENVIRONMENTAL ENGINEERING & CONSTRUCTION
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVT330010000
Trans Name:	US ECOLOGY
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	0.102
Waste Quantity:	30
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20150520
Creation Date:	7/8/2015 22:15:46
Receipt Date:	20150528
Manifest ID:	004693314SKS
Trans EPA ID:	TXR000081205
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD044429835
Trans Name:	CLEAN HARBORS WILMINGTON LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.25
Waste Quantity:	500

WESCON DESIGNED SOLUTIONS INC (Continued) **S113802589**

Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20150302
Creation Date:	6/24/2015 22:15:41
Receipt Date:	20150318
Manifest ID:	004693220SKS
Trans EPA ID:	TXR000081205
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD044429835
Trans Name:	CLEAN HARBORS WILMINGTON LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.25
Waste Quantity:	500
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2017
Gen EPA ID:	CAL000378058
Shipment Date:	20171204
Creation Date:	8/28/2018 18:30:25
Receipt Date:	20171218
Manifest ID:	006321302SKS
Trans EPA ID:	TXR000081205
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	MAD039322250
Trans 2 Name:	CLEAN HARBORS ENVIRONMENTAL SVC INC
TSDF EPA ID:	CAD044429835
Trans Name:	CLEAN HARBORS OF WILMINGTON LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.15
Waste Quantity:	300
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported

WESCON DESIGNED SOLUTIONS INC (Continued) **S113802589**

Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20171005
Creation Date:	5/30/2018 18:31:28
Receipt Date:	20171016
Manifest ID:	006139385SKS
Trans EPA ID:	TXR000081205
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	MAD039322250
Trans 2 Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES INC
TSDF EPA ID:	CAD044429835
Trans Name:	CLEAN HARBORS OF WILMINGTON LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.15
Waste Quantity:	300
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20170705
Creation Date:	5/21/2018 18:32:48
Receipt Date:	20170720
Manifest ID:	006139075SKS
Trans EPA ID:	TXR000081205
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	MAD039322250
Trans 2 Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES INC
TSDF EPA ID:	CAD044429835
Trans Name:	CLEAN HARBORS OF WILMINGTON LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.15
Waste Quantity:	300
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20170502
Creation Date:	5/30/2018 18:33:22
Receipt Date:	20170515

WESCON DESIGNED SOLUTIONS INC (Continued) **S113802589**

Manifest ID:	005986886SKS
Trans EPA ID:	TXR000081205
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	MAD039322250
Trans 2 Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES INC
TSDF EPA ID:	CAD044429835
Trans Name:	CLEAN HARBORS OF WILMINGTON LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.15
Waste Quantity:	300
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20170214
Creation Date:	5/10/2018 18:30:43
Receipt Date:	20170227
Manifest ID:	005891194SKS
Trans EPA ID:	TXR000081205
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	MAD039322250
Trans 2 Name:	CLEAN HARBORS
TSDF EPA ID:	NED981723513
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES IN
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	213 - Hydrocarbon solvents (benzene, hexane, Stoddard, etc.
RCRA Code:	D001
Meth Code:	H040 - Incineration--Thermal Destruction Other Than Use As A Fuel
Quantity Tons:	0.15
Waste Quantity:	300
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2016
Gen EPA ID:	CAL000378058

Shipment Date:	20151022
Creation Date:	5/4/2016 22:16:02
Receipt Date:	20151102
Manifest ID:	005050131SKS
Trans EPA ID:	TXR000081205
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	MOR000501973

WESCON DESIGNED SOLUTIONS INC (Continued) **S113802589**

Trans 2 Name:	R & R TRUCKING INC
TSDF EPA ID:	NED981723513
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	H040 - Incineration--Thermal Destruction Other Than Use As A Fuel
Quantity Tons:	0.125
Waste Quantity:	250
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20150813
Creation Date:	10/6/2015 22:15:06
Receipt Date:	20150821
Manifest ID:	004833974SKS
Trans EPA ID:	TXR000081205
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD044429835
Trans Name:	CLEAN HARBORS WILMINGTON LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.35
Waste Quantity:	700
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20150623
Creation Date:	1/19/2016 22:15:36
Receipt Date:	20150701
Manifest ID:	014527664JJK
Trans EPA ID:	CAR000201095
Trans Name:	PHOENIX ENVIRONMENTAL ENGINEERING & CONSTRUCTION
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVT330010000
Trans Name:	US ECOLOGY
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid

WESCON DESIGNED SOLUTIONS INC (Continued) **S113802589**

	Regeneration, Organics Recovery Ect
Quantity Tons:	0.102
Waste Quantity:	30
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20150520
Creation Date:	7/8/2015 22:15:46
Receipt Date:	20150528
Manifest ID:	004693314SKS
Trans EPA ID:	TXR000081205
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD044429835
Trans Name:	CLEAN HARBORS WILMINGTON LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.25
Waste Quantity:	500
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20150302
Creation Date:	6/24/2015 22:15:41
Receipt Date:	20150318
Manifest ID:	004693220SKS
Trans EPA ID:	TXR000081205
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD044429835
Trans Name:	CLEAN HARBORS WILMINGTON LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.25
Waste Quantity:	500
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported

WESCON DESIGNED SOLUTIONS INC (Continued) **S113802589**

Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2012
Gen EPA ID:	CAL000378058
Shipment Date:	20121226
Creation Date:	5/8/2013 22:15:09
Receipt Date:	20121231
Manifest ID:	003326153SKS
Trans EPA ID:	TXR000081205
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT000613893
Trans Name:	SAFETY-KLEEN SYSTEMS INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.1
Waste Quantity:	200
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20121029
Creation Date:	3/21/2013 22:15:13
Receipt Date:	20121101
Manifest ID:	003543847SKS
Trans EPA ID:	TXR000081205
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT000613893
Trans Name:	SAFETY-KLEEN SYSTEMS INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.15
Waste Quantity:	300
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

WESCON DESIGNED SOLUTIONS INC (Continued) **S113802589**

CERS:

Name:	WESCON
Address:	20551 PASCAL WAY
City,State,Zip:	LAKE FOREST, CA 92630
Site ID:	412690
CERS ID:	10579726
CERS Description:	Chemical Storage Facilities

Violations:

Site ID:	412690
Site Name:	WESCON
Violation Date:	11-18-2014
Citation:	22 CCR 12 66262.34(f) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(f)
Violation Description:	Failure to properly label hazardous waste accumulation containers with the following requirements: "Hazardous Waste", name and address of the generator, physical and chemical characteristics of the Hazardous Waste, and starting accumulation date.
Violation Notes:	Returned to compliance on 11/18/2014. The waste stripper/parts cleaning solution drums had faded labels. New labels were placed on the drums during the inspection and this violation was corrected.
Violation Division:	Orange County Environmental Health
Violation Program:	HW
Violation Source:	CERS

Site ID:	412690
Site Name:	WESCON
Violation Date:	10-01-2014
Citation:	HSC 6.95 25508(d) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(d)
Violation Description:	Failure to complete and/or electronically submit a business plan when storing/handling a hazardous material at or above reportable quantities.
Violation Notes:	Returned to compliance on 07/15/2015.
Violation Division:	Orange County Environmental Health
Violation Program:	HMRRP
Violation Source:	CERS

Site ID:	412690
Site Name:	WESCON
Violation Date:	10-01-2014
Citation:	HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description:	Failure to complete and electronically submit hazardous material inventory information for all reportable hazardous materials on site at or above reportable quantities.
Violation Notes:	Returned to compliance on 07/15/2015.
Violation Division:	Orange County Environmental Health
Violation Program:	HMRRP
Violation Source:	CERS

Site ID:	412690
Site Name:	WESCON
Violation Date:	11-20-2019
Citation:	HSC 6.95 25505(a)(4) - California Health and Safety Code, Chapter 6.95, Section(s) 25505(a)(4)
Violation Description:	Failure to provide initial and annual training to all employees in

WESCON DESIGNED SOLUTIONS INC (Continued) **S113802589**

safety procedures in the event of a release or threatened release of a hazardous material or failure to document and maintain training records for a minimum of three years.

Violation Notes: Returned to compliance on 12/05/2019. Annual training in hazardous materials management has not been provided for employees. Training that includes safety procedures in the event of a release or threatened release of hazardous materials, must be conducted within 30 days of this inspection and records be submitted to this agency.
Violation Division: Orange County Environmental Health
Violation Program: HMRRP
Violation Source: CERS

Evaluation:
Eval General Type: Other/Unknown
Eval Date: 06-12-2014
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: I received email from David Poer at the facility regarding fish toxicity testing. He had forwarded an email from Sierra Labs with question regarding sampling and testing method. I scanned and emailed the section out of the Title 22 that has fish toxicity testing requirements to him.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 07-01-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: INSPECTOR COMMENTS This facility has electronically submitted the Hazardous Materials Disclosure and Business Emergency to the eSubmit Portal on 7-1-2015. Violation I292 = CORRECTED Hazardous Materials Business plan has been submitted electronically. Violation I169 - CORRECTED Hazardous Materials Inventory Disclosure submitted electronically. This Agency will review the disclosure and inform the business of Approval or Declination with corrections. _____
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 07-15-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Documents submitted to E-submit on 7/1/15 were reviewed and accepted.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 11-07-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: No violations were observed this date.
Eval Division: Orange County Environmental Health
Eval Program: HW

WESCON DESIGNED SOLUTIONS INC (Continued) **S113802589**

Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	11-15-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Went to facility to conduct routine inspection. Facility contact was not on site.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	06-24-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Not reported
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	10-01-2014
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector Comments: Orange County Environmental Health as the Certified Unified Program Agency (OC CUPA) is the administrating agency for the Hazardous Materials Disclosure and Business Emergency Plan programs (HMD/BEP) previously administered by the Orange County Fire Authority. During the months of August and December of 2013, the OC CUPA sent out letters to regulated businesses requesting them to electronically submit their HMD/BEP forms. In addition, during the onsite inspection conducted on 11/25/13 your company was notified again to submit HMD/BEP electronically. Electronic submission of these forms is a legal requirement. Failure to submit HMD/BEP forms is in violation of the California Health & Safety Code Chapter 6.95. According to our records there is no electronic submission for this facility. Please go to www.esubmit.ocgov.com to request a username and password and submit the following HMD/BEP forms within the next 30 days: - Business Activities [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	11-12-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct routine hazardous waste inspection. Rose Poer granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans throughout the facility or municipal trash. Facility evaporates spent machine coolant. Waste coolant has been analyzed and is not hazardous. Waste stripper/parts cleaning solution (petroleum distillates) drum is stored closed and labeled. Manifests were reviewed. Emergency card is posted in CNC machine room.

WESCON DESIGNED SOLUTIONS INC (Continued) **S113802589**

Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	11-17-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct hazardous materials chemical inventory and business emergency plan inspection. Rose Poer granted consent to conduct inspection. I walked through the facility and inspected hazardous material storage area in back of building. There has been no changes in types and/or volumes of the hazardous material, new material or waste, stored on site since last inspection or previous reporting period. Employees are trained annually in hazardous materials management and safety/evacuation procedures. Emergency card is posted in shop. I notified business E-submit is not in operation and that annual HMBP certification documents must be submitted via CERS. I assisted him in creating account in CERS, corrected inventory form and showed how to submit annual certification documents.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	11-18-2014
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct routine hazardous waste inspection. Rose Poer granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans or municipal trash. Facility evaporates spent machine coolant. Waste coolant has been analyzed and is not hazardous. Three waste stripper/parts cleaning solution drums are stored closed with faded labels. New labels were placed on the drums during the inspection. Manifests were reviewed. Emergency card is posted in CNC machine room.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	05-23-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted annual certification documents submitted to CERS on 5/23/17.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	06-13-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I received another email with an attachment for an "EMC Water Eater unit, from David Poer stating that "there is no "waste water" left

WESCON DESIGNED SOLUTIONS INC (Continued) **S113802589**

over for us to deal with." I called him back and explained that the waste water going into the EMC unit (evaporates waste water) must be analyzed in order to determine whether or not hazardous waste is being treated.

Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 06-29-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Went to site after facility contact, Rose Poer, had emailed agency requesting assistance in uploading HMBP documents after receiving NOV for not submitting disclosure documents. I helped her upload all reportable (five) material and complete emergency plan. I explained what should be included in site map.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 11-15-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Went to facility to conduct routine inspection. Facility contact was not on site.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 11-18-2014
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Inspector Comments: On site for follow up inspection to discuss violations cited in the inspection report dated 10/1/14 regarding submitting HMBP documents electronically. Rose Poer assisted with the inspection. She stated that she has not received username/password. Portal administrator was contacted and username/password was emailed to the facility during the inspection. I assisted with completing portions of the submittal. Facility has the following hazardous materials that meet the required disclosure quantities: - 55 gallons of Corseal 931-Antirust - 55 gallons of Multistrip Pro - 55 gallons of Blaser Machine Coolant - 165 gallons waste petroleum distillate (multistrip and water) - 55 gallons waste machine coolant/water (evaporator)
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 11-20-2019
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: On site to conduct hazardous materials chemical inventory and business emergency plan inspection. Chris Marshall granted consent to conduct

WESCON DESIGNED SOLUTIONS INC (Continued) **S113802589**

inspection. I walked through the facility, perimeter and inspected hazardous material storage areas inside and outside building. There has been changes in types/volumes and location of waste drums and solvent tanks storing hazardous materials in "Reconditioning Room" since last inspection or previous reporting period. Facility stores the following hazardous materials at disclosure threshold: - 55 gallon drum and (volume stored in machines) of Blasocut BC 20 SW (Machine Coolant) - 55 gallons of Corseal Anti-rust - 165 gallons of Multi-Strip Pro 200 - 165 gallons of Polygon 305 IG - 55 gallons of waste Blasocut BC 20 SW - 165 gallons of waste Strip/solvent and Anti-rust solution Annual training in hazardous materials management has not been provided for employees. Training that includes safety procedures in the [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 11-25-2013
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Wescon 20551 Pascal Way Lake Forest, CA 92630 (949) 444-3807 On site to conduct new hazardous materials chemical inventory and business emergency plan inspection. I walked through the facility and inspected hazardous materials storage area. Facility has hazardous materials (machine coolant, new and waste parts washer solution) that meet required disclosure quantities. Facility is required and has been notified to electronically submit the following documents within 60 days of this inspection: - Business Activities form - Owner/Operator Identification form - Hazardous Material Chemical Inventory forms - Facility Site Map - Business Emergency Plan Documents must be electronically submitted by going to www.esubmit.ocgov.com and requesting a username and password. User guides and tutorials are located on the home page to help you get started. If you are having trouble, please call (714) 433-6000 and request to speak to the portal administrator

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 06-29-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: 9/29: Email from Rose Poer who was having issues with Portal. Forwarded to HCA/Rashidi who will assist with submittal.

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 07-02-2014
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: I received a copy of a fish toxicity/bioassay results for a sample collected from the oil/water solution (spent machine coolant) before it is treated by the evaporator. The results indicate that the

WESCON DESIGNED SOLUTIONS INC (Continued) **S113802589**

	untreated spent machine coolant is not hazardous. Therefore, this facility does not have to comply with Tiered Permitting regulations.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	11-12-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Went to site to conduct routine hazardous waste inspection. Facility contact was not on site.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	11-13-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Rose Poer granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans throughout the facility or municipal trash. Waste stripper/parts cleaning solution drum is stored closed and labeled. Manifests were reviewed. Emergency card is posted in CNC machine room.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	11-17-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct routine hazardous waste inspection. Rose Poer granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans throughout the facility or municipal trash. Facility evaporates spent machine coolant. Waste coolant has been analyzed and is not hazardous. Waste stripper/parts cleaning solution drum is stored closed and labeled. Manifests were reviewed. Emergency card is posted in CNC machine room.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	11-25-2013
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Rose Poer granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage areas. I did not observe any hazardous waste in trash cans. The facility has obtained an evaporator to treat the spent machine coolant. Hazardous waste determination (fish toxicity/bioassay) must be conducted on the oil/water solution

WESCON DESIGNED SOLUTIONS INC (Continued) **S113802589**

before it is treated, to determine whether or not this facility should be complying with Tiered Permitting regulations. Results must be submitted to this Agency for review. Waste parts washer solution drums are stored closed and labeled. Manifests were reviewed. An emergency card was provided to be filled out and posted.

Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 11-26-2013
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Processed A21.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Enforcement Action:
Site ID: 412690
Site Name: WESCON
Site Address: 20551 PASCAL WAY
Site City: LAKE FOREST
Site Zip: 92630
Enf Action Date: 06-24-2015
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: HMD/BEP NOV ISSUED 6-24-15.
Enf Action Division: Orange County Environmental Health
Enf Action Program: HMRRP
Enf Action Source: CERS

Coordinates:
Site ID: 412690
Facility Name: WESCON
Env Int Type Code: HMBP
Program ID: 10579726
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 33.663460
Longitude: -117.670100

Affiliation:
Affiliation Type Desc: Document Preparer
Entity Name: Rose Poer
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Identification Signer
Entity Name: Rose Poer
Entity Title: Voce President

WESCON DESIGNED SOLUTIONS INC (Continued) **S113802589**

Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	20551 PASCAL WAY
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92630
Affiliation Phone:	Not reported
Affiliation Type Desc:	Operator
Entity Name:	Wescon Designed Solutions, Inc.
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(949) 444-3807
Affiliation Type Desc:	Parent Corporation
Entity Name:	WESCON
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	CUPA District
Entity Name:	Orange County Env Health
Entity Title:	Not reported
Affiliation Address:	1241 East Dyer RoadSuite 120
Affiliation City:	Santa Ana
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92705-5611
Affiliation Phone:	(714) 433-6406
Affiliation Type Desc:	Environmental Contact
Entity Name:	Rose Poer
Entity Title:	Not reported
Affiliation Address:	20551 Pascal Way
Affiliation City:	Lake Forest
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92630
Affiliation Phone:	Not reported

WESCON DESIGNED SOLUTIONS INC (Continued) **S113802589**

Affiliation Type Desc:	Legal Owner
Entity Name:	WESCON DESIGNED SOLUTIONS INC
Entity Title:	Not reported
Affiliation Address:	20551 PASCAL WAY
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92630
Affiliation Phone:	(949) 444-3807

HWTS:

Name:	WESCON DESIGNED SOLUTIONS INC
Address:	20551 PASCAL WAY
Address 2:	Not reported
City,State,Zip:	LAKE FOREST, CA 92630
EPA ID:	CAL000378058
Inactive Date:	Not reported
Create Date:	09/11/2012
Last Act Date:	08/22/2019
Mailing Name:	Not reported
Mailing Address:	20551 PASCAL WAY
Mailing Address 2:	Not reported
Mailing City,State,Zip:	LAKE FOREST, CA 926300000
Owner Name:	WESCON DESIGNED SOLUTIONS INC
Owner Address:	20551 PASCAL WAY
Owner Address 2:	Not reported
Owner City,State,Zip:	LAKE FOREST, CA 926300000
Contact Name:	ROSE POER
Contact Address:	20551 PASCAL WAY
Contact Address 2:	Not reported
City,State,Zip:	LAKE FOREST, CA 92630

NAICS:

EPA ID:	CAL000378058
Create Date:	2012-09-11 11:53:23
NAICS Code:	336399
NAICS Description:	All Other Motor Vehicle Parts Manufacturing
Issued EPA ID Date:	2012-09-11 11:53:23
Inactive Date:	Not reported
Facility Name:	WESCON DESIGNED SOLUTIONS INC
Facility Address:	20551 PASCAL WAY
Facility Address 2:	Not reported
Facility City:	LAKE FOREST
Facility County:	30
Facility State:	CA
Facility Zip:	92630

N53 **WESCON DESIGNED SOLUTIONS INC** **RCRA NonGen / NLR** **1024835667**
NE **20551 PASCAL WAY** **CAL000378058**
1/8-1/4 **LAKE FOREST, CA 92630**
0.196 mi.
1034 ft. **Site 2 of 3 in cluster N**

Relative:
Higher

Actual:
674 ft.

RCRA NonGen / NLR:

Date form received by agency:	2012-09-11 00:00:00.0
Facility name:	WESCON DESIGNED SOLUTIONS INC
Facility address:	20551 PASCAL WAY LAKE FOREST, CA 92630
EPA ID:	CAL000378058
Contact:	ROSE POER
Contact address:	20551 PASCAL WAY LAKE FOREST, CA 92630
Contact country:	Not reported
Contact telephone:	949-444-3807
Contact email:	ROSE@WESCONDSI.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	ROSE POER
Owner/operator address:	20551 PASCAL WAY LAKE FOREST, CA 92630
Owner/operator country:	Not reported
Owner/operator telephone:	949-444-3807
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	WESCON DESIGNED SOLUTIONS INC
Owner/operator address:	20551 PASCAL WAY LAKE FOREST, CA 92630
Owner/operator country:	Not reported
Owner/operator telephone:	949-466-1210
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No

WESCON DESIGNED SOLUTIONS INC (Continued) **1024835667**

Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

54
NNW
1/8-1/4
0.203 mi.
1070 ft.

ARB INC **CERS HAZ WASTE** **S123517196**
20632 CIVIC CENTER DR **CERS TANKS** **N/A**
LAKE FOREST, CA 92630 **CERS**

Relative:
Higher

Actual:
727 ft.

CERS HAZ WASTE:
Name: ARB INC
Address: 20632 CIVIC CENTER DR
City,State,Zip: LAKE FOREST, CA 92630
Site ID: 410695
CERS ID: 10545232
CERS Description: Hazardous Waste Generator

CERS TANKS:
Name: ARB INC
Address: 20632 CIVIC CENTER DR
City,State,Zip: LAKE FOREST, CA 92630
Site ID: 410695
CERS ID: 10545232
CERS Description: Aboveground Petroleum Storage

CERS:
Name: ARB INC
Address: 20632 CIVIC CENTER DR
City,State,Zip: LAKE FOREST, CA 92630
Site ID: 410695
CERS ID: 10545232
CERS Description: Chemical Storage Facilities

Violations:
Site ID: 410695
Site Name: ARB INC
Violation Date: 10-01-2014
Citation: HSC 6.95 25508(d) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(d)
Violation Description: Failure to complete and/or electronically submit a business plan when storing/handling a hazardous material at or above reportable quantities.
Violation Notes: Returned to compliance on 07/18/2015.
Violation Division: Orange County Environmental Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 410695
Site Name: ARB INC
Violation Date: 10-01-2014
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter

ARB INC (Continued) **S123517196**

6.95, Section(s) 25508(a)(1)
Violation Description: Failure to complete and electronically submit hazardous material inventory information for all reportable hazardous materials on site at or above reportable quantities.
Violation Notes: Returned to compliance on 07/18/2015.
Violation Division: Orange County Environmental Health
Violation Program: HMRRP
Violation Source: CERS

Evaluation:
Eval General Type: Other/Unknown
Eval Date: 01-23-2014
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Purged file.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 01-23-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Inspector Comments: On site for follow up inspection since facility was notified to electronically submit HMBP documents during the onsite inspection conducted on 1/24/14 and inspection report dated 10/1/14 that included violations for failure to submit documents electronically. Argon and helium volumes observed on site are below reportable quantity 0f 1000 cubic feet for each gas. Three cylinders of nitrogen (one in shop and two in enclosure outside) were observed on site. However, the total volume could not be verified since the cylinders did have tags. Nitrogen must be reported if total volume stored on site is equal to or greater than 1000 cubic feet. Facility has the following hazardous materials that meet the required disclosure quantities: - 3987 cubic feet of oxygen - 601 cubic feet of acetylene - 700 gallons of waste oil - 150 gallons of transmission oil - 350 gallons of hydraulic oil - 350 gallons of motor oil - 55 gallons of waste antifreeze [Truncated]
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-30-2020
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to conduct hazardous materials chemical inventory and business emergency plan inspection. Frank Lockwood granted consent to conduct inspection. I walked through facility and inspected hazardous material storage areas throughout facility, both inside and outside building. There has been no changes in types and/or volumes of the hazardous material stored on site since last inspection or previous reporting period. However, propane cylinders were moved from adjacent building (20602 Civic Center Dr.) to this site. Inventory form for propane must be submitted during annual certification period. Hazardous materials management training is provided annually and training records are available. Emergency contact information is posted in shop.

ARB INC (Continued) **S123517196**

Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	05-03-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed revised documents submitted to CERS on 3/30/17 and did not accept it since a site revised map showing new locations of hazardous waste was not submitted. Also, G Fire Code Hazard ClassesG for diesel and Transmission Fluid must be corrected and G Used Absorbent G DebrisG line listed in mixture components table on Used Absorbent inventory form should be deleted.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	07-31-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted documents submitted to E-submit on 7/31/15.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	10-01-2014
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector Comments: Orange County Environmental Health as the Certified Unified Program Agency (OC CUPA) is the administrating agency for the Hazardous Materials Disclosure and Business Emergency Plan programs (HMD/BEP) previously administered by the Orange County Fire Authority. During the months of August and December of 2013, the OC CUPA sent out letters to regulated businesses requesting them to electronically submit their HMD/BEP forms. In addition, during the onsite inspection conducted on 1/24/14 your company was notified again to submit HMD/BEP electronically. Electronic submission of these forms is a legal requirement. Failure to submit HMD/BEP forms is in violation of the California Health & Safety Code Chapter 6.95. According to our records there is no electronic submission for this facility. Please go to www.esubmit.ocgov.com to request a username and password and submit the following HMD/BEP forms within the next 30 days: - Business Activities - [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-24-2014
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct new hazardous materials chemical inventory and business emergency plan inspection. I walked through the facility and inspected hazardous materials storage area. Facility has hazardous

ARB INC (Continued) **S123517196**

materials that meet the required disclosure quantities. Facility is required and has been notified to electronically submit the following documents within 60 days of this inspection: - Business Activities form - Owner/Operator Identification form - Hazardous Material Chemical Inventory forms - Facility Site Map - Business Emergency Plan Documents must be electronically submitted by going to www.esubmit.ocgov.com and requesting a username and password. User guides and tutorials are located on the home page to help you get started. If you are having trouble, please call (714) 433-6000 and request to speak to the portal administrator.

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-30-2020
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site for aboveground petroleum storage tank (APST) inspection. Frank Lockwood granted consent to conduct inspection. Facility stores the following materials in aboveground storage tanks and/or drums: - 965 gallons of waste oil - 280 gallons of ATF - 535 gallons of hydraulic oil - 535 gallons of new motor oil - 2100 gallons of diesel Daily container inspection logs are available for review. Annual SPCC training is provided for employees and records are available for review. SPCC plan dated 8/8/19 is available on site.

Eval Division: Orange County Environmental Health
Eval Program: APSA
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-17-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed annual certification documents submitted to CERS on 2/13/17. Hazardous Materials Inventory was not accepted and with the following considerations: - G Fire Code Hazard ClassesG are not listed on inventory forms. - Revised site map showing new locations of hazardous waste drums inside shop as observed during onsite inspection conducted on 1/20/17 was not submitted. In addition, a request was made to add cross/adjacent street names and access and excess points on site map.

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 05-22-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed revised documents submitted to CERS on 5/9/17. The site map was not accepted since north arrow, locations of emergency shutoffs (electricity, water and natural gas), and evacuation staging area that were shown on previous site map, are not shown on current site map.

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

ARB INC (Continued) **S123517196**

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-20-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct hazardous materials chemical inventory and business emergency plan inspection. Craig Stark granted consent to conduct inspection. I walked through the facility and inspected hazardous material storage areas, inside and outside facility. There has been no changes in types and/or volumes of the hazardous material stored on site since last inspection or previous reporting period. The location of hazardous waste drums has changed. Site map must be updated to show the new location of the hazardous waste drums and be electronically submitted. Compressed gas cylinders that are not in use are stored in metal cages. Training that includes hazardous material management is provided annually. Training records are maintained at the safety office. Emergency contact information is available on site.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-23-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct routine hazardous waste inspection. Craig Stark granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage areas. I did not observed any hazardous waste in trash cans or municipal trash. Waste oil is stored in aboveground storage tanks (one inside shop and one outside) and are labeled. Waste antifreeze (1), used oil filter (1) and oily absorbent (1) drums are stored closed and labeled. Manifests were reviewed. Emergency contact and phone numbers are posted in the shop.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-24-2014
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Craig Stark granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage areas. Waste oil is stored in aboveground storage tanks (one inside shop and one outside) and are labeled. Waste antifreeze (1) and oily absorbent (1) drums stored closed and labeled. A new label was provided for the waste antifreeze tank since the existing one is fading. Manifests were reviewed. Emergency contact and phone numbers are posted in the shop.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-25-2019
Violations Found:	No
Eval Type:	Routine done by local agency

ARB INC (Continued) **S123517196**

Eval Notes:	On site to conduct routine hazardous waste inspection. Frank Lockwood granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage areas inside and outside building. I did not observed any hazardous waste in trash cans or municipal trash. Waste oil stored in aboveground storage tanks (one inside shop and one outside) that are kept closed and are labeled. Waste antifreeze (1), used oil filter (1) and oily absorbent (1) drums are stored closed and labeled. Manifests were reviewed. Emergency contact and phone numbers are posted in the shop.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-23-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted annual certification documents submitted to E-submit on 2/16/16.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	06-24-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Not reported
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	06-29-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Received call from Lance York, facility consultant uploading HMBP documents. I explained that this site needs its own submittal since it has its own address.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	07-18-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to E-submit on 7/17/15 were reviewed and declined with the following considerations: The following material are below reportable volumes of 500 pounds or 1000 cubic feet and should be deleted: - Drained Used Oil Filters - Helium - Nitrogen Hydraulic Oil: CAS# is not listed for the main hazardous component at 96%, mineral oil. CAS# must be listed in the mixtures component section. CAS# 64742-52-5 may be used for mineral oil. Motor Oil: CAS# 6474-XX-X listed for G Various Lubricating Base OilsG in Mixture Components section is not acceptable, especially that this material is the main component at 85%. All digits of the CAS# must be provided. You may

ARB INC (Continued) **S123517196**

	either use CAS# 64742-58-1 listed for reported new oil stored on site or CAS# 64742-65-0 Transmission Oil form must be revised as follows: - Chemical Name should be changed to G Petroleum Hydrocarbon Distillates.G - Common Name should be changed to Transmission G Fluid.G - This material is [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-03-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Lance York called and requested that both account for this business be linked in CERS. Linked sites in CERS.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-19-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	I walked through shop and perimeter. I did not observe any hazardous waste in trash cans throughout the facility. All tanks and drums storing hazardous waste were closed and properly labeled.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-20-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site for aboveground petroleum storage tank (APST) inspection. Facility stores 4800 gallons of regulated petroleum products on site. Weekly container inspection logs are available for review. SPCC plan dated 12/5/16 is available on site.
Eval Division:	Orange County Environmental Health
Eval Program:	APSA
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-20-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Craig Stark granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage areas, inside and outside shop. I did not observed any hazardous waste in trash cans or municipal trash. Waste oil is stored in aboveground storage tanks (one inside shop and one outside) that are kept closed and are labeled. Waste antifreeze (1), used oil filter (2), oily absorbent (3) and waste aerosols (1) drums are stored closed and labeled. Manifests were reviewed. Emergency contact and phone numbers are posted in the shop.
Eval Division:	Orange County Environmental Health
Eval Program:	HW

ARB INC (Continued) **S123517196**

Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 07-26-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed and accepted revised site map submitted to CERS on 6/28/17.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-22-2016
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector Comments: On site to conduct routine hazardous waste inspection. Craig Stark granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage areas. I did not observed any hazardous waste in trash cans or municipal trash. Waste oil is stored in aboveground storage tanks (one inside shop and one outside) that are kept closed and are labeled. Waste antifreeze (1), used oil filter (2) and oily absorbent (1) drums are stored closed and labeled. Manifests were reviewed. Emergency contact and phone numbers are posted in the shop.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Enforcement Action:
Site ID: 410695
Site Name: ARB INC
Site Address: 20632 CIVIC CENTER DR
Site City: LAKE FOREST
Site Zip: 92630
Enf Action Date: 06-24-2015
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: HMD/BEP.
Enf Action Division: Orange County Environmental Health
Enf Action Program: HMRRP
Enf Action Source: CERS

Affiliation:
Affiliation Type Desc: Document Preparer
Entity Name: LANCE YORK
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Environmental Contact
Entity Name: FRANK LOCKWOOD
Entity Title: Not reported

ARB INC (Continued) **S123517196**

Affiliation Address:	26000 CIVIC CENTER DR.
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92630
Affiliation Phone:	Not reported
Affiliation Type Desc:	CUPA District
Entity Name:	Orange County Env Health
Entity Title:	Not reported
Affiliation Address:	1241 East Dyer RoadSuite 120
Affiliation City:	Santa Ana
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92705-5611
Affiliation Phone:	(714) 433-6406
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	PO BOX 5166
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92630
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	Lance York
Entity Title:	CONSULTANT
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Parent Corporation
Entity Name:	ARB Inc
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	ARB Inc
Entity Title:	Not reported
Affiliation Address:	PO BOX 5166
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92630
Affiliation Phone:	(949) 589-9242

ARB INC (Continued) **S123517196**

Affiliation Type Desc:	Operator
Entity Name:	ARB, INC.
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(949) 465-7330

55
SE
1/8-1/4
0.204 mi.
1076 ft.

WHISPERING HILLS
26246 FERN GLEN
LAKE FOREST, CA 92630

RCRA NonGen / NLR **1025850331**
CAC003030423

Relative:
Higher

Actual:
722 ft.

RCRA NonGen / NLR:

Date form received by agency:	2019-08-21 00:00:00.0
Facility name:	WHISPERING HILLS
Facility address:	26246 FERN GLEN LAKE FOREST, CA 92630
EPA ID:	CAC003030423
Mailing address:	47 TESLA #200 IRVINE, CA 92618
Contact:	BOBBY AMEEN
Contact address:	47 TESLA #200 IRVINE, CA 92618
Contact country:	Not reported
Contact telephone:	714-420-4205
Contact email:	BECKY@HCIENV.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	BOBBY AMEEN
Owner/operator address:	47 TESLA #200 IRVINE, CA 92618
Owner/operator country:	Not reported
Owner/operator telephone:	714-420-4205
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	24HRC JASSO
Owner/operator address:	47 TESLA #200 IRVINE, CA 92618
Owner/operator country:	Not reported
Owner/operator telephone:	714-420-4205
Owner/operator email:	Not reported
Owner/operator fax:	Not reported

WHISPERING HILLS (Continued) **1025850331**

Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): Not reported
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

O56 **PANASONIC AVIONICS CORPORATION BUILDING 3** **CERS HAZ WASTE** **S123517495**
NNE **26211 ENTERPRISE WAY** **CERS TANKS** **N/A**
1/8-1/4 **LAKE FOREST, CA 92630** **CERS**
0.220 mi.
1163 ft. **Site 1 of 5 in cluster O**

Relative:
Higher

Actual:
677 ft.

CERS HAZ WASTE:
Name: PANASONIC AVIONICS CORPORATION BUILDING 3
Address: 26211 ENTERPRISE WAY
City,State,Zip: LAKE FOREST, CA 92630
Site ID: 411996
CERS ID: 10584169
CERS Description: Hazardous Waste Generator

CERS TANKS:
Name: PANASONIC AVIONICS CORPORATION BUILDING 3
Address: 26211 ENTERPRISE WAY
City,State,Zip: LAKE FOREST, CA 92630
Site ID: 411996
CERS ID: 10584169
CERS Description: Aboveground Petroleum Storage

CERS:
Name: PANASONIC AVIONICS CORPORATION BUILDING 3
Address: 26211 ENTERPRISE WAY
City,State,Zip: LAKE FOREST, CA 92630
Site ID: 411996
CERS ID: 10584169
CERS Description: Chemical Storage Facilities

Evaluation:
Eval General Type: Other/Unknown
Eval Date: 01-30-2018

PANASONIC AVIONICS CORPORATION BUILDING 3 (Continued) **S123517495**

Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted annual certification documents submitted to CERS on 1/9/18 with the following comments: - Inventory forms conditionally accepted and requested that Federal Hazard Categories be updated in next submission. - Locations of fire extinguishers, if there are any near or inside generator enclosure, be added to site map and revised map be submitted with next submission.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-24-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to E-submit on 2/18/15 were reviewed and declined with the following considerations: The "Yes" box for facility generating hazardous waste should not be checked since facility does not generate hazardous waste. The site map does not show the locations of the evacuation staging areas, emergency response equipment (not clear if shown), electrical shutoff, water shutoff, storm and sewer drains. A revised site map must be provided.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	06-14-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed Emergency Response and Training Plan submitted to CERS on 6/8/17. It is the same as the one that was submitted on 3/1/17 and missing information/phone number regarding reporting spills/emergencies to state and local agencies, including this agency. Aso, I changed status of Hazardous Materiral Inventory submitted on 3//1/17 to "Not accepted" since a new submittal adding Fire Code Hazard Classes on invenory form and emergency water shutoff to site map were not submitted as requested.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-18-2014
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site for new aboveground petroleum storage tank (APST) inspection. The facility has an emergency back up generator that has a 1800 gallon diesel tank. Annual employee training is provided. SPCC plan dated August 2009 is available on site. The SPCC will be reviewed this year and will be updated if necessary.
Eval Division:	Orange County Environmental Health
Eval Program:	APSA
Eval Source:	CERS
Eval General Type:	Other/Unknown

PANASONIC AVIONICS CORPORATION BUILDING 3 (Continued) **S123517495**

Eval Date:	06-20-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Not reported
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	06-24-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	The documents submitted on 4/1/14 has been reviewed and declined with the following considerations: The G yesG box for recycling more than 100 kg/month of excluded or exempted recyclable materials (per HSC 25143.2) is checked. Please provide Recyclable Materials Report to this Agency. Helium gas is not reportable since there is less than 1000 cubic feet on site. This chemical must be removed. The site map shows two locations with Lead Acid Batteries. However, during the onsite inspection conducted on 6/18/14, it was stated that lead acid batteries are not stored in this building. The presence of batteries must be verified and inventory sheet for Sulfuric acid removed if there are no batteries in this building. If there are lead acid batteries in this building, the Sulfuric acid must be reported in gallons and not in pounds. The CAS# (7664-93-9) for sulfuric acid listed beneath the common name must be removed since this a mixture and not pure. The reported volume [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	07-07-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted revised Hazardous Materials Inventory and Emergency Response and Training Plans submitted to CERS on 6/15/17.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-08-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine above ground petroleum storage tank (APST) inspection. Facility has a backup generator with an 1800 gallon diesel (double wall) tank. Weekly tank inspection log is available on site for review. SPCC plan dated December 2014 certified by professional engineer is available on site.
Eval Division:	Orange County Environmental Health
Eval Program:	APSA
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-18-2014
Violations Found:	No

PANASONIC AVIONICS CORPORATION BUILDING 3 (Continued) **S123517495**

Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct hazardous materials chemical inventory and business emergency plan inspection. I walked through the facility and inspected hazardous materials storage area. Facility has diesel for generator that meets the required disclosure quantities. All required documents have been electronically submitted to E-submit and will be reviewed for approval by this Agency.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	07-08-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to E-submit on 7/6/15 were reviewed and declined with the following considerations: The "Yes" box for facility generating hazardous waste was unchecked based on 2/24/15 agency's review of documents. As discussed during the on site inspection conducted on 6/30/15, agency's previous comments regarding unchecking the "Yes" box for facility generating hazardous waste should not be followed, since hazardous waste is generated at this site. Please check "yes" for site generating hazardous waste again. The site map does not show water and electrical shutoffs.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-23-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted annual certification documents submitted to E-submit on 2/22/16.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-08-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct hazardous materials chemical inventory and business emergency plan inspection. Paul Paxton granted consent to conduct inspection. I walked through the facility, perimeter and inspected hazardous material storage areas inside and outside the building. There has been no changes in types and/or volumes of the hazardous material stored on site since last inspection or previous reporting period. Training in hazardous materials management is provided for employees annually. Training records are available electronically. FacilityG s business emergency plan is available online on company's intranet. Evacuation plan/site map are posted throughout the building.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown

PANASONIC AVIONICS CORPORATION BUILDING 3 (Continued) **S123517495**

Eval Date:	06-30-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	On site to discuss corrections needed for HMBP documents that were submitted on 2/18/15 and declined, with Jason Whitt, facility contact who submitted documents. Hazardous waste is generated at this building, therefore, the "yes" box for facility generating hazardous waste will remain checked. Corrections to site map was also discussed.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	07-14-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to E-submit on 7/13/15 were reviewed and accepted.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	07-19-2019
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted annual certification document submitted to CERS on 5/30/19.
Eval Division:	Orange County Environmental Health
Eval Program:	APSA
Eval Source:	CERS

Coordinates:

Site ID:	411996
Facility Name:	PANASONIC AVIONICS CORPORATION BUILDING 3
Env Int Type Code:	APSA
Program ID:	10584169
Coord Name:	Not reported
Ref Point Type Desc:	Center of a facility or station.
Latitude:	33.666140
Longitude:	-117.673800

Affiliation:

Affiliation Type Desc:	CUPA District
Entity Name:	Orange County Env Health
Entity Title:	Not reported
Affiliation Address:	1241 East Dyer RoadSuite 120
Affiliation City:	Santa Ana
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92705-5611
Affiliation Phone:	(714) 433-6406
Affiliation Type Desc:	Document Preparer
Entity Name:	Shozo Hirano
Entity Title:	Not reported
Affiliation Address:	Not reported

PANASONIC AVIONICS CORPORATION BUILDING 3 (Continued) **S123517495**

Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Operator
Entity Name:	PANASONIC AVIONICS CORPORATION
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(949) 672-2000
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	26211 ENTERPRISE WAY
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92630
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	PANASONIC AVIONICS CORPORATION
Entity Title:	Not reported
Affiliation Address:	26200 ENTERPRISE WY
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92630
Affiliation Phone:	(949) 672-2000
Affiliation Type Desc:	Environmental Contact
Entity Name:	RAUL GONZALEZ
Entity Title:	Not reported
Affiliation Address:	26200 ENTERPRISE WAY
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92630
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	Raul Gonzalez
Entity Title:	Manager, Environmental Health, Safety & Security
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Parent Corporation

PANASONIC AVIONICS CORPORATION BUILDING 3 (Continued) **S123517495**

Entity Name:	PANASONIC AVIONICS CORPORATION
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

O57 **PANASONIC AVIONICS CORPORATION** **RCRA NonGen / NLR** **1024813482**
NNE **26211 ENTERPRISE WAY** **CAL000304332**
1/8-1/4 **LAKE FOREST, CA 92630**
0.220 mi.
1163 ft. **Site 2 of 5 in cluster O**

Relative:
Higher

Actual:
677 ft.

RCRA NonGen / NLR:

Date form received by agency:	2006-03-10 00:00:00.0
Facility name:	PANASONIC AVIONICS CORPORATION
Facility address:	26211 ENTERPRISE WAY LAKE FOREST, CA 92630-8402
EPA ID:	CAL000304332
Mailing address:	26200 ENTERPRISE LAKE FOREST, CA 92630-0000
Contact:	THAYNE THOMAS
Contact address:	26200 ENTERPRISE WAY SAME LAKE FOREST, CA 92630
Contact country:	Not reported
Contact telephone:	949-462-1416
Contact email:	THAYNE.THOMAS@PANASONIC.AERO
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	PANASONIC AVIONICS CORPORATION
Owner/operator address:	26200 ENTERPRISE LAKE FOREST, CA 92630
Owner/operator country:	Not reported
Owner/operator telephone:	949-672-2000
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	THAYNE THOMAS
Owner/operator address:	26200 ENTERPRISE WAY SAME LAKE FOREST, CA 92630
Owner/operator country:	Not reported
Owner/operator telephone:	949-462-1416
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other

PANASONIC AVIONICS CORPORATION (Continued) **1024813482**

Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

M58 **ASSOCIATED ELECTRICS INC** **RCRA NonGen / NLR** **1024818533**
NNW **26021 COMMERCENTRE DR** **CAL000325984**
1/8-1/4 **LAKE FOREST, CA 92630**
0.227 mi.
1200 ft. **Site 2 of 2 in cluster M**

Relative:
Higher

Actual:
697 ft.

RCRA NonGen / NLR:
Date form received by agency: 2007-10-22 00:00:00.0
Facility name: ASSOCIATED ELECTRICS INC
Facility address: 26021 COMMERCENTRE DR
LAKE FOREST, CA 92630-8853
EPA ID: CAL000325984
Contact: CURTIS HUSTING
Contact address: 26021 COMMERCENTRE DR
LAKE FOREST, CA 92630
Contact country: Not reported
Contact telephone: 949-544-7500
Contact email: CURTISHUSTING@AETEAM.NET
EPA Region: 09
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: CURTIS HUSTING
Owner/operator address: 26021 COMMERCENTRE DR
LAKE FOREST, CA 92630
Owner/operator country: Not reported
Owner/operator telephone: 949-544-7500
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

ASSOCIATED ELECTRICS INC (Continued) **1024818533**

Owner/operator name: ASSOCIATED ELECTRICS INC
Owner/operator address: 26021 COMMERCENTRE DR
LAKE FOREST, CA 92630
Owner/operator country: Not reported
Owner/operator telephone: 949-544-7500
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

N59 **EURO AMERICAN COLLISION CENTER** **CERS HAZ WASTE** **S113107395**
ENE **20591 PASCAL WAY** **HAZNET** **N/A**
1/8-1/4 **LAKE FOREST, CA 92630** **CERS**
0.230 mi. **HWTS**
1215 ft. **Site 3 of 3 in cluster N**

Relative: Higher
Actual: 678 ft.

CERS HAZ WASTE:
Name: EURO AMERICAN COLLISION CENTER
Address: 20591 PASCAL WAY
City,State,Zip: LAKE FOREST, CA 92630
Site ID: 373743
CERS ID: 10537324
CERS Description: Hazardous Waste Generator

HAZNET:
Name: EURO AMERICAN COLLISION CENTER #2
Address: 20591 PASCAL WAY
Address 2: Not reported
City,State,Zip: LAKE FOREST, CA 926300000
Contact: ED ALIKHANI PRESIDENT
Telephone: 7147093068
Mailing Name: Not reported
Mailing Address: 20591 PASCAL WAY

Year: 2017
Gepaid: CAL000212254

EURO AMERICAN COLLISION CENTER (Continued) **S113107395**

TSD EPA ID: CAD008364432
CA Waste Code: 212 - Oxygenated solvents (acetone, butanol, ethyl acetate, etc.)
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.363

Year: 2016
Gepaid: CAL000212254
TSD EPA ID: CAD008364432
CA Waste Code: 212 - Oxygenated solvents (acetone, butanol, ethyl acetate, etc.)
Disposal Method: H061 - Fuel Blending Prior To Energy Recovery At Another Site
Tons: 0.05

Year: 2016
Gepaid: CAL000212254
TSD EPA ID: CAD008364432
CA Waste Code: 221 - Waste oil and mixed oil
Disposal Method: H061 - Fuel Blending Prior To Energy Recovery At Another Site
Tons: 0.04

Year: 2016
Gepaid: CAL000212254
TSD EPA ID: CAD008364432
CA Waste Code: 352 - Other organic solids
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.03

Year: 2015
Gepaid: CAL000212254
TSD EPA ID: CAD008364432
CA Waste Code: 221 - Waste oil and mixed oil
Disposal Method: H061 - Fuel Blending Prior To Energy Recovery At Another Site
Tons: 0.175

Year: 2015
Gepaid: CAL000212254
TSD EPA ID: CAD008364432
CA Waste Code: 212 - Oxygenated solvents (acetone, butanol, ethyl acetate, etc.)
Disposal Method: H061 - Fuel Blending Prior To Energy Recovery At Another Site
Tons: 0.175

Year: 2015
Gepaid: CAL000212254
TSD EPA ID: CAD008364432
CA Waste Code: 352 - Other organic solids
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.45

Year: 2013
Gepaid: CAL000212254
TSD EPA ID: CAT080013352
CA Waste Code: 133 - Aqueous solution with total organic residues 10 percent or more
Disposal Method: H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons: 0.1251

EURO AMERICAN COLLISION CENTER (Continued) **S113107395**

Year:	2011
Gepaid:	CAL000212254
TSD EPA ID:	CAD008252405
CA Waste Code:	214 - Unspecified solvent mixture
Disposal Method:	H020 - Solvents Recovery
Tons:	0.108

Year:	2011
Gepaid:	CAL000212254
TSD EPA ID:	CAD008252405
CA Waste Code:	221 - Waste oil and mixed oil
Disposal Method:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Tons:	0.0456

Click this hyperlink while viewing on your computer to access
23 additional CA HAZNET: record(s) in the EDR Site Report.

Additional Info:

Year:	2013
Gen EPA ID:	CAL000212254
Shipment Date:	20130513
Creation Date:	8/6/2013 22:15:08
Receipt Date:	20130522
Manifest ID:	006012725FLE
Trans EPA ID:	CAR000217711
Trans Name:	CORRICK ENVIRO SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	133 - Aqueous solution with 10% or more total organic residues
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	0.1251
Waste Quantity:	30
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2001
Gen EPA ID:	CAL000212254
Shipment Date:	20010227
Creation Date:	5/16/2001 0:00:00
Receipt Date:	20010227
Manifest ID:	20503178
Trans EPA ID:	CAD008252405

EURO AMERICAN COLLISION CENTER (Continued) **S113107395**

Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008252405
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD008252405
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	R01 - Recycler
Quantity Tons:	0.108
Waste Quantity:	30
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2004
Gen EPA ID:	CAL000212254
Shipment Date:	20041227
Creation Date:	3/13/2007 18:30:28
Receipt Date:	20041227
Manifest ID:	24152526
Trans EPA ID:	CAD982440364
Trans Name:	PFR ENVIRONMENTAL INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008302903
Trans Name:	ONYX ENVIRONMENTAL SERVICES LLC
TSDF Alt EPA ID:	CAD008302903
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	R01 - Recycler
Quantity Tons:	0.0972
Waste Quantity:	27
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20041129
Creation Date:	1/28/2005 18:31:06
Receipt Date:	20041130
Manifest ID:	23762621
Trans EPA ID:	CAD982440364
Trans Name:	PFR ENVIRONMENTAL INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008302903
Trans Name:	ONYX ENVIRONMENTAL SERVICES LLC

EURO AMERICAN COLLISION CENTER (Continued) **S113107395**

TSDF Alt EPA ID:	CAD008302903
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	R01 - Recycler
Quantity Tons:	0.108
Waste Quantity:	30
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20041101
Creation Date:	12/31/2004 18:31:40
Receipt Date:	20041103
Manifest ID:	23762479
Trans EPA ID:	CAD982440364
Trans Name:	PFR ENVIRONMENTAL INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008302903
Trans Name:	ONYX ENVIRONMENTAL SERVICES LLC
TSDF Alt EPA ID:	CAD008302903
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	R01 - Recycler
Quantity Tons:	0.108
Waste Quantity:	30
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20041004
Creation Date:	1/6/2005 18:32:03
Receipt Date:	20041006
Manifest ID:	23762332
Trans EPA ID:	CAD982440364
Trans Name:	PFR ENVIRONMENTAL INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008302903
Trans Name:	ONYX ENVIRONMENTAL SERVICES LLC
TSDF Alt EPA ID:	CAD008302903
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	R01 - Recycler
Quantity Tons:	0.162
Waste Quantity:	45
Quantity Unit:	G
Additional Code 1:	Not reported

EURO AMERICAN COLLISION CENTER (Continued) **S113107395**

Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20040823
Creation Date:	1/4/2005 18:32:14
Receipt Date:	20040823
Manifest ID:	23762145
Trans EPA ID:	CAD982440364
Trans Name:	PFR ENVIRONMENTAL INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008302903
Trans Name:	ONYX ENVIRONMENTAL SERVICES LLC
TSDF Alt EPA ID:	CAD008302903
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	R01 - Recycler
Quantity Tons:	0.144
Waste Quantity:	40
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20040719
Creation Date:	11/1/2004 12:36:11
Receipt Date:	20040720
Manifest ID:	23761914
Trans EPA ID:	CAD982440364
Trans Name:	PFR ENVIRONMENTAL INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008302903
Trans Name:	ONYX ENVIRONMENTAL SERVICES LLC
TSDF Alt EPA ID:	CAD008302903
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	R01 - Recycler
Quantity Tons:	0.144
Waste Quantity:	40
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20040607
Creation Date:	10/29/2004 7:40:51
Receipt Date:	20040609
Manifest ID:	23761763

EURO AMERICAN COLLISION CENTER (Continued) **S113107395**

Trans EPA ID:	CAD982440364
Trans Name:	PFR ENVIRONMENTAL INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008302903
Trans Name:	ONYX ENVIRONMENTAL SERVICES LLC
TSDF Alt EPA ID:	CAD008302903
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	R01 - Recycler
Quantity Tons:	0.09
Waste Quantity:	25
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20040510
Creation Date:	10/15/2004 8:41:08
Receipt Date:	20040512
Manifest ID:	23761635
Trans EPA ID:	CAD982440364
Trans Name:	PFR ENVIRONMENTAL INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008302903
Trans Name:	ONYX ENVIRONMENTAL SERVICES LLC
TSDF Alt EPA ID:	CAD008302903
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	R01 - Recycler
Quantity Tons:	0.1152
Waste Quantity:	32
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20040412
Creation Date:	10/1/2004 18:31:09
Receipt Date:	20040413
Manifest ID:	22767068
Trans EPA ID:	CAD982440364
Trans Name:	PFR ENVIRONMENTAL INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008302903
Trans Name:	ONYX ENVIRONMENTAL SERVICES LLC
TSDF Alt EPA ID:	CAD008302903
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture

EURO AMERICAN COLLISION CENTER (Continued) **S113107395**

RCRA Code:	D001
Meth Code:	R01 - Recycler
Quantity Tons:	0.126
Waste Quantity:	35
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20040308
Creation Date:	9/10/2004 9:51:11
Receipt Date:	20040309
Manifest ID:	22766935
Trans EPA ID:	CAD982440364
Trans Name:	PFR ENVIRONMENTAL INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008302903
Trans Name:	ONYX ENVIRONMENTAL SERVICES LLC
TSDF Alt EPA ID:	CAD008302903
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	R01 - Recycler
Quantity Tons:	0.1188
Waste Quantity:	33
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2002
Gen EPA ID:	CAL000212254
Shipment Date:	20021028
Creation Date:	2/18/2003 18:31:24
Receipt Date:	20021030
Manifest ID:	21979449
Trans EPA ID:	CAD982440364
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008302903
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	R01 - Recycler
Quantity Tons:	0.144
Waste Quantity:	40
Quantity Unit:	G

EURO AMERICAN COLLISION CENTER (Continued) **S113107395**

Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20020916
Creation Date:	1/27/2003 18:32:25
Receipt Date:	20020917
Manifest ID:	21988386
Trans EPA ID:	CAD982440364
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008302903
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	R01 - Recycler
Quantity Tons:	0.1116
Waste Quantity:	31
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20020812
Creation Date:	3/13/2003 18:31:17
Receipt Date:	20020814
Manifest ID:	21988174
Trans EPA ID:	CAD982440364
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008302903
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	R01 - Recycler
Quantity Tons:	0.1152
Waste Quantity:	32
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20020529
Creation Date:	8/29/2002 18:31:16
Receipt Date:	20020529

EURO AMERICAN COLLISION CENTER (Continued) **S113107395**

Manifest ID:	21646442
Trans EPA ID:	CAD008252405
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008252405
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	133 - Aqueous solution with 10% or more total organic residues
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	Not reported
Waste Quantity:	16
Quantity Unit:	Not reported
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2009
Gen EPA ID:	CAL000212254
Shipment Date:	20090213
Creation Date:	7/14/2009 18:30:20
Receipt Date:	20090213
Manifest ID:	004997341JJK
Trans EPA ID:	CAR000194837
Trans Name:	PACIFIC COAST LACQUER
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008252405
Trans Name:	PACIFIC RESOURCE RECOVERY
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	F005
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.1
Waste Quantity:	200
Quantity Unit:	P
Additional Code 1:	F003
Additional Code 2:	D001
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20090213
Creation Date:	7/14/2009 18:30:20
Receipt Date:	20090213
Manifest ID:	004997341JJK
Trans EPA ID:	CAR000194837
Trans Name:	PACIFIC COAST LACQUER
Trans 2 EPA ID:	Not reported

EURO AMERICAN COLLISION CENTER (Continued) **S113107395**

Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008252405
Trans Name:	PACIFIC RESOURCE RECOVERY
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	133 - Aqueous solution with 10% or more total organic residues
RCRA Code:	Not reported
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.02919
Waste Quantity:	7
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20090213
Creation Date:	7/14/2009 18:30:20
Receipt Date:	20090213
Manifest ID:	004997341JJK
Trans EPA ID:	CAR000194837
Trans Name:	PACIFIC COAST LACQUER
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008252405
Trans Name:	PACIFIC RESOURCE RECOVERY
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	133 - Aqueous solution with 10% or more total organic residues
RCRA Code:	Not reported
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.28356
Waste Quantity:	68
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2003
Gen EPA ID:	CAL000212254

Shipment Date:	20031229
Creation Date:	7/30/2004 18:31:14
Receipt Date:	20031230
Manifest ID:	22762624
Trans EPA ID:	CAD982440364
Trans Name:	PFR ENVIRONMENTAL INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008302903
Trans Name:	ONYX ENVIRONMENTAL SERVICES LLC
TSDF Alt EPA ID:	CAD008302903
TSDF Alt Name:	Not reported

EURO AMERICAN COLLISION CENTER (Continued) **S113107395**

Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	R01 - Recycler
Quantity Tons:	0.09
Waste Quantity:	25
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20031201
Creation Date:	8/5/2004 10:14:17
Receipt Date:	20031201
Manifest ID:	22762417
Trans EPA ID:	CAD982440364
Trans Name:	PFR ENVIRONMENTAL INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008302903
Trans Name:	ONYX ENVIRONMENTAL SERVICES LLC
TSDF Alt EPA ID:	CAD008302903
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	R01 - Recycler
Quantity Tons:	0.126
Waste Quantity:	35
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20031201
Creation Date:	8/9/2004 8:46:56
Receipt Date:	20031201
Manifest ID:	22768086
Trans EPA ID:	CAD982440364
Trans Name:	PFR ENVIRONMENTAL INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008302903
Trans Name:	ONYX ENVIRONMENTAL SERVICES LLC
TSDF Alt EPA ID:	CAD008302903
TSDF Alt Name:	Not reported
Waste Code Description:	181 - Other inorganic solid waste Organics
RCRA Code:	F001
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.1
Waste Quantity:	200
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported

EURO AMERICAN COLLISION CENTER (Continued) **S113107395**

Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20031020
Creation Date:	8/3/2004 15:00:31
Receipt Date:	20031020
Manifest ID:	22768198
Trans EPA ID:	CAD982440364
Trans Name:	PFR ENVIRONMENTAL INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008302903
Trans Name:	ONYX ENVIRONMENTAL SERVICES LLC
TSDF Alt EPA ID:	CAD008302903
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	R01 - Recycler
Quantity Tons:	0.198
Waste Quantity:	55
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20030904
Creation Date:	7/29/2004 7:46:19
Receipt Date:	20030909
Manifest ID:	22768029
Trans EPA ID:	CAD982440364
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008302903
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD008302903
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	R01 - Recycler
Quantity Tons:	0.126
Waste Quantity:	35
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20030804
Creation Date:	7/26/2004 18:30:41
Receipt Date:	20030805
Manifest ID:	22417448
Trans EPA ID:	CAD982440364
Trans Name:	Not reported

EURO AMERICAN COLLISION CENTER (Continued) **S113107395**

Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008302903
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD008302903
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	R01 - Recycler
Quantity Tons:	0.1008
Waste Quantity:	28
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20030707
Creation Date:	7/22/2004 7:52:06
Receipt Date:	20030708
Manifest ID:	22131934
Trans EPA ID:	CAD982440364
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008302903
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD008302903
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	R01 - Recycler
Quantity Tons:	0.126
Waste Quantity:	35
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20030505
Creation Date:	7/31/2003 18:30:54
Receipt Date:	20030505
Manifest ID:	22415736
Trans EPA ID:	CAD982440364
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008302903
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD008302903
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	R01 - Recycler

EURO AMERICAN COLLISION CENTER (Continued) **S113107395**

Quantity Tons:	0.09
Waste Quantity:	25
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20030310
Creation Date:	5/19/2003 18:32:02
Receipt Date:	20030313
Manifest ID:	22130086
Trans EPA ID:	CAD982440364
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008302903
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD008302903
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	R01 - Recycler
Quantity Tons:	0.126
Waste Quantity:	35
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20030106
Creation Date:	3/31/2003 18:31:15
Receipt Date:	20030108
Manifest ID:	22132736
Trans EPA ID:	CAD982440364
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008302903
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	R01 - Recycler
Quantity Tons:	0.1368
Waste Quantity:	38
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

EURO AMERICAN COLLISION CENTER (Continued) **S113107395**

Additional Info:

Year:	2016
Gen EPA ID:	CAL000212254
Shipment Date:	20150710
Creation Date:	Not reported
Receipt Date:	Not reported
Manifest ID:	014863517JJK
Trans EPA ID:	CAD983649880
Trans Name:	PSC ENVIRONMENTAL SERVICES OF POMONA LP
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	331 - Off-specification, aged, or surplus organics
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.175
Waste Quantity:	350
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20150710
Creation Date:	9/22/2015 22:15:56
Receipt Date:	20150720
Manifest ID:	014863517JJK
Trans EPA ID:	CAD983649880
Trans Name:	PSC ENVIRONMENTAL SERVICES OF POMONA LP
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.175
Waste Quantity:	350
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20150710
Creation Date:	9/22/2015 22:15:56
Receipt Date:	20150720
Manifest ID:	014863517JJK

EURO AMERICAN COLLISION CENTER (Continued) **S113107395**

Trans EPA ID:	CAD983649880
Trans Name:	PSC ENVIRONMENTAL SERVICES OF POMONA LP
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	D007
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.45
Waste Quantity:	900
Quantity Unit:	P
Additional Code 1:	D006
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20150710
Creation Date:	9/22/2015 22:15:56
Receipt Date:	20150720
Manifest ID:	014863517JJK
Trans EPA ID:	CAD983649880
Trans Name:	PSC ENVIRONMENTAL SERVICES OF POMONA LP
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	212 - Oxygenated solvents (acetone, butanol, ethyl acetate, etc.
RCRA Code:	F003
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.175
Waste Quantity:	350
Quantity Unit:	P
Additional Code 1:	D001
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2017
Gen EPA ID:	CAL000212254

Shipment Date:	20170929
Creation Date:	5/17/2018 18:30:51
Receipt Date:	20171006
Manifest ID:	000194591DAT
Trans EPA ID:	MNS000110924
Trans Name:	STERICYCLE SPECIALTY WASTE SOLUTIONS INC
Trans 2 EPA ID:	CAR000217554
Trans 2 Name:	CRUZ CONTAINERS LOGISTICS INC

EURO AMERICAN COLLISION CENTER (Continued) **S113107395**

TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	212 - Oxygenated solvents (acetone, butanol, ethyl acetate, etc.
RCRA Code:	F003
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.363
Waste Quantity:	110
Quantity Unit:	G
Additional Code 1:	D001
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2005
Gen EPA ID:	CAL000212254
Shipment Date:	20050913
Creation Date:	3/12/2006 18:30:40
Receipt Date:	20050913
Manifest ID:	24469983
Trans EPA ID:	CAD008252405
Trans Name:	PACIFIC COAST LACQUER
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008252405
Trans Name:	PACIFIC RESOURCE RECOVERY
TSDF Alt EPA ID:	CAD008252405
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	R01 - Recycler
Quantity Tons:	0.18
Waste Quantity:	50
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20050615
Creation Date:	8/17/2005 18:33:44
Receipt Date:	20050617
Manifest ID:	24156489
Trans EPA ID:	CAD982440364
Trans Name:	PFR ENVIRONMENTAL INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008302903
Trans Name:	ONYX ENVIRONMENTAL SERVICES LLC
TSDF Alt EPA ID:	CAD008302903
TSDF Alt Name:	Not reported

EURO AMERICAN COLLISION CENTER (Continued) **S113107395**

Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	R01 - Recycler
Quantity Tons:	0.108
Waste Quantity:	30
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20050516
Creation Date:	8/24/2005 7:27:35
Receipt Date:	20050520
Manifest ID:	24153577
Trans EPA ID:	CAD982440364
Trans Name:	PFR ENVIRONMENTAL INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008302903
Trans Name:	ONYX ENVIRONMENTAL SERVICES LLC
TSDF Alt EPA ID:	CAD008302903
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	R01 - Recycler
Quantity Tons:	0.09
Waste Quantity:	25
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20050418
Creation Date:	7/20/2005 18:30:55
Receipt Date:	20050422
Manifest ID:	24153463
Trans EPA ID:	CAD982440364
Trans Name:	PFR ENVIRONMENTAL INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008302903
Trans Name:	ONYX ENVIRONMENTAL SERVICES LLC
TSDF Alt EPA ID:	CAD008302903
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	R01 - Recycler
Quantity Tons:	0.0936
Waste Quantity:	26
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported

EURO AMERICAN COLLISION CENTER (Continued) **S113107395**

Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20050321
Creation Date:	5/29/2005 18:31:56
Receipt Date:	20050325
Manifest ID:	24153329
Trans EPA ID:	CAD982440364
Trans Name:	PFR ENVIRONMENTAL INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008302903
Trans Name:	ONYX ENVIRONMENTAL SERVICES LLC
TSDF Alt EPA ID:	CAD008302903
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	R01 - Recycler
Quantity Tons:	0.108
Waste Quantity:	30
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20050228
Creation Date:	4/29/2005 11:28:07
Receipt Date:	20050304
Manifest ID:	24152775
Trans EPA ID:	CAD982440364
Trans Name:	PFR ENVIRONMENTAL INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008302903
Trans Name:	ONYX ENVIRONMENTAL SERVICES LLC
TSDF Alt EPA ID:	CAD008302903
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	R01 - Recycler
Quantity Tons:	0.1296
Waste Quantity:	36
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20050124
Creation Date:	3/17/2005 18:34:39
Receipt Date:	20050124
Manifest ID:	24152646
Trans EPA ID:	CAD982440364
Trans Name:	PFR ENVIRONMENTAL INC

EURO AMERICAN COLLISION CENTER (Continued) **S113107395**

Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008302903
Trans Name:	ONYX ENVIRONMENTAL SERVICES LLC
TSDF Alt EPA ID:	CAD008302903
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	R01 - Recycler
Quantity Tons:	0.126
Waste Quantity:	35
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2015
Gen EPA ID:	CAL000212254
Shipment Date:	20150710
Creation Date:	Not reported
Receipt Date:	Not reported
Manifest ID:	014863517JJK
Trans EPA ID:	CAD983649880
Trans Name:	PSC ENVIRONMENTAL SERVICES OF POMONA LP
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	331 - Off-specification, aged, or surplus organics
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.175
Waste Quantity:	350
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20150710
Creation Date:	9/22/2015 22:15:56
Receipt Date:	20150720
Manifest ID:	014863517JJK
Trans EPA ID:	CAD983649880
Trans Name:	PSC ENVIRONMENTAL SERVICES OF POMONA LP
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC

EURO AMERICAN COLLISION CENTER (Continued) **S113107395**

TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.175
Waste Quantity:	350
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20150710
Creation Date:	9/22/2015 22:15:56
Receipt Date:	20150720
Manifest ID:	014863517JJK
Trans EPA ID:	CAD983649880
Trans Name:	PSC ENVIRONMENTAL SERVICES OF POMONA LP
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	D007
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.45
Waste Quantity:	900
Quantity Unit:	P
Additional Code 1:	D006
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20150710
Creation Date:	9/22/2015 22:15:56
Receipt Date:	20150720
Manifest ID:	014863517JJK
Trans EPA ID:	CAD983649880
Trans Name:	PSC ENVIRONMENTAL SERVICES OF POMONA LP
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008364432
Trans Name:	RHO CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	212 - Oxygenated solvents (acetone, butanol, ethyl acetate, etc.
RCRA Code:	F003
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.175
Waste Quantity:	350
Quantity Unit:	P

EURO AMERICAN COLLISION CENTER (Continued) **S113107395**

Additional Code 1:	D001
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2011
Gen EPA ID:	CAL000212254
Shipment Date:	20110601
Creation Date:	12/9/2011 18:30:36
Receipt Date:	20110601
Manifest ID:	008660570JJK
Trans EPA ID:	CAR000194837
Trans Name:	PACIFIC COAST LACQUER
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008252405
Trans Name:	PACIFIC RESOURCE RECOVERY
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	F005
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.2
Waste Quantity:	400
Quantity Unit:	P
Additional Code 1:	F003
Additional Code 2:	D001
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20110525
Creation Date:	11/30/2011 18:30:12
Receipt Date:	20110525
Manifest ID:	008660284JJK
Trans EPA ID:	CAR000194837
Trans Name:	PACIFIC COAST LACQUER
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008252405
Trans Name:	PACIFIC RESOURCE RECOVERY
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	F005
Meth Code:	H020 - Solvents Recovery
Quantity Tons:	0.108
Waste Quantity:	30
Quantity Unit:	G
Additional Code 1:	F003
Additional Code 2:	D001
Additional Code 3:	Not reported
Additional Code 4:	Not reported

EURO AMERICAN COLLISION CENTER (Continued) **S113107395**

Additional Code 5:	Not reported
Shipment Date:	20110525
Creation Date:	11/30/2011 18:30:12
Receipt Date:	20110525
Manifest ID:	008660284JJK
Trans EPA ID:	CAR000194837
Trans Name:	PACIFIC COAST LACQUER
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008252405
Trans Name:	PACIFIC RESOURCE RECOVERY
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	F005
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.0252
Waste Quantity:	7
Quantity Unit:	G
Additional Code 1:	F003
Additional Code 2:	D001
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20110325
Creation Date:	9/13/2011 18:30:19
Receipt Date:	20110328
Manifest ID:	007422174JJK
Trans EPA ID:	CAR000194837
Trans Name:	PACIFIC COAST LACQUER
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008252405
Trans Name:	PACIFIC RESOURCE RECOVERY
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	133 - Aqueous solution with 10% or more total organic residues
RCRA Code:	Not reported
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.11676
Waste Quantity:	28
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20110204
Creation Date:	7/8/2011 18:30:12
Receipt Date:	20110204
Manifest ID:	007419084JJK
Trans EPA ID:	CAR000194837
Trans Name:	PACIFIC COAST LACQUER
Trans 2 EPA ID:	Not reported

EURO AMERICAN COLLISION CENTER (Continued) **S113107395**

Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008252405
Trans Name:	PACIFIC RESOURCE RECOVERY
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	133 - Aqueous solution with 10% or more total organic residues
RCRA Code:	Not reported
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.1251
Waste Quantity:	30
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20110204
Creation Date:	7/8/2011 18:30:12
Receipt Date:	20110204
Manifest ID:	007419084JJK
Trans EPA ID:	CAR000194837
Trans Name:	PACIFIC COAST LACQUER
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008252405
Trans Name:	PACIFIC RESOURCE RECOVERY
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.0456
Waste Quantity:	12
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20110204
Creation Date:	7/8/2011 18:30:12
Receipt Date:	20110204
Manifest ID:	007419084JJK
Trans EPA ID:	CAR000194837
Trans Name:	PACIFIC COAST LACQUER
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008252405
Trans Name:	PACIFIC RESOURCE RECOVERY
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	F005
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)

EURO AMERICAN COLLISION CENTER (Continued) **S113107395**

Quantity Tons:	0.1
Waste Quantity:	200
Quantity Unit:	P
Additional Code 1:	F003
Additional Code 2:	D001
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20110204
Creation Date:	7/8/2011 18:30:12
Receipt Date:	20110204
Manifest ID:	007419084JJK
Trans EPA ID:	CAR000194837
Trans Name:	PACIFIC COAST LACQUER
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008252405
Trans Name:	PACIFIC RESOURCE RECOVERY
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	133 - Aqueous solution with 10% or more total organic residues
RCRA Code:	Not reported
Meth Code:	- Not reported
Quantity Tons:	Not reported
Waste Quantity:	Not reported
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2006
Gen EPA ID:	CAL000212254
Shipment Date:	20060330
Creation Date:	7/27/2006 18:35:05
Receipt Date:	20060330
Manifest ID:	25093251
Trans EPA ID:	CAD008252405
Trans Name:	PACIFIC COAST LACQUER
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008252405
Trans Name:	PACIFIC RESOURCE RECOVERY
TSDF Alt EPA ID:	CAD008252405
TSDF Alt Name:	Not reported
Waste Code Description:	133 - Aqueous solution with 10% or more total organic residues
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	0.16263
Waste Quantity:	39
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported

EURO AMERICAN COLLISION CENTER (Continued) **S113107395**

Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20060330
Creation Date:	7/27/2006 18:35:05
Receipt Date:	20060330
Manifest ID:	25093251
Trans EPA ID:	CAD008252405
Trans Name:	PACIFIC COAST LACQUER
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008252405
Trans Name:	PACIFIC RESOURCE RECOVERY
TSDF Alt EPA ID:	CAD008252405
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	D001
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.1
Waste Quantity:	200
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2010
Gen EPA ID:	CAL000212254
Shipment Date:	20101013
Creation Date:	4/22/2011 18:30:28
Receipt Date:	20101013
Manifest ID:	007414382JJK
Trans EPA ID:	CAR000194837
Trans Name:	PACIFIC COAST LACQUER
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008252405
Trans Name:	PACIFIC RESOURCE RECOVERY
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	133 - Aqueous solution with 10% or more total organic residues
RCRA Code:	Not reported
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.11259
Waste Quantity:	27
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20101013

EURO AMERICAN COLLISION CENTER (Continued) **S113107395**

Creation Date:	4/22/2011 18:30:28
Receipt Date:	20101013
Manifest ID:	007414382JJK
Trans EPA ID:	CAR000194837
Trans Name:	PACIFIC COAST LACQUER
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008252405
Trans Name:	PACIFIC RESOURCE RECOVERY
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	F005
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.1
Waste Quantity:	200
Quantity Unit:	P
Additional Code 1:	F003
Additional Code 2:	D001
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20100525
Creation Date:	1/24/2011 18:30:30
Receipt Date:	20100525
Manifest ID:	006492961JJK
Trans EPA ID:	CAR000194837
Trans Name:	PACIFIC COAST LACQUER
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008252405
Trans Name:	PACIFIC RESOURCE RECOVERY
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	F005
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.1
Waste Quantity:	200
Quantity Unit:	P
Additional Code 1:	F003
Additional Code 2:	D001
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20100310
Creation Date:	12/3/2010 18:30:22
Receipt Date:	20100310
Manifest ID:	006489890JJK
Trans EPA ID:	CAR000194837
Trans Name:	PACIFIC COAST LACQUER
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported

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TSDF EPA ID:	CAD008252405
Trans Name:	PACIFIC RESOURCE RECOVERY
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	133 - Aqueous solution with 10% or more total organic residues
RCRA Code:	Not reported
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	0.1251
Waste Quantity:	30
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20100310
Creation Date:	12/3/2010 18:30:22
Receipt Date:	20100310
Manifest ID:	006489890JJK
Trans EPA ID:	CAR000194837
Trans Name:	PACIFIC COAST LACQUER
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008252405
Trans Name:	PACIFIC RESOURCE RECOVERY
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	F005
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.1
Waste Quantity:	200
Quantity Unit:	P
Additional Code 1:	F003
Additional Code 2:	D001
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2007
Gen EPA ID:	CAL000212254

Shipment Date:	20070404
Creation Date:	1/8/2008 18:30:08
Receipt Date:	20070404
Manifest ID:	001648247JJK
Trans EPA ID:	CAD008252405
Trans Name:	PACIFIC COAST LACQUER
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008252405
Trans Name:	PACIFIC RESOURCE RECOVERY
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported

EURO AMERICAN COLLISION CENTER (Continued) **S113107395**

Waste Code Description:	512 - Other empty containers 30 gallons or more
RCRA Code:	D001
Meth Code:	- Not reported
Quantity Tons:	Not reported
Waste Quantity:	Not reported
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20070404
Creation Date:	1/8/2008 18:30:08
Receipt Date:	20070404
Manifest ID:	001648247JJK
Trans EPA ID:	CAD008252405
Trans Name:	PACIFIC COAST LACQUER
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008252405
Trans Name:	PACIFIC RESOURCE RECOVERY
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	F005
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.2
Waste Quantity:	400
Quantity Unit:	P
Additional Code 1:	F003
Additional Code 2:	D001
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2000
Gen EPA ID:	CAL000212254
Shipment Date:	20001213
Creation Date:	2/1/2001 0:00:00
Receipt Date:	20001215
Manifest ID:	20830001
Trans EPA ID:	CAR000036673
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008302903
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD008302903
TSDF Alt Name:	Not reported
Waste Code Description:	461 - Paint sludge
RCRA Code:	D001
Meth Code:	R01 - Recycler
Quantity Tons:	0.1501

EURO AMERICAN COLLISION CENTER (Continued) **S113107395**

Waste Quantity:	36
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20000929
Creation Date:	11/14/2000 0:00:00
Receipt Date:	20000929
Manifest ID:	20495249
Trans EPA ID:	CAR000036673
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008302903
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD008302903
TSDF Alt Name:	Not reported
Waste Code Description:	461 - Paint sludge
RCRA Code:	D001
Meth Code:	R01 - Recycler
Quantity Tons:	0.1334
Waste Quantity:	32
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20000929
Creation Date:	11/14/2000 0:00:00
Receipt Date:	20000929
Manifest ID:	20495249
Trans EPA ID:	CAR000036673
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008302903
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD008302903
TSDF Alt Name:	Not reported
Waste Code Description:	- Not reported
RCRA Code:	D001
Meth Code:	- Not reported
Quantity Tons:	0
Waste Quantity:	0
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20000718

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Creation Date:	9/25/2000 0:00:00
Receipt Date:	20000718
Manifest ID:	20273771
Trans EPA ID:	CAD008252405
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008252405
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD008252405
TSDF Alt Name:	Not reported
Waste Code Description:	214 - Unspecified solvent mixture
RCRA Code:	D001
Meth Code:	R01 - Recycler
Quantity Tons:	0.0468
Waste Quantity:	13
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

CERS:

Name:	EURO AMERICAN COLLISION CENTER
Address:	20591 PASCAL WAY
City,State,Zip:	LAKE FOREST, CA 92630
Site ID:	373743
CERS ID:	10537324
CERS Description:	Chemical Storage Facilities

Violations:

Site ID:	373743
Site Name:	EURO AMERICAN COLLISION CENTER
Violation Date:	01-14-2020
Citation:	HSC 6.95 25505(a)(4) - California Health and Safety Code, Chapter 6.95, Section(s) 25505(a)(4)
Violation Description:	Failure to provide initial and annual training to all employees in safety procedures in the event of a release or threatened release of a hazardous material or failure to document and maintain training records for a minimum of three years.
Violation Notes:	Training in hazardous materials management has not been provided for employees. Training that includes safety procedures in the event of a release or threatened release of hazardous materials, must be conducted within 30 days of this inspection and records be submitted to this agency.
Violation Division:	Orange County Environmental Health
Violation Program:	HMRRP
Violation Source:	CERS

Site ID:	373743
Site Name:	EURO AMERICAN COLLISION CENTER
Violation Date:	01-17-2017
Citation:	22 CCR 12 66262.34(f) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(f)
Violation Description:	Failure to properly label hazardous waste accumulation containers and portable tanks with the following requirements: "Hazardous Waste",

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	name and address of the generator, physical and chemical characteristics of the Hazardous Waste, and starting accumulation date.
Violation Notes:	Returned to compliance on 01/17/2017. Spent spray booth filters bag is stored closed but not labeled. The bag was labeled during the inspection and this violation has been corrected.
Violation Division:	Orange County Environmental Health
Violation Program:	HW
Violation Source:	CERS
Site ID:	373743
Site Name:	EURO AMERICAN COLLISION CENTER
Violation Date:	10-01-2014
Citation:	HSC 6.95 25508(d) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(d)
Violation Description:	Failure to complete and/or electronically submit a business plan when storing/handling a hazardous material at or above reportable quantities.
Violation Notes:	Returned to compliance on 06/22/2016.
Violation Division:	Orange County Environmental Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	373743
Site Name:	EURO AMERICAN COLLISION CENTER
Violation Date:	01-14-2020
Citation:	HSC 6.5 25123.3(h)(1) - California Health and Safety Code, Chapter 6.5, Section(s) 25123.3(h)(1)
Violation Description:	Failure to send hazardous waste offsite for treatment, storage, or disposal within 180 days (or 270 days if waste is transported over 200 miles) for a generator who generates less than 1000 kilogram per month if all of the following conditions are met: (1) The quantity of hazardous waste accumulated onsite never exceeds 6,000 kilograms. (2) The generator complies with the requirements of 40 Code of Federal Regulations section 262.34(d), (e) and (f). (3) The generator does not hold acutely hazardous waste or extremely hazardous waste in an amount greater than one kilogram for more than 90 days.
Violation Notes:	Last waste pick up occurred on 11/28/18. There is approximately 55 gallons of waste paint stored on site. Waste storage time has been exceeded. Waste paint must be disposed of properly within 30 days of this inspection and a copy of the manifest be submitted to this Agency.
Violation Division:	Orange County Environmental Health
Violation Program:	HW
Violation Source:	CERS
Site ID:	373743
Site Name:	EURO AMERICAN COLLISION CENTER
Violation Date:	01-17-2017
Citation:	22 CCR 12 66262.34(d) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(d)
Violation Description:	Failure to send hazardous waste offsite for treatment, storage, or disposal within 180 days (or 270 days if waste is transported over 200 miles) for a generator who generates less than 1000 kilogram per month if all of the following conditions are met: (1) The quantity of hazardous waste accumulated onsite never exceeds 6,000 kilograms. (2) The generator complies with the requirements of 40 Code of Federal

EURO AMERICAN COLLISION CENTER (Continued) **S113107395**

Regulations section 262.34(d), (e) and (f). (3) The generator does not hold acutely hazardous waste or extremely hazardous waste in an amount greater than one kilogram for more than 90 days.

Violation Notes: Returned to compliance on 10/03/2017. The last waste pick up occurred on 3/17/16. There is approximately 80 gallons of waste paint stored on site. Waste storage time has been exceeded. Waste paint must be disposed of properly within 30 days of this inspection and a copy of the manifest be submitted to this Agency.
Violation Division: Orange County Environmental Health
Violation Program: HW
Violation Source: CERS

Site ID: 373743
Site Name: EURO AMERICAN COLLISION CENTER
Violation Date: 03-09-2015
Citation: 22 CCR 12 66262.34(d) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(d)
Violation Description: Failure to dispose of hazardous waste within 180 days (or 270 if waste is transported over 200 miles) for the generator who generates less than 1000 kilogram per month, but more than 100 kilograms per month.
Violation Notes: Returned to compliance on 10/14/2015. Accumulation time for storing waste antifreeze, waste paint/thinner and spent spray booth filters drums have been exceeded. There is approximately 40 gallons of both waste antifreeze and waste paint and two full drums of spent spray booth filter stored on site currently. Waste paint/thinner, waste antifreeze and spent spray booth filters must be disposed of properly within 30 days of this inspection.
Violation Division: Orange County Environmental Health
Violation Program: HW
Violation Source: CERS

Site ID: 373743
Site Name: EURO AMERICAN COLLISION CENTER
Violation Date: 10-01-2014
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description: Failure to complete and electronically submit hazardous material inventory information for all reportable hazardous materials on site at or above reportable quantities.
Violation Notes: Returned to compliance on 06/22/2016.
Violation Division: Orange County Environmental Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 373743
Site Name: EURO AMERICAN COLLISION CENTER
Violation Date: 01-14-2020
Citation: 22 CCR 12 66262.34(f) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(f)
Violation Description: Failure to properly label hazardous waste accumulation containers and portable tanks with the following requirements: "Hazardous Waste", name and address of the generator, physical and chemical characteristics of the Hazardous Waste, and starting accumulation date.
Violation Notes: Labels on waste paint and spent waterborne solution drums are not legible. Hazardous waste labels were placed on both drums during inspection. This violation has been corrected.

EURO AMERICAN COLLISION CENTER (Continued) **S113107395**

Violation Division: Orange County Environmental Health
Violation Program: HW
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-17-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to conduct hazardous materials chemical inventory and business emergency plan inspection. Michael Tilander granted consent to conduct inspection. I walked through the facility and inspected hazardous material storage areas in between spray booths and in shop. Seven empty 55 gallon drums were observed throughout the shop. There has been changes in types and/or volumes of the hazardous material stored on site since last inspection or previous reporting period. Business is now storing waste oil and waste antifreeze in 55 gallons drums. Inventory forms for waste oil and waste antifreeze were uploaded into CERS during the inspection. Emergency card is posted on the first aid kit box in the shop. I discussed revising site map to show locations of the waste oil and waste antifreeze to be submitted when documents are certified for 2017.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 02-11-2014
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to conduct hazardous materials chemical inventory and business emergency plan inspection. I walked through the facility and inspected hazardous materials storage area. The facility has the following hazardous materials that meet required disclosure quantities: - Used oil - Used antifreeze - Waste solvent based paint Facility is required and has been notified to electronically submit the following documents within 30 days of this inspection: - Business Activities form - Owner/Operator Identification form - Hazardous Material Chemical Inventory forms - Facility Site Map - Business Emergency Plan Documents must be electronically submitted by going to www.esubmit.ocgov.com and requesting a username and password. User guides and tutorials are located on the home page to help you get started. If you are having trouble, please call (714) 433-6000 and request to speak to the portal administrator.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 02-11-2014
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to conduct routine hazardous waste inspection. Micheal Tilander granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage areas. I did not observe any hazardous waste in trash cans or municipal trash. Waste paint (1), spent waterborne cleaning solution (1), waste oil (1),

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waste antifreeze (2) and spent spray booth filters (2) drums are stored closed and labeled. Manifests were reviewed. Please be advised that the spent spray booth filter may be managed as non-hazardous waste by analyzing a representative sample(s) of the spent spray booth filters for CA metals to determine whether or not they are hazardous. A copy of the laboratory results must be submitted to this Agency for evaluation. Emergency card was provided to be filled out and posted.

Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 06-20-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed and accepted annual certification documents submitted to CERS on 6/19/17 which included reporting of waste oil, waste antifreeze and updated site map.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 06-22-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed and accepted HMBP documents submitted to CERS on 6/20/16. Violations I169 and I292 regarding failure to submit HMBP documents and emergency plan have been corrected.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 10-14-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Inspector Comments: On site for second follow up inspection to correct outstanding violation, I053, regarding waste accumulation time for waste antifreeze, waste paint and spent spray booth filters being exceeded, that was cited during the routine inspection conducted on 3/9/15. Waste oil, waste anitfreeze, waste paint and spent spray booth filters were hauled off site by registered hauler on 7/10/15. Manifest was available for review. Violation I053 has been corrected.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-14-2020
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: On site to conduct routine hazardous waste inspection. James Dunn granted consent to conduct inspection. I walked through facility, perimeter and inspected waste storage area in paint mixing area next to spray booth. I did not observe any hazardous waste in municipal trash or trash cans throughout the facility. Waste paint/thinner (1)

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and spent waterborne cleaning solution (1) drums are stored closed with labels that are not legible. Hazardous waste labels were placed on both drums during inspection. Due to low volume of waste oil and waste antifreeze generated at facility, these waste are taken to neighboring business for proper disposal. Manifests were reviewed. Last waste pick up occurred on 11/26/18 and 12/7/18. There is approximately 55 gallons of waste paint stored on site and storage time has been exceeded. Waste paint must be disposed of properly within 30 days of this inspection. A new Emergency Response Notification & Contingency Plan was [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-17-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: On site to conduct routine hazardous waste inspection. Michael Tilander granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage areas in paint mixing room and shop. I did not observe any hazardous waste in municipal trash or trash cans throughout the facility. Waste paint/thinner (2), spent waterborne cleaning solution (1), waste oil (1), waste antifreeze (1) drums are stored closed labeled. Spent spray booth filters bag is stored closed but not labeled. The spent spray booth filters bag was labeled during the inspection. Manifests were reviewed. The last waste pick up occurred on 3/17/16. There is approximately 80 gallons of waste paint stored on site and storage time has been exceeded. Waste paint must be disposed of properly within 30 days of this inspection. Emergency card is posted on the first aid box in the shop.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 10-29-2014
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Portal Administrator issued username/password to facility. I emailed additional chemical Inventory forms to facility.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 11-05-2014
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: I received email from site manager, Michael, asking for the facility's "Hazardous Waste ID#". I looked up EPA ID# and it is "inactive." I emailed him a copy of the EPA ID# Profile and a form (with instructions) to reactivate the number.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

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Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-14-2020
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct hazardous materials chemical inventory and business emergency plan (HMBP) inspection. James Dunn granted consent to conduct inspection. I walked through facility and inspected hazardous material storage area in paint mixing area next to spray booth. There has been changes in types and/or volumes of the hazardous material stored on site since last inspection or previous reporting period. Due to low volume of waste oil and waste antifreeze generated at facility, these material are not stored on site. Facility stores the following material at disclosure threshold: - 55 gallons of gun cleaner/acetone - 110 gallons of waste gun cleaner/acetone Training in hazardous materials management has not been provided for employees. Training that includes safety procedures in the event of a release or threatened release of hazardous materials, must be conducted within 30 days of this inspection and records be submitted to this agency. A new Emergency [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-09-2015
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct routine hazardous waste inspection. Michael Tilander granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage areas. I did not observe any hazardous waste in municipal trash or trash cans throughout the facility. Waste paint/thinner (1), spent waterborne cleaning solution (1), waste antifreeze (1), waste oil (1) and spent spray booth filter (3) are stored closed and labeled. Manifests were reviewed. Accumulation time for waste antifreeze, waste paint/thinner and spent spray booth filters has been exceeded and all these waste must be disposed of properly within 30 days of this inspection. Please be advised that the spent spray booth filter may either be managed as hazardous waste and be hauled off by a registered hauler for proper disposal or they may be managed as non-hazardous waste by analyzing a representative sample(s) of the spent spray booth filters for CA [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Other/Unknown
Eval Date:	04-23-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	4/23/16: File Review. Routine Inspection 2/11/14. No Submission to CERS/Esubmit. VIOLATIONS OUTSTANDING AEO CASE
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Other/Unknown

EURO AMERICAN COLLISION CENTER (Continued) **S113107395**

Eval Date:	06-19-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	On site for follow up inspection to correct outstanding violation regarding failure to dispose of waste paint within permissible accumulation period, cited during routine inspection conducted on 1/17/17. Waste paint has not been disposed of yet. Please be advised that waste paint must be disposed of within 15 days of this inspection to avoid enforcement action.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-20-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct routine hazardous waste inspection. Michael Tilander granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage areas in paint mixing room and shop. I did not observe any hazardous waste in municipal trash or trash cans throughout the facility. Waste paint/thinner (1) and spent waterborne cleaning solution (1) drums are stored closed labeled. There is no other hazardous waste stored on site due to recent pick up. Manifests were reviewed. Please be advised that the spent spray booth filter may either be managed as hazardous waste and be hauled off by a registered hauler for proper disposal or they may be managed as non-hazardous waste by analyzing a representative sample(s) of the spent spray booth filters for CA metals to determine whether or not they are hazardous. A copy of the laboratory results must be submitted to this Agency for evaluation. Emergency card is [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	10-03-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I received a copy on manifest documenting that 110 gallons of waste paint was hauled off site by Stericycle Specality Waste Solutions Inc. on 9/29/17. Outstanding violation I053 regarding failure to dispose of waste paint within permissible accumulation period, cited during routine inspection conducted on 1/17/17, has been corrected.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	05-20-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Inspector Comments: On site for follow up inspection to correct outstanding violation, I053, regarding waste accumulation time for waste antifreeze, waste paint and spent spray booth filters being exceeded, that was cited during the routine inspection conducted on

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3/9/15. Michael Tilander, facility manager, granted access to conduct inspection. Waste has not been picked up yet. Facility manager requested two weeks extension for having the waste picked up. Please be advised that all waste has to be diposed of properly by 6/3/15, to avoid further enforcement action.

Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 06-20-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: While on site for hazardous waste inspection. I verified that facility has replaced some 55 gallon drums with 30 gallons drums and only the following material is stored at reportable quantity: - 55 gallons of acetone - 55 gallons of waste paint I assisted manager with creating account in CERS and uploading Hazmat inventory and drawing site map.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 06-24-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 07-25-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: On site for follow up inspection to correct outstanding violation regarding failure to dispose of waste paint within permissible accumulation period, cited during routine inspection conducted on 1/17/17. Bijan Alikhani granted consent to conduct inspection. Facility has new manager, Rene Magana, and he was not aware of the outstanding violation. Two drums labeled waste paint were observed on site. Manager will contact hauler and have waste picked up. Please be advised that waste paint must be disposed of within 15 days of this inspection to avoid enforcement action.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 10-01-2014
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Inspector Comments: Orange County Environmental Health as the Certified Unified Program Agency (OC CUPA) is the administrating agency for the Hazardous Materials Disclosure and Business Emergency Plan programs (HMD/BEP) previously administered by the Orange County Fire Authority. During the months of August and December of 2013, the

EURO AMERICAN COLLISION CENTER (Continued) **S113107395**

OC CUPA sent out letters to regulated businesses requesting them to electronically submit their HMD/BEP forms. In addition, during the onsite inspection conducted on 2/11/14 your company was notified again to submit HMD/BEP electronically. Electronic submission of these forms is a legal requirement. Failure to submit HMD/BEP forms is in violation of the California Health & Safety Code Chapter 6.95. According to our records there is no electronic submission for this facility. Please go to www.esubmit.ocgov.com to request a username and password and submit the following HMD/BEP forms within the next 30 days: - Business Activities form [Truncated]

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 10-28-2014
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Went to site after receiving call from facility manager requesting assistance with uploading documents to E-submit. I walked through the facility. Empty welding gas cylinders have been removed the facility and remaining compressed gases are not at reporting volumess. I explained that the following materials must be reported: - 55 gallons of waste antifreeze - 55 gallons of waste oil - 55 gallons of waste paint/thinner - 55 gallons new solvent/acetone I explained all components of HMBP documents that need to be submitted and provided example chemical inventory forms. Manager tried to request username/password but E-submit was not functioning and gave error code. He will try again later.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Enforcement Action:
Site ID: 373743
Site Name: EURO AMERICAN COLLISION CENTER
Site Address: 20591 PASCAL WAY
Site City: LAKE FOREST
Site Zip: 92630
Enf Action Date: 06-24-2015
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: HMD/BEP.
Enf Action Division: Orange County Environmental Health
Enf Action Program: UNSPEC
Enf Action Source: CERS

Coordinates:
Site ID: 373743
Facility Name: EURO AMERICAN COLLISION CENTER
Env Int Type Code: HWG
Program ID: 10537324
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 33.663110
Longitude: -117.669440

EURO AMERICAN COLLISION CENTER (Continued) **S113107395**

Affiliation:

Affiliation Type Desc:	Document Preparer
Entity Name:	JIM DUNN
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Identification Signer
Entity Name:	Jim Dunn
Entity Title:	manager
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Parent Corporation
Entity Name:	EURO AMERICAN COLLISION CENTER
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Environmental Contact
Entity Name:	micheal tilander
Entity Title:	Not reported
Affiliation Address:	20591 pascal way
Affiliation City:	lake forest
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92630
Affiliation Phone:	Not reported

Affiliation Type Desc:	Legal Owner
Entity Name:	ed alikhani
Entity Title:	Not reported
Affiliation Address:	20591 pascal way
Affiliation City:	lake forest
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92630
Affiliation Phone:	(714) 709-3068

Affiliation Type Desc:	Operator
Entity Name:	Euro American Collision Centers
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported

EURO AMERICAN COLLISION CENTER (Continued) **S113107395**

Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (626) 488-5894

Affiliation Type Desc: CUPA District
Entity Name: Orange County Env Health
Entity Title: Not reported
Affiliation Address: 1241 East Dyer RoadSuite 120
Affiliation City: Santa Ana
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92705-5611
Affiliation Phone: (714) 433-6406

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 20591 pascal way
Affiliation City: lake forest
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92630
Affiliation Phone: Not reported

HWTS:
Name: EURO AMERICAN COLLISION CENTER #2
Address: 20591 PASCAL WAY
Address 2: Not reported
City,State,Zip: LAKE FOREST, CA 926300000
EPA ID: CAL000212254
Inactive Date: 06/30/2017
Create Date: 02/24/2000
Last Act Date: 12/07/2018
Mailing Name: Not reported
Mailing Address: 20591 PASCAL WAY
Mailing Address 2: Not reported
Mailing City,State,Zip: LAKE FOREST, CA 926300000
Owner Name: EURO AMERICAN AUTOBODY SHOPS
Owner Address: 20591 PASCAL WAY
Owner Address 2: Not reported
Owner City,State,Zip: LAKE FOREST, CA 926300000
Contact Name: ED ALIKHANI PRESIDENT
Contact Address: 17 DEL CAMBREA
Contact Address 2: Not reported
City,State,Zip: IRVINE, CA 92606

P60 **JERRYS CLASSIC REPAIR** **CERS HAZ WASTE** **S124446471**
ENE **22602 PASCAL WAY UNIT B** **CERS** **N/A**
1/8-1/4 **LAKE FOREST, CA 92630**
0.235 mi.
1239 ft. **Site 1 of 5 in cluster P**

Relative:
Higher

Actual:
677 ft.

CERS HAZ WASTE:
Name: JERRYS CLASSIC REPAIR
Address: 22602 PASCAL WAY UNIT B
City,State,Zip: LAKE FOREST, CA 92630

JERRYS CLASSIC REPAIR (Continued) **S124446471**

Site ID: 554949
CERS ID: 10822552
CERS Description: Hazardous Waste Generator

CERS:
Name: JERRYS CLASSIC REPAIR
Address: 22602 PASCAL WAY UNIT B
City,State,Zip: LAKE FOREST, CA 92630
Site ID: 554949
CERS ID: 10822552
CERS Description: Chemical Storage Facilities

Affiliation:
Affiliation Type Desc: Document Preparer
Entity Name: Jerry Preston
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Environmental Contact
Entity Name: Jerry Preston
Entity Title: Not reported
Affiliation Address: 22602 Pascal Way Unit B
Affiliation City: Lake Forest
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92630
Affiliation Phone: Not reported

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 20602 pascal way unit B
Affiliation City: Lake Forest
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92630
Affiliation Phone: Not reported

Affiliation Type Desc: Identification Signer
Entity Name: Jerry Preston
Entity Title: Owner
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner
Entity Name: Jerrys Classic Repair
Entity Title: Not reported
Affiliation Address: 20602 pascal way unit B

JERRYS CLASSIC REPAIR (Continued) **S124446471**

Affiliation City:	lake forest
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92630
Affiliation Phone:	(949) 636-9895
Affiliation Type Desc:	CUPA District
Entity Name:	Orange County Env Health
Entity Title:	Not reported
Affiliation Address:	1241 East Dyer RoadSuite 120
Affiliation City:	Santa Ana
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92705-5611
Affiliation Phone:	(714) 433-6406
Affiliation Type Desc:	Operator
Entity Name:	Jerrys Classic Repair
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(949) 636-9895
Affiliation Type Desc:	Parent Corporation
Entity Name:	Jerrys Classic Repair
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

P61 **HERNANDEZ AUTO REPAIR** **RCRA NonGen / NLR** **1024855892**
ENE **20622 PASCAL WAY STE C** **CAL000419051**
1/8-1/4 **LAKE FOREST, CA 92630**
0.243 mi.
1281 ft. **Site 2 of 5 in cluster P**

Relative: **Higher**

Actual: **677 ft.**

RCRA NonGen / NLR:

Date form received by agency:	2016-07-21 00:00:00.0
Facility name:	HERNANDEZ AUTO REPAIR
Facility address:	20622 PASCAL WAY STE C LAKE FOREST, CA 92630
EPA ID:	CAL000419051
Contact:	JESUS HARNANDEZ
Contact address:	21641 CANADA RD APT 19 H LAKE FOREST, CA 92630
Contact country:	Not reported
Contact telephone:	949-544-9175
Contact email:	HERNANDEZAUTO@OUTLOOK.COM
EPA Region:	09
Classification:	Non-Generator

HERNANDEZ AUTO REPAIR (Continued) **1024855892**

Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	JESUS HARNANDEZ
Owner/operator address:	21641 CANADA RD APT 19 H
	LAKE FOREST, CA 92630
Owner/operator country:	Not reported
Owner/operator telephone:	949-544-9175
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	JESUS HERNANDEZ
Owner/operator address:	21641 CANADA RD APT 19 H
	LAKE FOREST, CA 92630
Owner/operator country:	Not reported
Owner/operator telephone:	949-544-9175
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

P62 **L & M AUTOMOTIVE** **RCRA NonGen / NLR** **1024817681**
ENE **20622 PASCAL WAY STE A** **CAL000322249**
1/8-1/4 **LAKE FOREST, CA 92630**
0.243 mi.
1281 ft. **Site 3 of 5 in cluster P**

Relative:
Higher

Actual:
677 ft.

RCRA NonGen / NLR:

Date form received by agency:	2007-07-13 00:00:00.0
Facility name:	L & M AUTOMOTIVE
Facility address:	20622 PASCAL WAY STE A LAKE FOREST, CA 92630
EPA ID:	CAL000322249
Contact:	CHARLES SMITH
Contact address:	20622 PASCAL WAY STE A LAKE FOREST, CA 92630
Contact country:	Not reported
Contact telephone:	949-770-3265
Contact email:	CHARLIE@JUSTDRIVEHAPPY.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	L & M AUTOMOTIVE
Owner/operator address:	40 SUNNYDALE RANCHO SANTA MARGARI, CA 92688
Owner/operator country:	Not reported
Owner/operator telephone:	949-436-0360
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	CHARLES SMITH
Owner/operator address:	20622 PASCAL WAY STE A LAKE FOREST, CA 92630
Owner/operator country:	Not reported
Owner/operator telephone:	949-770-3265
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No

L & M AUTOMOTIVE (Continued) **1024817681**

Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

P63 **AUTO MECHANIC SERVICES** **CERS HAZ WASTE** **S113148621**
ENE **20622 PASCAL WAY STE D** **CERS** **N/A**
1/8-1/4 **LAKE FOREST, CA 92630**
0.243 mi.
1281 ft. **Site 4 of 5 in cluster P**

Relative:
Higher

Actual:
677 ft.

CERS HAZ WASTE:
Name: AUTO MECHANIC SERVICES
Address: 20622 PASCAL WAY STE D
City,State,Zip: LAKE FOREST, CA 92630
Site ID: 377929
CERS ID: 10689526
CERS Description: Hazardous Waste Generator

Name: L & M AUTOMOTIVE
Address: 20622 PASCAL WAY STE A
City,State,Zip: LAKE FOREST, CA 92630
Site ID: 413449
CERS ID: 10560055
CERS Description: Hazardous Waste Generator

CERS:
Name: L & M AUTOMOTIVE
Address: 20622 PASCAL WAY STE A
City,State,Zip: LAKE FOREST, CA 92630
Site ID: 413449
CERS ID: 10560055
CERS Description: Chemical Storage Facilities

Violations:
Site ID: 413449
Site Name: L & M AUTOMOTIVE
Violation Date: 01-18-2017
Citation: 22 CCR 12 66262.34(f) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(f)
Violation Description: Failure to properly label hazardous waste accumulation containers and portable tanks with the following requirements: "Hazardous Waste", name and address of the generator, physical and chemical characteristics of the Hazardous Waste, and starting accumulation date.
Violation Notes: Returned to compliance on 01/18/2017. Labels on all hazardous waste containers (aboveground tank and drums) are either faded and or falling off. New labels were placed on all hazardous waste containers during the inspection and this violation has been corrected.
Violation Division: Orange County Environmental Health
Violation Program: HW
Violation Source: CERS

Site ID: 413449

AUTO MECHANIC SERVICES (Continued) **S113148621**

Site Name:	L & M AUTOMOTIVE
Violation Date:	01-05-2018
Citation:	22 CCR 12 66262.12 - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.12
Violation Description:	Failure to obtain an Identification Number prior to treating, storing, disposing of, transporting or offering for transportation any hazardous waste.
Violation Notes:	Returned to compliance on 01/05/2018. The facility does not have an active EPA ID number. Assisted the business with completing the form to reactivate the EPA ID number and it was submitted to DTSC.
Violation Division:	Orange County Environmental Health
Violation Program:	HW
Violation Source:	CERS

Site ID:	413449
Site Name:	L & M AUTOMOTIVE
Violation Date:	01-25-2016
Citation:	22 CCR 12 66262.34(f) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(f)
Violation Description:	Failure to properly label hazardous waste accumulation containers with the following requirements: "Hazardous Waste", name and address of the generator, physical and chemical characteristics of the Hazardous Waste, and starting accumulation date.
Violation Notes:	Returned to compliance on 01/25/2016. Labels on the waste oil tank and waste antifreeze drum are faded. New labels were placed on the waste oil tank and waste antifreeze drum during the inspection and this violation was corrected.
Violation Division:	Orange County Environmental Health
Violation Program:	HW
Violation Source:	CERS

Evaluation:

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-05-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	There has been no change in the hazardous materials inventory since last inspection and/or reporting period. Assisted the business with CERS annual certification submittal. The Emergency Plan is posted in the shop.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-05-2018
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Walked around the facility and did not observe any hazardous waste in the trash cans around the shop. Emergency card is posted inside the shop. Assisted the business with the completion of the form to reactivate the EPA number and it was submitted to DTSC.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Other/Unknown

AUTO MECHANIC SERVICES (Continued) **S113148621**

Eval Date:	01-09-2018
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Finalize report and review with Arghavan. Submit to business.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-18-2017
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Charlie Smith granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans throughout the facility. Waste oil is stored in an aboveground storage tank that is kept closed and with faded label. Waste antifreeze drum is stored closed with label falling off. Used oil filer drum is stored closed without label. New labels were placed on the waste oil tank, waste antifreeze and used oil filter drums during the inspection. Manifests were reviewed. Emergency card is posted in the shop.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-25-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Obtained username/password and assisted owner in uploading HMBP documents. All required documents were uploaded except for the site map.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-09-2018
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Finalize report and review with Arghavan. Submit to business.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-20-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Accepted revised documents submitted to CERS on 1/19/17.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	02-06-2014

AUTO MECHANIC SERVICES (Continued) **S113148621**

Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Dominic Pagliarulo granted consent to conduct inspection. I walked through the facility and inspected waste storage area. I did not observe hazardous waste in trash cans. Waste oil is stored in an aboveground storage tank and is labeled. Used oil filter (1) and waste antifreeze (1) drums are stored closed and labeled. New labels were provided for the waste oil tank and waste antifreeze drums. Manifests were reviewed. Emergency card is posted in the shop.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	02-06-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	L & M Automotive 20622 Pascal Way, Ste. A Lake Forest, CA 92630 On site to conduct new hazardous materials chemical inventory and business emergency plan inspection. I walked through the facility and inspected hazardous materials storage area. The facility has the following hazardous materials that meet the required disclosure quantities: - 165 gallons of new motor oil - 75 gallons of ATF - 240 gallons of waste oil - 55 gallons of waste antifreeze Facility is required and has been notified to electronically submit the following documents within 30 days of this inspection: - Business Activities form - Owner/Operator Identification form - Hazardous Material Chemical Inventory forms - Facility Site Map - Business Emergency Plan Documents must be electronically submitted by going to www.esubmit.ocgov.com and requesting a username and password. User guides and tutorials are located on the home page to help you get started. If you are having [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-09-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Emailed owner example chemical inventory sheets for reportable material at the facility.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	06-03-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Went to site since HMBP documents had not been submitted. Owner, Charles Smith thought it had been submitted. I checked status in E-submit and it was unfinished. The site map had not been uploaded. He could not find the site map that was drawn when I was on site a few months ago. I assisted in drawing another site map to be uploaded.
Eval Division:	Orange County Environmental Health

AUTO MECHANIC SERVICES (Continued) **S113148621**

Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	06-06-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Accepted documents submitted to E-submit on 6/3/16.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	01-19-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed annual certification documents submitted to CERS on 1/18/17 and did not accept it with the following considerations: - EPA ID# is inactive. - The G Average Daily AmountG for waste antifreeze at 365 gallons exceeds the total volume (55 gallons) stored on site.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-24-2019
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Charles Smith granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans throughout the facility. Waste oil is stored in an aboveground storage tank that is kept closed and labeled. Waste antifreeze (1) and used oil filer (1) drums are stored closed and labeled. Manifests were reviewed. Emergency card is posted in the shop.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-25-2016
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct routine hazardous waste inspection. Ken Lopez granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans throughout the facility. Waste oil is stored in an aboveground storage tank that is kept closed and with faded label. Waste antifreeze drum is stored closed with faded label. Used oil filer drum is stored closed and labeled. New labels were placed on the waste oil tank and waste antifreeze drum during the inspection. Manifests were reviewed. Emergency card is posted in the shop.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS

AUTO MECHANIC SERVICES (Continued) **S113148621**

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	02-06-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct routine hazardous waste inspection. Charlie Smith granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans throughout the facility. Waste oil is stored in an aboveground storage tank and is labeled. Waste antifreeze (1) and used oil filter (1) drums are stored closed and labeled. Manifests were reviewed. A new emergency card was provided to be filled out and posted.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Other/Unknown
Eval Date:	01-09-2018
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Accepted annual certification documents submitted to CERS on 1/5/18.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS

Affiliation:

Affiliation Type Desc:	Operator
Entity Name:	Charles Smith
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(949) 770-3265

Affiliation Type Desc:	Document Preparer
Entity Name:	Kenneth Lopez
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Environmental Contact
Entity Name:	Charles Smith
Entity Title:	Not reported
Affiliation Address:	20622 pascal way unit a
Affiliation City:	Lake forest
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92630
Affiliation Phone:	Not reported

Affiliation Type Desc:	Identification Signer

AUTO MECHANIC SERVICES (Continued) **S113148621**

Entity Name:	Kenneth Lopez
Entity Title:	Manager
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	CUPA District
Entity Name:	Orange County Env Health
Entity Title:	Not reported
Affiliation Address:	1241 East Dyer RoadSuite 120
Affiliation City:	Santa Ana
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92705-5611
Affiliation Phone:	(714) 433-6406
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	20622 PASCAL WAY STE A
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92630
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	L & M AUTOMOTIVE INC
Entity Title:	Not reported
Affiliation Address:	20622 PASCAL WAY STE A
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92630
Affiliation Phone:	(949) 770-3265
Affiliation Type Desc:	Parent Corporation
Entity Name:	L & M Automotive
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Name:	AUTO MECHANIC SERVICES
Address:	20622 PASCAL WAY STE D
City,State,Zip:	LAKE FOREST, CA 92630
Site ID:	377929
CERS ID:	10689526
CERS Description:	Chemical Storage Facilities

AUTO MECHANIC SERVICES (Continued) **S113148621**

Evaluation:

Eval General Type:	Other/Unknown
Eval Date:	04-10-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed documents submitted to CERS on 4/10/17. Hazardous Materials Inventory was not accepted since site map does not show adjacent/cross street and evacuation staging area, water shutoff by 20602 Building is not identified propery and fire hydrant that is on the sidewalk on Pascal Way is shown inside the building.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	08-04-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste generator since new business moved into this facility. Nima Tayebi granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans throughout the facility. Waste oil is stored in an aboveground tank that is kept closed and labeled. Waste antifreeze (1), used oil filter/metal (1) and used oil filter/paper (1) drums are stored closed. Manifests were reviewed. Emergency card is posted in shop.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Other/Unknown
Eval Date:	04-19-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted revised documents submitted to CERS on 4/18/17.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	08-07-2019
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct hazardous materials chemical inventory and business emergency plan inspection. Nima Tayebi granted consent to conduct inspection. I walked through the facility and inspected hazardous materials storage areas by roll up door. There has been no changes in types and/or volumes of the hazardous material stored on site since last inspection or previous reporting period. Facility stores new oil, waste oil and waste antifreeze at disclosure threshold. Hazardous materials management training is provided annually. Emergency card is posted in shop. I assisted business owner with updating emergency plans and submitting annual certification documents to CERS.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS

AUTO MECHANIC SERVICES (Continued) **S113148621**

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	08-07-2019
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Nima Tayebi granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area by roll up door. I did not observe any hazardous waste in trash cans throughout the facility. Waste oil is stored in an aboveground tank that is kept closed and labeled. Waste antifreeze (1), used oil filter/metal (1) and used oil filter/paper (1) drums are stored closed. Manifests were reviewed. Emergency card is posted in shop.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	08-14-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. I walked through the facility, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans throughout the facility. Waste oil is stored in an aboveground tank that is kept closed and labeled. Waste antifreeze (1), used oil filter/metal (1) and used oil filter/paper (1) drums are stored closed. Manifests were reviewed. Emergency card is posted in shop.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	08-16-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct new hazardous materials chemical inventory and business emergency plan inspection since new business moved into this facility. Nima Tayebi granted consent to conduct inspection. I walked through the facility and inspected hazardous materials/hazardous waste storage area. Facility has the following hazardous materials that meet the required disclosure quantities: - 200 gallons of new oil - 220 gallons of waste oil - 55 gallons of waste antifreeze Facility is required and has been notified to electronically submit the following documents within 30 days of this inspection: - Business Activities form - Owner/Operator Identification form - Hazardous Material Chemical Inventory forms - Facility Site Map - Business Emergency Plan Documents may be electronically submitted by visiting the California Electronic Reporting System (CERS) at http//cers.calepa.ca.gov I assisted facility owner with obtaining access to [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	08-16-2016
Violations Found:	No

AUTO MECHANIC SERVICES (Continued) **S113148621**

Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct new hazardous waste generator since new business moved into this facility. Nima Tayebi granted consent to conduct inspection. I walked through the facility, perimeter and inspected waste storage area. I did not observe any hazardous waste in trash cans throughout the facility. Waste oil is stored in an aboveground tank that is kept closed and labeled. Waste antifreeze (1) and used oil filter (1) drums are stored closed. Manifests were reviewed. An emergency card was provided to be filled out and posted.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS

Affiliation:

Affiliation Type Desc:	Document Preparer
Entity Name:	nima tayebi
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	20622 Pascal Way Ste D
Affiliation City:	Lake Forest
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92630
Affiliation Phone:	Not reported

Affiliation Type Desc:	Identification Signer
Entity Name:	Nima Tayebi
Entity Title:	Owner
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Parent Corporation
Entity Name:	Auto Mechanic Services
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	CUPA District
Entity Name:	Orange County Env Health

AUTO MECHANIC SERVICES (Continued) **S113148621**

Entity Title:	Not reported
Affiliation Address:	1241 East Dyer RoadSuite 120
Affiliation City:	Santa Ana
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92705-5611
Affiliation Phone:	(714) 433-6406
Affiliation Type Desc:	Legal Owner
Entity Name:	Lake Forest
Entity Title:	Not reported
Affiliation Address:	20622 Pascal Way Ste D
Affiliation City:	Lake Forest
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92630
Affiliation Phone:	(949) 916-9454
Affiliation Type Desc:	Operator
Entity Name:	Nima Tayebi
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(949) 916-9454

P64 **HERNANDEZ AUTO REPAIR** **CERS HAZ WASTE** **S124446460**
ENE **20622 PASCAL WAY, UNIT C** **CERS** **N/A**
1/8-1/4 **LAKE FOREST, CA 92630**
0.243 mi.
1281 ft. **Site 5 of 5 in cluster P**

Relative:
Higher

Actual:
677 ft.

CERS HAZ WASTE:

Name:	HERNANDEZ AUTO REPAIR
Address:	20622 PASCAL WAY, UNIT C
City,State,Zip:	LAKE FOREST, CA 92630
Site ID:	554924
CERS ID:	10822468
CERS Description:	Hazardous Waste Generator

CERS:

Name:	HERNANDEZ AUTO REPAIR
Address:	20622 PASCAL WAY, UNIT C
City,State,Zip:	LAKE FOREST, CA 92630
Site ID:	554924
CERS ID:	10822468
CERS Description:	Chemical Storage Facilities

Evaluation:

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	08-06-2019
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Hernandez Auto Repair 20622 Pascal Way, Unit C Lake Forest, CA 92630 (949) 599-6676 On site to conduct new hazardous materials chemical

HERNANDEZ AUTO REPAIR (Continued) **S124446460**

inventory and business emergency plan inspection. Jesus Hernandez granted consent to conduct inspection. I walked through the facility and inspected hazardous materials storage areas by roll up door. Facility stores the following hazardous materials at disclosure threshold: - 110 gallons of waste oil - 55 gallons of waste antifreeze Emergency Response Notification & Contingency Plan card was filled out and posted during inspection. I assisted business owner with creating account in CERS, completing all required HMBP documents and submitting them during inspection.

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 08-06-2019
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Hernandez Auto Repair 20622 Pascal Way, Unit C Lake Forest, CA 92630 (949) 599-6676 On site to conduct new hazardous waste generator inspection. Jesus Hernandez granted consent to conduct inspection. EPA ID# for this business is CAL000419051. I walked through the facility and inspected hazardous materials storage areas by roll up door. I did not observe any hazardous waste in trash cans in shop. Waste oil (2), waste antifreeze (1) and used oil filters (1) are stored closed and labeled. Manifests were reviewed. Emergency Response Notification & Contingency Plan card was filled out and posted during inspection.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Affiliation:

Affiliation Type Desc: Environmental Contact
Entity Name: JESUS HERNANDEZ
Entity Title: Not reported
Affiliation Address: 20622 Pascal Way, Unit C
Affiliation City: Lake Forest
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92630
Affiliation Phone: Not reported

Affiliation Type Desc: Operator
Entity Name: Hernandez Auto Repair
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (949) 599-6676

Affiliation Type Desc: Document Preparer
Entity Name: Jesus Hernandez
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported

HERNANDEZ AUTO REPAIR (Continued) **S124446460**

Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	Jesus Hernandez
Entity Title:	Owner
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Parent Corporation
Entity Name:	Hernandez Auto Repair
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	CUPA District
Entity Name:	Orange County Env Health
Entity Title:	Not reported
Affiliation Address:	1241 East Dyer RoadSuite 120
Affiliation City:	Santa Ana
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92705-5611
Affiliation Phone:	(714) 433-6406
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	20622 Pascal Way, Unit C
Affiliation City:	Lake Forest
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92630
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	JESUS HERNANDEZ
Entity Title:	Not reported
Affiliation Address:	20622 Pascal Way, Unit C
Affiliation City:	Lake Forest
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92630
Affiliation Phone:	(949) 599-6676

O65 **PANASONIC AVIONICS CORPORATION** **RCRA NonGen / NLR** **1024799662**
NNE **26200 ENTERPRISE** **CAL000213077**
1/8-1/4 **LAKE FOREST, CA 92630**
0.243 mi.
1285 ft. **Site 3 of 5 in cluster O**

Relative:
Higher

Actual:
683 ft.

RCRA NonGen / NLR:

Date form received by agency:	2000-11-09 00:00:00.0
Facility name:	PANASONIC AVIONICS CORPORATION
Facility address:	26200 ENTERPRISE LAKE FOREST, CA 92630-0000
EPA ID:	CAL000213077
Contact:	THAYNE THOMAS
Contact address:	26200 ENTERPRISE WAY SAME LAKE FOREST, CA 92630
Contact country:	Not reported
Contact telephone:	949-462-1416
Contact email:	THAYNE.THOMAS@PANASONIC.AERO
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	PANASONIC AVIONICS CORPORATION
Owner/operator address:	26200 ENTERPRISE LAKE FOREST, CA 92630
Owner/operator country:	Not reported
Owner/operator telephone:	949-672-2000
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	THAYNE THOMAS
Owner/operator address:	26200 ENTERPRISE WAY SAME LAKE FOREST, CA 92630
Owner/operator country:	Not reported
Owner/operator telephone:	949-462-1416
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No

PANASONIC AVIONICS CORPORATION (Continued) **1024799662**

Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

O66 **PANASONIC AVIONICS CORPORATION** **RCRA-SQG** **1024877571**
NNE **26200 ENTERPRISE WAY** **CAR000292755**
1/8-1/4 **LAKE FORESTLAKE FOREST, CA 92630**
0.243 mi.
1285 ft. **Site 4 of 5 in cluster O**

Relative:
Higher

Actual:
683 ft.

RCRA-SQG:

Date form received by agency:	2019-02-27 00:00:00.0
Facility name:	PANASONIC AVIONICS CORPORATION
Facility address:	26200 ENTERPRISE WAY LAKE FORESTLAKE FOREST, CA 92630
EPA ID:	CAR000292755
Mailing address:	ENTERPRISE WAY LAKE FORESTLAKE FOREST, CA 92630
Contact:	RAUL GONZALEZ
Contact address:	ENTERPRISE WAY LAKE FORESTLAKE FOREST, CA 92630
Contact country:	US
Contact telephone:	949-462-1798
Contact email:	RAUL.GONZALEZ@PANASONIC.AERO
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	PANASONIC AVIONICS CORPORATION
Owner/operator address:	ENTERPRISE WAY LAKE FORESTLAKE FOREST, CA 92630
Owner/operator country:	US
Owner/operator telephone:	949-462-1798
Owner/operator email:	RAUL.GONZALEZ@PANASONIC.AERO
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	County
Owner/Operator Type:	Operator
Owner/Op start date:	2019-02-26 00:00:00.
Owner/Op end date:	Not reported

Owner/operator name:	PANASONIC AVIONICS CORPORATION
Owner/operator address:	ENTERPRISE WAY LAKE FORESTLAKE FOREST, CA 92630
Owner/operator country:	US
Owner/operator telephone:	949-462-1798
Owner/operator email:	RAUL.GONZALEZ@PANASONIC.AERO

PANASONIC AVIONICS CORPORATION (Continued) **1024877571**

Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: County
Owner/Operator Type: Owner
Owner/Op start date: 2019-02-26 00:00:00.
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Hazardous Waste Summary:

. Waste code: 122
. Waste name: Alkaline solution without metals (pH > 12.5)

. Waste code: 181
. Waste name: Other inorganic solid waste

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D003
. Waste name: REACTIVE WASTE

. Waste code: D004
. Waste name: ARSENIC

. Waste code: D005
. Waste name: BARIUM

. Waste code: D006
. Waste name: CADMIUM

. Waste code: D007
. Waste name: CHROMIUM

. Waste code: D008
. Waste name: LEAD

PANASONIC AVIONICS CORPORATION (Continued) **1024877571**

. Waste code: D009
. Waste name: MERCURY

. Waste code: D010
. Waste name: SELENIUM

. Waste code: D011
. Waste name: SILVER

. Waste code: D012
. Waste name: ENDRIN (1,2,3,4,10,10-HEXACHLORO-1,7-EPOXY-1,4,4A,5,6,7,8,8A-OCTAHYDRO-1,4-ENDO, ENDO-5,8-DIMETH-ANO-NAPHTHALENE)

. Waste code: D013
. Waste name: LINDANE (1,2,3,4,5,6-HEXA-CHLOROCYCLOHEXANE, GAMMA ISOMER)

. Waste code: D014
. Waste name: METHOXYCHLOR (1,1,1-TRICHLORO-2,2-BIS [P-METHOXYPHENYL] ETHANE)

. Waste code: D015
. Waste name: TOXAPHENE (C10 H10 CL8, TECHNICAL CHLORINATED CAMPHENE, 67-69 PERCENT CHLORINE)

. Waste code: D016
. Waste name: 2,4-D (2,4-DICHLOROPHENOXYACETIC ACID)

. Waste code: D017
. Waste name: 2,4,5-TP SILVEX (2,4,5-TRICHLOROPHENOXYPROPIONIC ACID)

. Waste code: D018
. Waste name: BENZENE

. Waste code: D019
. Waste name: CARBON TETRACHLORIDE

. Waste code: D020
. Waste name: CHLORDANE

. Waste code: D021
. Waste name: CHLOROBENZENE

. Waste code: D022
. Waste name: CHLOROFORM

. Waste code: D023
. Waste name: O-CRESOL

. Waste code: D024
. Waste name: M-CRESOL

. Waste code: D025
. Waste name: P-CRESOL

. Waste code: D026
. Waste name: CRESOL

PANASONIC AVIONICS CORPORATION (Continued) **1024877571**

. Waste code: D027
. Waste name: 1,4-DICHLOROBENZENE

. Waste code: D028
. Waste name: 1,2-DICHLOROETHANE

. Waste code: D029
. Waste name: 1,1-DICHLOROETHYLENE

. Waste code: D030
. Waste name: 2,4-DINITROTOLUENE

. Waste code: D031
. Waste name: HEPTACHLOR (AND ITS EPOXIDE)

. Waste code: D032
. Waste name: HEXACHLOROBENZENE

. Waste code: D033
. Waste name: HEXACHLOROBUTADIENE

. Waste code: D034
. Waste name: HEXACHLOROETHANE

. Waste code: D035
. Waste name: METHYL ETHYL KETONE

. Waste code: D036
. Waste name: NITROBENZENE

. Waste code: D037
. Waste name: PENTACHLOROPHENOL

. Waste code: D038
. Waste name: PYRIDINE

. Waste code: D039
. Waste name: TETRACHLOROETHYLENE

. Waste code: D040
. Waste name: TRICHLORETHYLENE

. Waste code: D041
. Waste name: 2,4,5-TRICHLOROPHENOL

. Waste code: D042
. Waste name: 2,4,6-TRICHLOROPHENOL

. Waste code: D043
. Waste name: VINYL CHLORIDE

. Waste code: F001
. Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLORETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF

PANASONIC AVIONICS CORPORATION (Continued) **1024877571**

ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F002
. Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2, TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F004
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: CRESOLS, CRESYLIC ACID, AND NITROBENZENE; AND THE STILL BOTTOMS FROM THE RECOVERY OF THESE SOLVENTS; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F005
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F006
. Waste name: WASTEWATER TREATMENT SLUDGES FROM ELECTROPLATING OPERATIONS, EXCEPT FROM THE FOLLOWING PROCESSES: (1) SULFURIC ACID ANODIZING OF ALUMINUM; (2) TIN PLATING ON CARBON STEEL; (3) ZINC PLATING (SEGREGATED BASIS) ON CARBON STEEL; (4) ALUMINUM OR ZINC-ALUMINUM PLATING ON CARBON STEEL; (5) CLEANING/STRIPPING ASSOCIATED WITH TIN, ZINC, AND ALUMINUM PLATING ON CARBON STEEL; AND (6) CHEMICAL ETCHING AND MILLING OF ALUMINUM.

. Waste code: F007
. Waste name: SPENT CYANIDE PLATING BATH SOLUTIONS FROM ELECTROPLATING OPERATIONS.

PANASONIC AVIONICS CORPORATION (Continued) **1024877571**

. Waste code: F008
. Waste name: PLATING BATH RESIDUES FROM THE BOTTOM OF PLATING BATHS FROM ELECTROPLATING OPERATIONS IN WHICH CYANIDES ARE USED IN THE PROCESS.

. Waste code: F009
. Waste name: SPENT STRIPPING AND CLEANING BATH SOLUTIONS FROM ELECTROPLATING OPERATIONS IN WHICH CYANIDES ARE USED IN THE PROCESS.

. Waste code: F010
. Waste name: QUENCHING BATH RESIDUES FROM OIL BATHS FROM METAL HEAT TREATING OPERATIONS IN WHICH CYANIDES ARE USED IN THE PROCESS.

. Waste code: F011
. Waste name: SPENT CYANIDE SOLUTIONS FROM SLAT BATH POT CLEANING FROM METAL HEAT TREATING OPERATIONS.

. Waste code: F012
. Waste name: QUENCHING WASTEWATER TREATMENT SLUDGES FROM METAL HEAT TREATING OPERATIONS IN WHICH CYANIDES ARE USED IN THE PROCESS.

. Waste code: F019
. Waste name: WASTEWATER TREATMENT SLUDGES FROM THE CHEMICAL CONVERSION COATING OF ALUMINUM, EXCEPT FROM ZIRCONIUM PHOSPHATING IN ALUMINUM CAN WASHING WHEN SUCH PHOSPHATING IS AN EXCLUSIVE CONVERSION COATING PROCESS.

. Waste code: F020
. Waste name: WASTES (EXCEPT WASTEWATER AND SPENT CARBON FROM HYDROGEN CHLORIDE PURIFICATION) FROM THE PRODUCTION OR MANUFACTURING USE (AS A REACTANT, CHEMICAL INTERMEDIATE, OR COMPONENT IN A FORMULATING PROCESS) OF TRI- OR TETRACHLOROPHENOL OR OF INTERMEDIATES USED TO PRODUCE THEIR PESTICIDE DERIVATIVES. (THIS LISTING DOES NOT INCLUDE WASTES FROM THE PRODUCTION OF HEXACHLOROPHENE FROM HIGHLY PURIFIED 2,4,5-TRICHLOROPHENOL.)

. Waste code: F021
. Waste name: WASTES (EXCEPT WASTEWATER AND SPENT CARBON FROM HYDROGEN CHLORIDE PURIFICATION) FROM THE PRODUCTION OR MANUFACTURING USE (AS A REACTANT, CHEMICAL INTERMEDIATE, OR COMPONENT IN A FORMULATING PROCESS) OF PENTACHLOROPHENOL, OR OF INTERMEDIATES USED TO PRODUCE DERIVATIVES.

. Waste code: F022
. Waste name: WASTES (EXCEPT WASTEWATER AND SPENT CARBON FROM HYDROGEN CHLORIDE PURIFICATION) FROM THE MANUFACTURING USE (AS A REACTANT, CHEMICAL INTERMEDIATE, OR COMPONENT IN A FORMULATING PROCESS) OF TETRA-, PENTA-, OR HEXACHLOROBENZENES UNDER ALKALINE CONDITIONS.

. Waste code: F023
. Waste name: WASTES (EXCEPT WASTEWATER AND SPENT CARBON FROM HYDROGEN CHLORIDE PURIFICATION) FROM THE PRODUCTION OF MATERIALS ON EQUIPMENT PREVIOUSLY USED FOR THE PRODUCTION OR MANUFACTURING USE (AS A REACTANT, CHEMICAL INTERMEDIATE, OR COMPONENT IN A FORMULATING PROCESS) OF TRI- AND TETRACHLOROPHENOLS. (THIS LISTING DOES NOT INCLUDE WASTES FROM EQUIPMENT USED ONLY FOR THE PRODUCTION OR USE OF HEXACHLOROPHENE FROM HIGHLY PURIFIED 2,4,5-TRICHLOROPHENOL.)

. Waste code: F024
. Waste name: PROCESS WASTES INCLUDING, BUT NOT LIMITED TO, DISTILLATION RESIDUES,

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HEAVY ENDS, TARS, AND REACTOR CLEAN-OUT WASTES FROM THE PRODUCTION OF CERTAIN CHLORINATED ALIPHATIC HYDROCARBONS BY FREE RADICAL CATALYZED PROCESSES. THESE CHLORINATED ALIPHATIC HYDROCARBONS ARE THOSE HAVING CARBON CHAIN LENGTHS RANGING FROM ONE TO, AND INCLUDING FIVE, WITH VARYING AMOUNTS AND POSITIONS OF CHLORINE SUBSTITUTION. (THIS LISTING DOES NOT INCLUDE WASTEWATERS, WASTEWATER TREATMENT SLUDGE, SPENT CATALYSTS, AND WASTES LISTED IN SECTIONS 261.31. OR 261.32)

. Waste code: F025
. Waste name: CONDENSED LIGHT ENDS, SPENT FILTERS AND FILTER AIDS, AND SPENT DESICCANT WASTES FROM THE PRODUCTION OF CERTAIN CHLORINATED ALIPHATIC HYDROCARBONS BY FREE RADICAL CATALYZED PROCESSES. THESE CHLORINATED ALIPHATIC HYDROCARBONS ARE THOSE HAVING CARBON CHAIN LENGTHS RANGING FROM ONE TO, AND INCLUDING FIVE, WITH VARYING AMOUNTS AND POSITIONS OF CHLORINE SUBSTITUTION.

. Waste code: F026
. Waste name: WASTES (EXCEPT WASTEWATER AND SPENT CARBON FROM HYDROGEN CHLORIDE PURIFICATION) FROM THE PRODUCTION OF MATERIALS ON EQUIPMENT PREVIOUSLY USED FOR THE MANUFACTURING USE (AS A REACTANT, CHEMICAL INTERMEDIATE, OR COMPONENT IN A FORMULATING PROCESS) OF TETRA-, PENTA-, OR HEXACHLOROBENZENE UNDER ALKALINE CONDITIONS.

. Waste code: F027
. Waste name: DISCARDED UNUSED FORMULATIONS CONTAINING TRI-, TETRA-, OR PENTACHLOROPHENOL OR DISCARDED UNUSED FORMULATIONS CONTAINING COMPOUNDS DERIVED FROM THESE CHLOROPHENOLS. (THIS LISTING DOES NOT INCLUDE FORMULATIONS CONTAINING HEXACHLOROPHENE SYNTHESIZED FROM PREPURIFIED 2,4,5-TRICHLOROPHENOL AS THE SOLE COMPONENT.)

. Waste code: F028
. Waste name: RESIDUES RESULTING FROM THE INCINERATION OR THERMAL TREATMENT OF SOIL CONTAMINATED WITH EPA HAZARDOUS WASTE NOS. F020, F021, F022, F023, F026, AND F027.

. Waste code: F032
. Waste name: WASTEWATERS, PROCESS RESIDUALS, PRESERVATIVE DRIPPAGE, AND SPENT FORMULATIONS FROM WOOD PRESERVING PROCESSES GENERATED AT PLANTS THAT CURRENTLY USE, OR HAVE PREVIOUSLY USED, CHLOROPHENOLIC FORMULATIONS [EXCEPT POTENTIALLY CROSS-CONTAMINATED WASTES THAT HAVE HAD THE F032 WASTE CODE DELETED IN ACCORDANCE WITH SECTION 261.35 (I.E., THE NEWLY PROMULGATED EQUIPMENT CLEANING OR REPLACEMENT STANDARDS), AND WHERE THE GENERATOR DOES NOT RESUME OR INITIATE USE OF CHLOROPHENOLIC FORMULATIONS]. (THIS LISTING DOES NOT INCLUDE K001 BOTTOM SEDIMENT SLUDGE FROM THE TREATMENT OF WASTEWATER FROM WOOD PRESERVING PROCESSES THAT USE CREOSOTE AND/OR PENTACHLOROPHENOL.)

. Waste code: F034
. Waste name: WASTEWATERS, PROCESS RESIDUALS, PRESERVATIVE DRIPPAGE, AND SPENT FORMULATIONS FROM WOOD PRESERVING PROCESSES GENERATED AT PLANTS THAT USE CREOSOTE FORMULATIONS. THIS LISTING DOES NOT INCLUDE K001 BOTTOM SEDIMENT SLUDGE FROM THE TREATMENT OF WASTEWATER FROM WOOD PRESERVING PROCESSES THAT USE CREOSOTE AND/OR PENTACHLOROPHENOL.

. Waste code: F035
. Waste name: WASTEWATERS, PROCESS RESIDUALS, PRESERVATIVE DRIPPAGE, AND SPENT FORMULATIONS FROM WOOD PRESERVING PROCESSES GENERATED AT PLANTS THAT

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USE INORGANIC PRESERVATIVES CONTAINING ARSENIC OR CHROMIUM. THIS LISTING DOES NOT INCLUDE K001 BOTTOM SEDIMENT SLUDGE FROM THE TREATMENT OF WASTEWATER FROM WOOD PRESERVING PROCESSES THAT USE CREOSOTE AND/OR PENTACHLOROPHENOL.

. Waste code: F037
. Waste name: PETROLEUM REFINERY PRIMARY OIL/WATER/SOLIDS SEPARATION SLUDGE - ANY SLUDGE GENERATED FROM THE GRAVITATIONAL SEPARATION OF OIL/WATER/SOLIDS DURING THE STORAGE OR TREATMENT OF PROCESS WASTEWATERS AND OILY COOLING WASTEWATERS FROM PETROLEUM REFINERIES. SUCH SLUDGES INCLUDE, BUT ARE NOT LIMITED TO, THOSE GENERATED IN OIL/WATER/SOLIDS SEPARATORS; TANKS AND IMPOUNDMENTS; DITCHES AND OTHER CONVEYANCES; SUMPS; AND STORM WATER UNITS RECEIVING DRY WEATHER FLOW. SLUDGES GENERATED IN STORM WATER UNITS THAT DO NOT RECEIVE DRY WEATHER FLOW, SLUDGES GENERATED IN AGGRESSIVE BIOLOGICAL TREATMENT UNITS AS DEFINED IN SECTION 261.31(B)(2) (INCLUDING SLUDGES GENERATED IN ONE OR MORE ADDITIONAL UNITS AFTER WASTEWATERS HAVE BEEN TREATED IN AGGRESSIVE BIOLOGICAL TREATMENT UNITS), AND K051 WASTES ARE EXEMPTED FROM THIS LISTING.

. Waste code: F038
. Waste name: PETROLEUM REFINERY SECONDARY (EMULSIFIED) OIL/WATER/SOLIDS SEPARATION SLUDGE - ANY SLUDGE AND/OR FLOAT GENERATED FROM THE PHYSICAL AND/OR CHEMICAL SEPARATION OF OIL/WATER/SOLIDS IN PROCESS WASTEWATERS AND OILY COOLING WASTEWATERS FROM PETROLEUM REFINERIES. SUCH WASTES INCLUDE, BUT ARE NOT LIMITED TO, ALL SLUDGES AND FLOATS GENERATED IN INDUCED AIR FLOTATION (IAF) UNITS, TANKS AND IMPOUNDMENTS, AND ALL SLUDGES GENERATED IN DAF UNITS. SLUDGES GENERATED IN STORMWATER UNITS THAT DO NOT RECEIVE DRY WEATHER FLOW, SLUDGES GENERATED IN AGGRESSIVE BIOLOGICAL TREATMENT UNITS AS DEFINED IN SECTION 261.31(B)(2) (INCLUDING SLUDGES GENERATED IN ONE OR MORE ADDITIONAL UNITS AFTER WASTEWATERS HAVE BEEN TREATED IN AGGRESSIVE BIOLOGICAL TREATMENT UNITS), AND F037, K048, AND K051 WASTES ARE EXEMPTED FROM THIS LISTING.

. Waste code: F039
. Waste name: LEACHATE RESULTING FROM THE TREATMENT, STORAGE, OR DISPOSAL OF WASTES CLASSIFIED BY MORE THAN ONE WASTE CODE UNDER SUBPART D, OR FROM A MIXTURE OF WASTES CLASSIFIED UNDER SUBPARTS C AND D OF THIS PART. (LEACHATE RESULTING FROM THE MANAGEMENT OF ONE OR MORE OF THE FOLLOWING EPA HAZARDOUS WASTES AND NO OTHER HAZARDOUS WASTES RETAINS ITS HAZARDOUS WASTE CODE(S): F020, F021, F022, F023, F026, F027, AND/OR F028.)

. Waste code: K001
. Waste name: BOTTOM SEDIMENT SLUDGE FROM THE TREATMENT OF WASTEWATERS FROM WOOD PRESERVING PROCESSES THAT USE CREOSOTE AND/OR PENTACHLOROPHENOL.

. Waste code: K002
. Waste name: WASTEWATER TREATMENT SLUDGE FROM THE PRODUCTION OF CHROME YELLOW AND ORANGE PIGMENTS.

. Waste code: K003
. Waste name: WASTEWATER TREATMENT SLUDGE FROM THE PRODUCTION OF MOLYBDATE ORANGE PIGMENTS.

. Waste code: K004

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. Waste name: WASTEWATER TREATMENT SLUDGE FROM THE PRODUCTION OF ZINC YELLOW PIGMENTS.

. Waste code: K005
. Waste name: WASTEWATER TREATMENT SLUDGE FROM THE PRODUCTION OF CHROME GREEN PIGMENTS.

. Waste code: K006
. Waste name: WASTEWATER TREATMENT SLUDGE FROM THE PRODUCTION OF CHROME OXIDE GREEN PIGMENTS (ANHYDROUS AND HYDRATED).

. Waste code: K007
. Waste name: WASTEWATER TREATMENT SLUDGE FROM THE PRODUCTION OF IRON BLUE PIGMENTS.

. Waste code: K008
. Waste name: OVEN RESIDUE FROM THE PRODUCTION OF CHROME OXIDE GREEN PIGMENTS.

. Waste code: K009
. Waste name: DISTILLATION BOTTOMS FROM THE PRODUCTION OF ACETALDEHYDE FROM ETHYLENE.

. Waste code: K010
. Waste name: DISTILLATION SIDE CUTS FROM THE PRODUCTION OF ACETALDEHYDE FROM ETHYLENE.

. Waste code: K011
. Waste name: BOTTOM STREAM FROM THE WASTEWATER STRIPPER IN THE PRODUCTION OF ACRYLONITRILE.

. Waste code: K013
. Waste name: BOTTOM STREAM FROM THE ACETONITRILE COLUMN IN THE PRODUCTION OF ACRYLONITRILE.

. Waste code: K014
. Waste name: BOTTOMS FROM THE ACETONITRILE PURIFICATION COLUMN IN THE PRODUCTION OF ACRYLONITRILE.

. Waste code: K015
. Waste name: STILL BOTTOMS FROM THE DISTILLATION OF BENZYL CHLORIDE.

. Waste code: K016
. Waste name: HEAVY ENDS OR DISTILLATION RESIDUES FROM THE PRODUCTION OF CARBON TETRACHLORIDE.

. Waste code: K017
. Waste name: HEAVY ENDS (STILL BOTTOMS) FROM THE PURIFICATION COLUMN IN THE PRODUCTION OF EPICHLOROHYDRIN.

. Waste code: K018
. Waste name: HEAVY ENDS FROM THE FRACTIONATION COLUMN IN ETHYL CHLORIDE PRODUCTION.

. Waste code: K019
. Waste name: HEAVY ENDS FROM THE DISTILLATION OF ETHYLENE DICHLORIDE IN ETHYLENE DICHLORIDE PRODUCTION.

. Waste code: K020
. Waste name: HEAVY ENDS FROM THE DISTILLATION OF VINYL CHLORIDE IN VINYL CHLORIDE

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MONOMER PRODUCTION.

. Waste code: K021
. Waste name: AQUEOUS SPENT ANTIMONY CATALYST WASTE FROM FLUOROMETHANE PRODUCTION.

. Waste code: K022
. Waste name: DISTILLATION BOTTOM TARS FROM THE PRODUCTION OF PHENOL/ACETONE FROM CUMENE.

. Waste code: K023
. Waste name: DISTILLATION LIGHT ENDS FROM THE PRODUCTION OF PHTHALIC ANHYDRIDE FROM NAPHTHALENE.

. Waste code: K024
. Waste name: DISTILLATION BOTTOMS FROM THE PRODUCTION OF PHTHALIC ANHYDRIDE FROM NAPHTHALENE.

. Waste code: K025
. Waste name: DISTILLATION BOTTOMS FROM THE PRODUCTION OF NITROBENZENE BY THE NITRATION OF BENZENE.

. Waste code: K026
. Waste name: STRIPPING STILL TAILS FROM THE PRODUCTION OF METHYL ETHYL PYRIDINES.

. Waste code: K027
. Waste name: CENTRIFUGE AND DISTILLATION RESIDUES FROM TOLUENE DIISOCYANATE PRODUCTION.

. Waste code: K028
. Waste name: SPENT CATALYST FROM THE HYDROCHLORINATOR REACTOR IN THE PRODUCTION OF 1,1,1-TRICHLOROETHANE.

. Waste code: K029
. Waste name: WASTE FROM THE PRODUCT STEAM STRIPPER IN THE PRODUCTION OF 1,1,1-TRICHLOROETHANE.

. Waste code: K030
. Waste name: COLUMN BOTTOMS OR HEAVY ENDS FROM THE COMBINED PRODUCTION OF TRICHLOROETHYLENE AND PERCHLOROETHYLENE.

. Waste code: K031
. Waste name: BY-PRODUCT SALTS GENERATED IN THE PRODUCTION OF MSMA AND CACODYLIC ACID.

. Waste code: K032
. Waste name: WASTEWATER TREATMENT SLUDGE FROM THE PRODUCTION OF CHLORDANE.

. Waste code: K033
. Waste name: WASTEWATER AND SCRUB WATER FROM THE CHLORINATION OF CYCLOPENTADIENE IN THE PRODUCTION OF CHLORDANE.

. Waste code: K034
. Waste name: FILTER SOLIDS FROM THE FILTRATION OF HEXACHLOROCYCLOPENTADIENE IN THE PRODUCTION OF CHLORDANE.

. Waste code: K035
. Waste name: WASTEWATER TREATMENT SLUDGES GENERATED IN THE PRODUCTION OF CREOSOTE.

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. Waste code: K036
. Waste name: STILL BOTTOMS FROM TOLUENE RECLAMATION DISTILLATION IN THE PRODUCTION OF DISULFOTON.

. Waste code: K037
. Waste name: WASTEWATER TREATMENT SLUDGES FROM THE PRODUCTION OF DISULFOTON.

. Waste code: K038
. Waste name: WASTEWATER FROM THE WASHING AND STRIPPING OF PHORATE PRODUCTION.

. Waste code: K039
. Waste name: FILTER CAKE FROM THE FILTRATION OF DIETHYLPHOSPHORODITHIOIC ACID IN THE PRODUCTION OF PHORATE.

. Waste code: K040
. Waste name: WASTEWATER TREATMENT SLUDGE FROM THE PRODUCTION OF PHORATE.

. Waste code: K041
. Waste name: WASTEWATER TREATMENT SLUDGE FROM THE PRODUCTION OF TOXAPHENE.

. Waste code: K042
. Waste name: HEAVY ENDS OR DISTILLATION RESIDUES FROM THE DISTILLATION OF TETRACHLOROBENZENE IN THE PRODUCTION OF 2,4,5-T.

. Waste code: K043
. Waste name: 2,6-DICHLOROPHENOL WASTE FROM THE PRODUCTION OF 2,4-D.

. Waste code: K044
. Waste name: WASTEWATER TREATMENT SLUDGES FROM THE MANUFACTURING AND PROCESSING OF EXPLOSIVES.

. Waste code: K045
. Waste name: SPENT CARBON FROM THE TREATMENT OF WASTEWATER CONTAINING EXPLOSIVES.

. Waste code: K046
. Waste name: WASTEWATER TREATMENT SLUDGES FROM THE MANUFACTURING, FORMULATION, AND LOADING OF LEAD-BASED INITIATING COMPOUNDS.

. Waste code: K047
. Waste name: PINK/RED WATER FROM TNT OPERATIONS.

. Waste code: K048
. Waste name: DISSOLVED AIR FLOTATION (DAF) FLOAT FROM THE PETROLEUM REFINING INDUSTRY.

. Waste code: K049
. Waste name: SLOP OIL EMULSION SOLIDS FROM THE PETROLEUM REFINING INDUSTRY.

. Waste code: K050
. Waste name: HEAT EXCHANGER BUNDLE CLEANING SLUDGE FROM THE PETROLEUM REFINING INDUSTRY.

. Waste code: K051
. Waste name: API SEPARATOR SLUDGE FROM THE PETROLEUM REFINING INDUSTRY.

. Waste code: K052
. Waste name: TANK BOTTOMS (LEADED) FROM THE PETROLEUM REFINING INDUSTRY.

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. Waste code: K060
. Waste name: AMMONIA STILL LIME SLUDGE FROM COKING OPERATIONS.

. Waste code: K061
. Waste name: EMISSION CONTROL DUST/SLUDGE FROM THE PRIMARY PRODUCTION OF STEEL IN ELECTRIC FURNACES.

. Waste code: K062
. Waste name: SPENT PICKLE LIQUOR FROM STEEL FINISHING OPERATIONS OF PLANTS THAT PRODUCE IRON OR STEEL.

. Waste code: K069
. Waste name: EMISSION CONTROL DUST/SLUDGE FROM SECONDARY LEAD SMELTING.

. Waste code: K071
. Waste name: BRINE PURIFICATION MUDS FROM THE MERCURY CELL PROCESS IN CHLORINE PRODUCTION, IN WHICH SEPARATELY PREPURIFIED BRINE IS NOT USED.

. Waste code: K073
. Waste name: CHLORINATED HYDROCARBON WASTE FROM THE PURIFICATION STEP OF THE DIAPHRAGM CELL PROCESS USING GRAPHITE ANODES IN CHLORINE PRODUCTION.

. Waste code: K083
. Waste name: DISTILLATION BOTTOMS FROM ANILINE PRODUCTION.

. Waste code: K084
. Waste name: WASTEWATER TREATMENT SLUDGES GENERATED DURING THE PRODUCTION OF VETERINARY PHARMACEUTICALS FROM ARSENIC OR ORGANO-ARSENIC COMPOUNDS.

. Waste code: K085
. Waste name: DISTILLATION OR FRACTIONATION COLUMN BOTTOMS FROM THE PRODUCTION OF CHLOROBENZENES.

. Waste code: K086
. Waste name: SOLVENT WASHES AND SLUDGES, CAUSTIC WASHES AND SLUDGES, OR WATER WASHES AND SLUDGES FROM CLEANING TUBS AND EQUIPMENT USED IN THE FORMULATION OF INK FROM PIGMENTS, DRIERS, SOAPS, AND STABILIZERS CONTAINING CHROMIUM AND LEAD.

. Waste code: K087
. Waste name: DECANTER TANK TAR SLUDGE FROM COKING OPERATIONS.

. Waste code: K088
. Waste name: SPENT POTLINERS FROM PRIMARY ALUMINUM REDUCTION.

. Waste code: K093
. Waste name: DISTILLATION LIGHT ENDS FROM THE PRODUCTION OF PHTHALIC ANHYDRIDE FROM ORTHO-XYLENE.

. Waste code: K094
. Waste name: DISTILLATION BOTTOMS FROM THE PRODUCTION OF PHTHALIC ANHYDRIDE FROM ORTHO-XYLENE.

. Waste code: K095
. Waste name: DISTILLATION BOTTOMS FROM THE PRODUCTION OF 1,1,1-TRICHLOROETHANE.

. Waste code: K096

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. Waste name: HEAVY ENDS FROM THE HEAVY ENDS COLUMN FROM THE PRODUCTION OF 1,1,1-TRICHLOROETHANE.

. Waste code: K097
. Waste name: VACUUM STRIPPER DISCHARGE FROM THE CHLORDANE CHLORINATOR IN THE PRODUCTION OF CHLORDANE.

. Waste code: K098
. Waste name: UNTREATED PROCESS WASTEWATER FROM THE PRODUCTION OF TOXAPHENE.

. Waste code: K099
. Waste name: UNTREATED WASTEWATER FROM THE PRODUCTION OF 2,4-D.

. Waste code: K100
. Waste name: WASTE LEACHING SOLUTION FROM ACID LEACHING OF EMISSION CONTROL DUST/SLUDGE FROM SECONDARY LEAD SMELTING.

. Waste code: K101
. Waste name: DISTILLATION TAR RESIDUES FROM THE DISTILLATION OF ANILINE-BASED COMPOUNDS IN THE PRODUCTION OF VETERINARY PHARMACEUTICALS FROM ARSENIC OR ORGANO-ARSENIC COMPOUNDS.

. Waste code: K102
. Waste name: RESIDUE FROM THE USE OF ACTIVATED CARBON FOR DECOLORIZATION IN THE PRODUCTION OF VETERINARY PHARMACEUTICALS FROM ARSENIC OR ORGANO-ARSENIC COMPOUNDS.

. Waste code: K103
. Waste name: PROCESS RESIDUES FROM ANILINE EXTRACTION FROM THE PRODUCTION OF ANILINE.

. Waste code: K104
. Waste name: COMBINED WASTEWATERS GENERATED FROM NITROBENZENE/ANILINE PRODUCTION.

. Waste code: K105
. Waste name: SEPARATED AQUEOUS STREAM FROM THE REACTOR PRODUCT WASHING STEP IN THE PRODUCTION OF CHLOROBENZENES.

. Waste code: K106
. Waste name: WASTEWATER TREATMENT SLUDGE FROM THE MERCURY CELL PROCESS IN CHLORINE PRODUCTION.

. Waste code: K107
. Waste name: COLUMN BOTTOMS FROM PRODUCT SEPARATION FROM THE PRODUCTION OF 1,1-DIMETHYLHYDRAZINE (UDMH) FROM CARBOXYLIC ACID HYDRAZIDES.

. Waste code: K108
. Waste name: CONDENSED COLUMN OVERHEADS FROM PRODUCT SEPARATION AND CONDENSED REACTOR VENT GASES FROM THE PRODUCTION OF 1,1-DIMETHYLHYDRAZINE FROM CARBOXYLIC ACID HYDRAZIDES.

. Waste code: K109
. Waste name: SPENT FILTER CARTRIDGES FROM PRODUCT PURIFICATION FROM THE PRODUCT OF 1,1-DIMETHYLHYDRAZINE FROM CARBOXYLIC ACID HYDRAZIDES.

. Waste code: K110
. Waste name: CONDENSED COLUMN OVERHEADS FROM INTERMEDIATE SEPARATION FROM THE

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PRODUCTION OF 1,1-DIMETHYLHYDRAZINE FROM CARBOXYLIC ACID HYDRAZIDES.

. Waste code: K111
. Waste name: PRODUCT WASHWATERS FROM THE PRODUCTION OF DINITROTOLUENE VIA NITRATION OF TOLUENE.

. Waste code: K112
. Waste name: REACTION BY-PRODUCT WATER FROM THE DRYING COLUMN IN THE PRODUCTION OF TOLUENEDIAMINE VIA HYDROGENATION OF DINITROTOLUENE.

. Waste code: K113
. Waste name: CONDENSED LIQUID LIGHT ENDS FROM PURIFICATION OF TOLUENEDIAMINE IN PRODUCTION OF TOLUENEDIAMINE VIA HYDROGENATION OF DINITROTOLUENE.

. Waste code: K114
. Waste name: VICINALS FROM THE PURIFICATION OF TOLUENEDIAMINE IN PRODUCTION OF TOLUENEDIAMINE VIA HYDROGENATION OF DINITROTOLUENE.

. Waste code: K115
. Waste name: HEAVY ENDS FROM PURIFICATION OF TOLUENEDIAMINE IN THE PRODUCTION OF TOLUENEDIAMINE VIA HYDROGENATION OF DINITROTOLUENE.

. Waste code: K116
. Waste name: ORGANIC CONDENSATE FROM THE SOLVENT RECOVERY COLUMN IN THE PRODUCTION OF TOLUENE DIISOCYANATE VIA PHOSGENATION OF TOLUENEDIAMINE.

. Waste code: K117
. Waste name: WASTEWATER FROM THE REACTOR VENT GAS SCRUBBER IN THE PRODUCTION OF ETHYLENE DIBROMIDE VIA BROMINATION OF ETHENE.

. Waste code: K118
. Waste name: SPENT ADSORBENT SOLIDS FROM PURIFICATION OF ETHYLENE DIBROMIDE IN THE PRODUCTION OF ETHYLENE DIBROMIDE VIA BROMINATION OF ETHENE.

. Waste code: K123
. Waste name: PROCESS WASTEWATER (INCLUDING SUPERNATES, FILTRATES, AND WASHWATERS) FROM THE PRODUCTION OF ETHYLENEBISDITHIOCARBAMIC ACID AND ITS SALTS.

. Waste code: K124
. Waste name: REACTOR VENT SCRUBBER WATER FROM THE PRODUCTION OF ETHYLENEBISDITHIOCARBAMIC ACID AND ITS SALTS.

. Waste code: K125
. Waste name: FILTRATION, EVAPORATION, AND CENTRIFUGATION SOLIDS FROM THE PRODUCTION OF ETHYLENEBISDITHIOCARBAMIC ACID AND ITS SALTS.

. Waste code: K126
. Waste name: BAGHOUSE DUST AND FLOOR SWEEPINGS IN MILLING AND PACKAGING OPERATIONS FROM PRODUCTION OR FORMULATION OF ETHYLENEBISDITHIOCARBAMIC ACID AND ITS SALTS.

. Waste code: K131
. Waste name: WASTEWATER FROM THE REACTOR AND SPENT SULFURIC ACID FROM THE ACID DRYER FROM THE PRODUCTION OF METHYL BROMIDE.

. Waste code: K132
. Waste name: SPENT ABSORBENT AND WASTEWATER SEPARATOR SOLIDS FROM THE PRODUCTION OF

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METHYL BROMIDE.

. Waste code: K136
. Waste name: STILL BOTTOMS FROM THE PURIFICATION OF ETHYLENE DIBROMIDE IN THE PRODUCTION OF ETHYLENE DIBROMIDE VIA BROMINATION OF ETHENE.

. Waste code: K141
. Waste name: PROCESS RESIDUES FROM THE RECOVERY OF COAL TAR, INCLUDING, BUT NOT LIMITED TO, TAR COLLECTING SUMP RESIDUES FROM THE PRODUCTION OF COKE FROM COAL OR THE RECOVERY OF COKE BY-PRODUCTS PRODUCED FROM COAL. THIS LISTING DOES NOT INCLUDE K087 (DECANTER TANK SLUDGE FROM COKING OPERATIONS).

. Waste code: K142
. Waste name: TANK STORAGE RESIDUES FROM THE PRODUCTION OF COKE FROM COAL OR FROM THE RECOVERY OF COKE BY-PRODUCTS FROM COAL.

. Waste code: K143
. Waste name: PROCESS RESIDUES FROM THE RECOVERY OF LIGHT OIL, INCLUDING, BUT NOT LIMITED TO, THOSE GENERATED IN STILLS, DECANTERS, AND WASH OIL RECOVERY UNITS FROM THE RECOVERY OF COKE BY-PRODUCTS PRODUCED FROM COAL.

. Waste code: K144
. Waste name: WASTEWATER SUMP RESIDUES FROM LIGHT OIL REFINING, INCLUDING, BUT NOT LIMITED TO, INTERCEPTING OR CONTAMINATION SUMP SLUDGES FROM THE RECOVERY OF COKE BY-PRODUCTS PRODUCED FROM COAL.

. Waste code: K145
. Waste name: RESIDUES FROM NAPHTHALENE COLLECTION AND RECOVERY OPERATIONS FROM THE RECOVERY OF COKE BY-PRODUCTS PRODUCED FROM COAL.

. Waste code: K147
. Waste name: TAR STORAGE RESIDUES FROM COAL TAR REFINING.

. Waste code: K148
. Waste name: RESIDUES FROM COAL TAR DISTILLATION, INCLUDING, BUT NOT LIMITED TO, STILL BOTTOMS.

. Waste code: K149
. Waste name: DISTILLATION BOTTOMS FROM THE PRODUCTION OF ALPHA (OR METHYL-) CHLORINATED TOLUNES, RING-CHLORINATED TOLUNES, BENZOYL CHLORIDES, AND COMPOUNDS WITH MIXTURES OF THESE FUNCTIONAL GROUPS. [THIS WASTE DOES NOT INCLUDE STILL BOTTOMS FROM THE DISTILLATION OF BENZOYL CHLORIDE]

. Waste code: K150
. Waste name: ORGANIC RESIDULES EXCLUDING SPENT CARBON ADSORBENT, FROM THE SPENT CHLORINE GAS AND HYDROCHLORIC ACID RECOVERY PROCESSES ASSOCIATED WITH THE PRODUCTION OF ALPHA (OR METHYL-) CHLORINATED TOLUNES, BENZOYL CHLORIDES, AND COMPOUNDS WITH MIXTURES OF THESE FUNCTIONAL GROUPS.

. Waste code: K151
. Waste name: WASTEWATER TREATMENT SLUDGES, EXCLUDING NEUTRALIZATION AND BIOLOGICAL SLUDGES, GENERATED DURING THE TREATMENT OF WASTEWATERS FROM THE PRODUCTION OF ALPHA (OR METHYL-) CHLORINATED TOLUNES, BENZOYL CHLORIDES, AND COMPOUNDS WITH MIXTURES OF THESE FUNCTIONAL GROUPS.

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. Waste code: K156
. Waste name: ORGANIC WASTE (INCLUDING HEAVY ENDS, STILL BOTTOMS, LIGHT ENDS, SPENT SOLVENTS, FILTRATES, AND DECANTATES) FROM THE PRODUCTION OF CARBAMATES AND CARBAMOYL OXIMES.

. Waste code: K157
. Waste name: WASTEWATERS (INCLUDING SCRUBBER WATERS, CONDENSER WATERS, WASHWATERS, AND SEPARATION WATERS) FROM THE PRODUCTION OF CARBAMATES AND CARBAMOYL OXIMES.

. Waste code: K158
. Waste name: BAG HOUSE DUSTS AND FILTER/SEPARATION SOLIDS FROM THE PRODUCTION OF CARBAMATES AND CARBAMOYL OXIMES.

. Waste code: K159
. Waste name: ORGANICS FROM THE TREATMENT OF THIOCARBAMATE WASTES.

. Waste code: K161
. Waste name: PURIFICATION SOLIDS (INCLUDING FILTRATION, EVAPORATION, AND CENTRIFUGATION SOLIDS), BAG HOUSE DUST AND FLOOR SWEEPINGS FROM THE PRODUCTION OF DITHIOCARBAMATE ACIDS AND THEIR SALTS. (THIS LISTING DOES NOT INCLUDE K125 OR K126).

. Waste code: K169
. Waste name: CRUDE OIL STORAGE TANK SEDIMENT FROM PETROLEUM REFINING OPERATIONS

. Waste code: K170
. Waste name: CLARIFIED SLURRY OIL TANK SEDIMENT AND/OR IN-LINE FILTER/SEPARATION SOLIDS FROM PETROLEUM REFINING OPERATIONS

. Waste code: K171
. Waste name: SPENT HYDROTREATING CATALYST FROM PETROLEUM REFINING OPERATIONS,INCLUDING GUARD BEDS USED TO DESULFURIZE FEEDS TO OTHER CATALYTIC REACTORS (THIS LISTING DOES NOT INCLUDE INERT SUPPORT MEDIA)

. Waste code: K172
. Waste name: SPENT HYDROREFINING CATALYST FROM PETROLEUM REFINING OPERATIONS, INCLUDING GUARD BEDS USED TO DESULFURIZE FEEDS TO OTHER CATALYTIC REACTORS (THIS LISTING DOES NOT INCLUDE INERT SUPPORT MEDIA)

. Waste code: K174
. Waste name: WASTEWATER TREATMENT SLUDGES FROM THE PRODUCTION OF ETHLYENE DICHLORIDE OR VINYL CHLORIDE

. Waste code: K175
. Waste name: WASTEWATER TREATMENT SLUDGE FROM THE PRODUCTION OF VINYL CHLORIDE MONOMER..

. Waste code: K176
. Waste name: BAGHOUSE FILTERS FROM THE PRODUCTION OF ANTIMONY OXIDE, INCLUDING FILTERS FROM THE PRODUCTION OF INTERMEDIATES (E.G.,ANTIMONY METAL OR CRUDE ANTIMONY OXIDE)

. Waste code: K177
. Waste name: SLAG FROM THE PRODUCTION OF ANTIMONY OXIDE THAT IS SPECULATIVELY ACCUMULATED OR DISPOSED,INCLUDING SLAG FROM THE PRODUCTION OF INTERMEDIATES (E.G.,ANTIMONY METAL OR CRUDE ANTIMONY OXIDE)

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. Waste code: K178
. Waste name: RESIDUES FROM MANUFACTURING AND MANUFACTURING-SITE STORAGE OF FERRIC CHLORIDE FROM ACIDS FORMED DURING THE PRODUCTION OF TITANIUM DIOXIDE USING THE CHLORIDE-ILMENITE PROCESS.

. Waste code: K181
. Waste name: Nonwastewaters from the production of dyes and/or pigments.

. Waste code: LABP
. Waste name: LAB PACK

. Waste code: P001
. Waste name: 2H-1-BENZOPYRAN-2-ONE, 4-HYDROXY-3-(3-OXO-1-PHENYLBUTYL)-, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3% (OR) WARFARIN, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3%

. Waste code: P002
. Waste name: 1-ACETYL-2-THIOUREA (OR) ACETAMIDE, N-(AMINOTHIOXOMETHYL)-

. Waste code: P003
. Waste name: 2-PROPENAL (OR) ACROLEIN

. Waste code: P004
. Waste name: 1,4,5,8-DIMETHANONAPHTHALENE, 1,2,3,4,10,10-HEXA-CHLORO-1,4,4A,5,8,8A,-HEXAHYDRO-, (1ALPHA, 4ALPHA, 4ABETA, 5ALPHA, 8ALPHA, 8ABETA)- (OR) ALDRIN

. Waste code: P005
. Waste name: 2-PROPEN-1-OL (OR) ALLYL ALCOHOL

. Waste code: P006
. Waste name: ALUMINUM PHOSPHIDE (R,T)

. Waste code: P007
. Waste name: 3(2H)-ISOXAZOLONE, 5-(AMINOMETHYL)- (OR) 5-(AMINOMETHYL)-3-ISOXAZOLOL

. Waste code: P008
. Waste name: 4-AMINOPYRIDINE (OR) 4-PYRIDINAMINE

. Waste code: P009
. Waste name: AMMONIUM PICRATE (R) (OR) PHENOL, 2,4,6-TRINITRO-, AMMONIUM SALT (R)

. Waste code: P010
. Waste name: ARSENIC ACID H3ASO4

. Waste code: P011
. Waste name: ARSENIC OXIDE AS2O5 (OR) ARSENIC PENTOXIDE

. Waste code: P012
. Waste name: ARSENIC OXIDE AS2O3 (OR) ARSENIC TRIOXIDE

. Waste code: P013
. Waste name: BARIUM CYANIDE

. Waste code: P014
. Waste name: BENZENETHIOL (OR) THIOPHENOL

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. Waste code: P015
. Waste name: BERYLLIUM

. Waste code: P016
. Waste name: DICHLOROMETHYL ETHER (OR) METHANE, OXYBIS[CHLORO-

. Waste code: P017
. Waste name: 2-PROPANONE, 1-BROMO- (OR) BROMOACETONE

. Waste code: P018
. Waste name: BRUCINE (OR) STRYCHNIDIN-10-ONE, 2,3-DIMETHOXY-

. Waste code: P020
. Waste name: DINOSEB (OR) PHENOL, 2-(1-METHYLPROPYL)-4,6-DINITRO-

. Waste code: P021
. Waste name: CALCIUM CYANIDE (OR) CALCIUM CYANIDE CA(CN)2

. Waste code: P022
. Waste name: CARBON DISULFIDE

. Waste code: P023
. Waste name: ACETALDEHYDE, CHLORO- (OR) CHLOROACETALDEHYDE

. Waste code: P024
. Waste name: BENZENAMINE, 4-CHLORO- (OR) P-CHLORANILINE

. Waste code: P026
. Waste name: 1-(O-CHLOROPHENYL)THIOUREA (OR) THIOUREA, (2-CHLOROPHENYL)-

. Waste code: P027
. Waste name: 3-CHLOROPROPIONITRILE (OR) PROPANENITRILE, 3-CHLORO-

. Waste code: P028
. Waste name: BENZENE, (CHLOROMETHYL)- (OR) BENZYL CHLORIDE

. Waste code: P029
. Waste name: COPPER CYANIDE (OR) COPPER CYANIDE CU(CN)

. Waste code: P030
. Waste name: CYANIDES (SOLUBLE CYANIDE SALTS), NOT OTHERWISE SPECIFIED

. Waste code: P031
. Waste name: CYANOGEN (OR) ETHANEDINITRILE

. Waste code: P033
. Waste name: CYANOGEN CHLORIDE (OR) CYANOGEN CHLORIDE (CN)CL

. Waste code: P034
. Waste name: 2-CYCLOHEXYL-4,6-DINITROPHENOL (OR) PHENOL, 2-CYCLOHEXYL-4,6-DINITRO-

. Waste code: P036
. Waste name: ARSONOUS DICHLORIDE, PHENYL- (OR) DICHLOROPHENYLARSINE

. Waste code: P037
. Waste name: 2,7:3,6-DIMETHANONAPHTH[2,3-B]OXIRENE,
3,4,5,6,9,9-HEXACHLORO-1A,2,2A,3,6,6A,7,7A-OCTAHYDRO-, (1AALPHA,

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2BETA, 2AALPHA, 3BETA, 6BETA, 6AALPHA, 7BETA, 7AALPHA)- (OR) DIELDRIN

. Waste code: P038
. Waste name: ARSINE, DIETHYL- (OR) DIETHYLARSINE

. Waste code: P039
. Waste name: DISULFOTON (OR) PHOSPHORODITHIOIC ACID, O,O-DIETHYL S-[2-(ETHYLTHIO)ETHYL] ESTER

. Waste code: P040
. Waste name: O,O-DIETHYL O-PYRAZINYL PHOSPHOROTHIOATE (OR) PHOSPHOROTHIOIC ACID, O,O-DIETHYL O-PYRAZINYL ESTER

. Waste code: P041
. Waste name: DIETHYL-P-NITROPHENYL PHOSPHATE (OR) PHOSPHORIC ACID, DIETHYL 4-NITROPHENYL ESTER

. Waste code: P042
. Waste name: 1,2-BENZENEDIOL, 4-[1-HYDROXY-2-(METHYLAMINO)ETHYL]-, (R)- (OR) EPINEPHRINE

. Waste code: P043
. Waste name: DIISOPROPYLFLUOROPHOSPHATE (DFP) (OR) PHOSPHOROFLUORIDIC ACID, BIS(1-METHYLETHYL) ESTER

. Waste code: P044
. Waste name: DIMETHOATE (OR) PHOSPHORODITHIOIC ACID, O,O-DIMETHYL S-[2-(METHYLAMINO)-2-OXOETHYL] ESTER

. Waste code: P045
. Waste name: 2-BUTANONE, 3,3-DIMETHYL-1-(METHYLTHIO)-, O-[METHYLAMINO)CARBONYL] OXIME (OR) THIOFANOX

. Waste code: P046
. Waste name: ALPHA,ALPHA-DIMETHYLPHENETHYLAMINE (OR) BENZENEETHANAMINE, ALPHA, ALPHA-DIMETHYL-

. Waste code: P047
. Waste name: 4,6-DINITRO-O-CRESOL, & SALTS (OR) PHENOL, 2-METHYL-4,6-DINITRO-, & SALTS

. Waste code: P048
. Waste name: 2,4-DINITROPHENOL (OR) PHENOL, 2,4-DINITRO-

. Waste code: P049
. Waste name: DITHIOBIURET (OR) THIOIMIDODICARBONIC DIAMIDE [(H2N)C(S)]2NH

. Waste code: P050
. Waste name: 6,9-METHANO-2,4,3-BENZODIOXATHIEPIN,6,7,8,9,10,10-HEXACHLORO-1,5,5A,6, 9,9A-HEXAHYDRO-,3-OXIDE (OR) ENDOSULFAN

. Waste code: P051
. Waste name: 2,7:3,6-DIMETHANONAPHTH[2,3-B]OXIRENE, 3,4,5,6,9,9-HEXACHLORO-1A,2,2A,3,6,6A,7,7A-OCTAHYDRO-, (1AALPHA, 2BETA, 2ABETA, 3ALPHA, 6ALPHA, 6ABETA, 7BETA, 7AALPHA)- & METABOLITES (OR) ENDRIN (OR) ENDRIN, & METABOLITES

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. Waste code: P054
. Waste name: AZIRIDINE (OR) ETHYLENEIMINE

. Waste code: P056
. Waste name: FLUORINE

. Waste code: P057
. Waste name: ACETAMIDE, 2-FLUORO- (OR) FLUOROACETAMIDE

. Waste code: P058
. Waste name: ACETIC ACID, FLUORO-, SODIUM SALT (OR) FLUOROACETIC ACID, SODIUM SALT

. Waste code: P059
. Waste name: 4,7-METHANO-1H-INDENE, 1,4,5,6,7,8,8-HEPTACHLORO-3A,4,7,7A-TETRAHYDRO- (OR) HEPTACHLOR

. Waste code: P060
. Waste name: 1,4,5,8-DIMETHANONAPHTHALENE, 1,2,3,4,10,10-HEXA-CHLORO-1,4,4A,5,8,8A,-HEXAHYDRO-, (1ALPHA, 4ALPHA, 4ABETA, 5BETA, 8BETA, 8ABETA)- (OR) ISODRIN

. Waste code: P062
. Waste name: HEXAETHYL TETRAPHOSPHATE (OR) TETRAPHOSPHORIC ACID, HEXAETHYL ESTER

. Waste code: P063
. Waste name: HYDROCYANIC ACID (OR) HYDROGEN CYANIDE

. Waste code: P064
. Waste name: METHANE, ISOCYANATO- (OR) METHYL ISOCYANATE

. Waste code: P065
. Waste name: FULMINIC ACID, MERCURY(2+) SALT (R,T) (OR) MERCURY FULMINATE (R,T)

. Waste code: P066
. Waste name: ETHANIMIDOTHIOIC ACID, N-[[(METHYLAMINO)CARBONYL]OXY]-, METHYL ESTER (OR) METHOMYL

. Waste code: P067
. Waste name: 1,2-PROPYLENIMINE (OR) AZIRIDINE, 2-METHYL-

. Waste code: P068
. Waste name: HYDRAZINE, METHYL- (OR) METHYL HYDRAZINE

. Waste code: P069
. Waste name: 2-METHYLLACTONITRILE (OR) PROPANENITRILE, 2-HYDROXY-2-METHYL-

. Waste code: P070
. Waste name: ALDICARB (OR) PROPANAL, 2-METHYL-2-(METHYLTHIO)-, O-[(METHYLAMINO)CARBONYL]OXIME

. Waste code: P071
. Waste name: METHYL PARATHION (OR) PHOSPHOROTHIOIC ACID, O,O,-DIMETHYL O-(4-NITROPHENYL) ESTER

. Waste code: P072
. Waste name: ALPHA-NAPHTHYLTHIOUREA (OR) THIOUREA, 1-NAPHTHALENYL-

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. Waste code: P073
. Waste name: NICKEL CARBONYL (OR) NICKEL CARBONYL NI(CO)4, (T-4)-

. Waste code: P074
. Waste name: NICKEL CYANIDE (OR) NICKEL CYANIDE NI(CN)2

. Waste code: P075
. Waste name: NICOTINE, & SALTS (OR) PYRIDINE, 3-(1-METHYL-2-PYRROLIDINYL)-,(S)-, & SALTS

. Waste code: P076
. Waste name: NITRIC OXIDE (OR) NITROGEN OXIDE NO

. Waste code: P077
. Waste name: BENZENAMINE, 4-NITRO- (OR) P-NITROANILINE

. Waste code: P078
. Waste name: NITROGEN DIOXIDE (OR) NITROGEN OXIDE NO2

. Waste code: P081
. Waste name: 1,2,3-PROPANETRIOL, TRINITRATE (R) (OR) NITROGLYCERINE (R)

. Waste code: P082
. Waste name: METHANIMINE, N-METHYL-N-NITROSO- (OR) N-NITROSODIMETHYLAMINE

. Waste code: P084
. Waste name: N-NITROSOMETHYLVINYLAMINE (OR) VINYLAMINE, N-METHYL-N-NITROSO-

. Waste code: P085
. Waste name: DIPHOSPHORAMIDE, OCTAMETHYL- (OR) OCTAMETHYLPYROPHOSPHORAMIDE

. Waste code: P087
. Waste name: OSMIUM OXIDE OSO4, (T-4)- (OR) OSMIUM TETROXIDE

. Waste code: P088
. Waste name: 7-OXABICYCLO[2.2.1]HEPTANE-2,3-DICARBOXYLIC ACID (OR) ENDOTHALL

. Waste code: P089
. Waste name: PARATHION (OR) PHOSPHOROTHIOIC ACID, O,O-DIETHYL-O-(4-NITROPHENYL) ESTER

. Waste code: P092
. Waste name: MERCURY, (ACETATO-O)PHENYL- (OR) PHENYLMERCURY ACETATE

. Waste code: P093
. Waste name: PHENYLTHIOUREA (OR) THIOUREA, PHENYL-

. Waste code: P094
. Waste name: PHORATE (OR) PHOSPHORODITHIOIC ACID, O,O-DIETHYL S-[(ETHYLTHIO)METHYL] ESTER

. Waste code: P095
. Waste name: CARBONIC DICHLORIDE (OR) PHOSGENE

. Waste code: P096
. Waste name: HYDROGEN PHOSPHIDE (OR) PHOSPHINE

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. Waste code: P097
. Waste name: FAMPHUR (OR) PHOSPHOROTHIOIC ACID O-[4-[(DIMETHYLAMINO)SULFONYL]PHENYL] O,O-DIMETHYL ESTER

. Waste code: P098
. Waste name: POTASSIUM CYANIDE (OR) POTASSIUM CYANIDE K(CN)

. Waste code: P099
. Waste name: ARGENTATE (1-), BIS(CYANO-C)-, POTASSIUM (OR) POTASSIUM SILVER CYANIDE

. Waste code: P101
. Waste name: ETHYL CYANIDE (OR) PROPANENITRILE

. Waste code: P102
. Waste name: 2-PROPYN-1-OL (OR) PROPARGYL ALCOHOL

. Waste code: P103
. Waste name: SELENOUREA

. Waste code: P104
. Waste name: SILVER CYANIDE (OR) SILVER CYANIDE AG(CN)

. Waste code: P105
. Waste name: SODIUM AZIDE

. Waste code: P106
. Waste name: SODIUM CYANIDE (OR) SODIUM CYANIDE NA(CN)

. Waste code: P108
. Waste name: STRYCHNIDIN-10-ONE, & SALTS (OR) STRYCHNINE, & SALTS

. Waste code: P109
. Waste name: TETRAETHYLDITHIOPYROPHOSPHATE (OR) THIODIPHOSPHORIC ACID, TETRAETHYL ESTER

. Waste code: P110
. Waste name: PLUMBANE, TETRAETHYL- (OR) TETRAETHYL LEAD

. Waste code: P111
. Waste name: DIPHOSPHORIC ACID, TETRAETHYL ESTER (OR) TETRAETHYL PYROPHOSPHATE

. Waste code: P112
. Waste name: METHANE, TETRANITRO- (R) (OR) TETRANITROMETHANE (R)

. Waste code: P113
. Waste name: THALLIC OXIDE (OR) THALLIUM OXIDE TL2O3

. Waste code: P114
. Waste name: SELENIOUS ACID, DITHALLIUM (1+) SALT (OR) THALLIUM(I) SELENITE

. Waste code: P115
. Waste name: SULFURIC ACID, DITHALLIUM (1+) SALT (OR) THALLIUM(I) SULFATE

. Waste code: P116
. Waste name: HYDRAZINECARBOTHIOAMIDE (OR) THIOSEMICARBAZIDE

. Waste code: P118

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. Waste name: METHANETHIOL, TRICHLORO- (OR) TRICHLOROMETHANETHIOL

. Waste code: P119
. Waste name: AMMONIUM VANADATE (OR) VANADIC ACID, AMMONIUM SALT

. Waste code: P120
. Waste name: VANADIUM OXIDE V2O5 (OR) VANADIUM PENTOXIDE

. Waste code: P121
. Waste name: ZINC CYANIDE (OR) ZINC CYANIDE ZN(CN)2

. Waste code: P122
. Waste name: ZINC PHOSPHIDE ZN3P2, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 10% (R,T)

. Waste code: P123
. Waste name: TOXAPHENE

. Waste code: P124
. Waste name: ACTINOMYCIN D

. Waste code: P127
. Waste name: 7-BENZOFURANOL, 2,3-DIHYDRO-2,2-DIMETHYL-, METHYLCARBAMATE (OR) CARBOFURAN

. Waste code: P128
. Waste name: PHENOL, 4-(DIMETHYLAMINO)-3,5-DIMETHYL-, METHYLCARBAMATE (ESTER)

. Waste code: P185
. Waste name: 1,3-DITHIOLANE-2-CARBOXALDEHYDE, 2,4-DIMETHYL-, O-[(METHYLAMINO)-CARBONYL]OXIME (OR) TIRPATE

. Waste code: P188
. Waste name: BENZOIC ACID, 2-HYDROXY-, COMPD. WITH (3AS-CIS)-1,2,3,3A,8,8A-HEXAHYDRO-1,3A,8-TRIMETHYLPYRROLO[2,3-B]INDOL-5-YL METHYLCARBAMATE ESTER (1:1) (OR) PHYSOSTIGMINE SALICYLATE

. Waste code: P189
. Waste name: CARBAMIC ACID, [(DIBUTYLAMINO)-THIO]METHYL-, 2,3-DIHYDRO-2,2-DIMETHYL -7-BENZOFURANYL ESTER (OR) CARBOSULFAN

. Waste code: P190
. Waste name: CARBAMIC ACID, METHYL-, 3-METHYLPHENYL ESTER (OR) METOLCARB

. Waste code: P191
. Waste name: CARBAMIC ACID, DIMETHYL-, 1-[(DIMETHYL-AMINO)CARBONYL]- 5-METHYL-1H-PYRAZOL-3-YL ESTER (OR) DIMETILAN

. Waste code: P192
. Waste name: ISOLAN (OR) CARBAMIC ACID, DIMETHYL-, 3-METHY-L-(1-METHYLETHYL)-1H-PYRAZOL-5-YL ESTER

. Waste code: P194
. Waste name: ETHANIMIDOTHIOC ACID, 2-(DIMETHYLAMINO)-N-[[(METHYLAMINO) CARBONYL]OXY]-2-OXO-, METHYL ESTER (OR) OXAMYL

. Waste code: P196

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. Waste name: MANGANESE DIMETHYLDITHIOCARBAMATE (OR) MANGANESE, BIS(DIMETHYLCARBAMODITHIOATO-S,S')-,

. Waste code: P197
. Waste name: FORMPARANATE (OR) METHANIMIDAMIDE, N,N-DIMETHYL-N'-[2-METHYL-4-[[(METHYLAMINO)CARBONYL]OXY]PHENYL]

. Waste code: P198
. Waste name: METHANIMIDAMIDE, N,N-DIMETHYL-N'-[3-[[(METHYLAMINO)-CARBONYL]OXY]PHENYL]-, MONOHYDROCHLORIDE (OR) FORMETANATE HYDROCHLORIDE

. Waste code: P199
. Waste name: METHIOCARB (OR) MEXACARBATE (OR) PHENOL, (3,5-DIMETHYL-4-(METHYLTHIO)-, METHYLCARBAMATE

. Waste code: P201
. Waste name: PHENOL, 3-METHYL-5-(1-METHYLETHYL)-, METHYL CARBAMATE (OR) PROMECARB

. Waste code: P202
. Waste name: M-CUMENYL METHYLCARBAMATE (OR) 3-ISOPROPYLPHENYL N-METHYLCARBAMATE (OR) PHENOL, 3-(1-METHYLETHYL)-, METHYL CARBAMATE

. Waste code: P203
. Waste name: ALDICARB SULFONE (OR) PROPANAL, 2-METHYL-2-(METHYL-SULFONYL)-, O-[(METHYLAMINO)CARBONYL] OXIME

. Waste code: P204
. Waste name: PHYSOSTIGMINE (OR) PYRROLO[2,3-B]INDOL-5-OL, 1,2,3,3A,8,8A-HEXAHYDRO-1,3A,8-TRIMETHYL-METHYLCARBAMATE (ESTER), (3AS-CIS)-

. Waste code: P205
. Waste name: ZINC, BIS(DIMETHYLCARBAMODITHIOATO-S,S')-, (OR) ZIRAM

. Waste code: U001
. Waste name: ACETALDEHYDE (I) (OR) ETHANAL (I)

. Waste code: U002
. Waste name: 2-PROPANONE (I) (OR) ACETONE (I)

. Waste code: U003
. Waste name: ACETONITRILE (I,T)

. Waste code: U004
. Waste name: ACETOPHENONE (OR) ETHANONE, 1-PHENYL-

. Waste code: U005
. Waste name: 2-ACETYLAMINOFLUORENE (OR) ACETAMIDE, N-9H-FLUOREN-2-YL

. Waste code: U006
. Waste name: ACETYL CHLORIDE (C,R,T)

. Waste code: U007
. Waste name: 2-PROPENAMIDE (OR) ACRYLAMIDE

. Waste code: U008

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. Waste name: 2-PROPENOIC ACID (I) (OR) ACRYLIC ACID (I)

. Waste code: U009
. Waste name: 2-PROPENENITRILE (OR) ACRYLONITRILE

. Waste code: U010
. Waste name: AZIRINO [2',3':3,4]PYRROLO[1,2-A]INDOLE-4,7-DIONE, 6-AMINO-8-[[(AMINOCARBONYL)OXY]METHYL]-1,1A,2,8,8A,8B-HEXAHYDRO-8A-METHOXY-5-METHYL-, [1AS-(1AALPHA, 8BETA, 8AALPHA, 8BALPHA)]- (OR) MITOMYCIN C

. Waste code: U011
. Waste name: 1H-1,2,4-TRIAZOL-3-AMINE (OR) AMITROLE

. Waste code: U012
. Waste name: ANILINE (I,T) (OR) BENZENAMINE (I,T)

. Waste code: U014
. Waste name: AURAMINE (OR) BENZENAMINE, 4,4'-CARBONIMIDOYLBIS[N,N-DIMETHYL-

. Waste code: U015
. Waste name: AZASERINE (OR) L-SERINE, DIAZOACETATE (ESTER)

. Waste code: U016
. Waste name: BENZ[C]ACRIDINE

. Waste code: U017
. Waste name: BENZAL CHLORIDE (OR) BENZENE, (DICHLOROMETHYL)-

. Waste code: U018
. Waste name: BENZ[A]ANTHRACENE

. Waste code: U019
. Waste name: BENZENE (I,T)

. Waste code: U020
. Waste name: BENZENESULFONIC ACID CHLORIDE (C,R) (OR) BENZENESULFONYL CHLORIDE (C,R)

. Waste code: U021
. Waste name: [1,1'-BIPHENYL]-4,4'-DIAMINE (OR) BENZIDINE

. Waste code: U022
. Waste name: BENZO[A]PYRENE

. Waste code: U023
. Waste name: BENZENE, (TRICHLOROMETHYL)- (OR) BENZOTRICHLORIDE (C,R,T)

. Waste code: U024
. Waste name: DICHLOROMETHOXY ETHANE (OR) ETHANE, 1,1'-[METHYLENEBIS(OXY)]BIS[2-CHLORO-

. Waste code: U025
. Waste name: DICHLOROETHYL ETHER (OR) ETHANE, 1,1'-OXYBIS[2-CHLORO-

. Waste code: U026
. Waste name: CHLORNAPHAZIN (OR) NAPHTHALENAMINE, N,N'-BIS(2-CHLOROETHYL)-

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. Waste code: U027
. Waste name: DICHLOROISOPROPYL ETHER (OR) PROPANE, 2,2'-OXYBIS[2-CHLORO-

. Waste code: U028
. Waste name: 1,2-BENZENEDICARBOXYLIC ACID, BIS(2-ETHYLHEXYL) ESTER (OR) DIETHYLHEXYL PHTHALATE

. Waste code: U029
. Waste name: METHANE, BROMO- (OR) METHYL BROMIDE

. Waste code: U030
. Waste name: 4-BROMOPHENYL PHENYL ETHER (OR) BENZENE, 1-BROMO-4-PHENOXY-

. Waste code: U031
. Waste name: 1-BUTANOL (I) (OR) N-BUTYL ALCOHOL (I)

. Waste code: U032
. Waste name: CALCIUM CHROMATE (OR) CHROMIC ACID H2CRO4, CALCIUM SALT

. Waste code: U033
. Waste name: CARBON OXYFLUORIDE (R,T) (OR) CARBONIC DIFLUORIDE

. Waste code: U034
. Waste name: ACETALDEHYDE, TRICHLORO- (OR) CHLORAL

. Waste code: U035
. Waste name: BENZENEBUTANOIC ACID, 4-[BIS(2-CHLOROETHYL)AMINO]- (OR) CHLORAMBUCIL

. Waste code: U036
. Waste name: 4,7-METHANO-1H-INDENE, 1,2,4,5,6,7,8,8-OCTACHLORO-2,3,3A,4,7,7A-HEXAHYDRO- (OR) CHLORDANE, ALPHA & GAMMA ISOMERS

. Waste code: U037
. Waste name: BENZENE, CHLORO- (OR) CHLOROBENZENE

. Waste code: U038
. Waste name: BENZENEACETIC ACID, 4-CHLORO-ALPHA-(4-CHLOROPHENYL)-ALPHA-HYDROXY-, ETHYL ESTER (OR) CHLOROBENZILATE

. Waste code: U039
. Waste name: P-CHLORO-M-CRESOL (OR) PHENOL, 4-CHLORO-3-METHYL-

. Waste code: U041
. Waste name: EPICHLOROHYDRIN (OR) OXIRANE, (CHLOROMETHYL)-

. Waste code: U042
. Waste name: 2-CHLOROETHYL VINYL ETHER (OR) ETHENE, (2-CHLOROETHOXY)-

. Waste code: U043
. Waste name: ETHENE, CHLORO- (OR) VINYL CHLORIDE

. Waste code: U044
. Waste name: CHLOROFORM (OR) METHANE, TRICHLORO-

. Waste code: U045
. Waste name: METHANE, CHLORO- (I,T) (OR) METHYL CHLORIDE (I,T)

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. Waste code: U046
. Waste name: CHLOROMETHYL METHYL ETHER (OR) METHANE, CHLOROMETHOXY-

. Waste code: U047
. Waste name: BETA-CHLORONAPHTHALENE (OR) NAPHTHALENE, 2-CHLORO-

. Waste code: U048
. Waste name: O-CHLOROPHENOL (OR) PHENOL, 2-CHLORO-

. Waste code: U049
. Waste name: 4-CHLORO-O-TOLUIDINE, HYDROCHLORIDE (OR) BENZENAMINE, 4-CHLORO-2-METHYL-, HYDROCHLORIDE

. Waste code: U050
. Waste name: CHRYSENE

. Waste code: U051
. Waste name: CREOSOTE

. Waste code: U052
. Waste name: CRESOL (CRESYLIC ACID) (OR) PHENOL, METHYL-

. Waste code: U053
. Waste name: 2-BUTENAL (OR) CROTONALDEHYDE

. Waste code: U055
. Waste name: BENZENE, (1-METHYLETHYL)- (I) (OR) CUMENE (I)

. Waste code: U056
. Waste name: BENZENE, HEXAHYDRO- (I) (OR) CYCLOHEXANE (I)

. Waste code: U057
. Waste name: CYCLOHEXANONE (I)

. Waste code: U058
. Waste name: 2H-1,3,2-OXAZAPHOSPHORIN-2-AMINE, N,N-BIS(2-CHLOROETHYL)TETRAHYDRO-, 2-OXIDE (OR) CYCLOPHOSPHAMIDE

. Waste code: U059
. Waste name: 5,12-NAPHTHACENEDIONE, 8-ACETYL-10-[(3-AMINO-2,3,6-TRIDEOXY)-ALPHA-L-LYXO-HEXOPYRANOSYL)OXY]-7,8,9,10-TETRAHYDRO-6,8,11-TRIHYDROXY-1-METHOXY-, (8S-CIS)- (OR) DAUNOMYCIN

. Waste code: U060
. Waste name: BENZENE, 1,1'-(2,2-DICHLOROETHYLIDENE)BIS[4-CHLORO- (OR) DDD

. Waste code: U061
. Waste name: BENZENE, 1,1'-(2,2,2-TRICHLOROETHYLIDENE)BIS[4-CHLORO- (OR) DDT

. Waste code: U062
. Waste name: CARBAMOTHIOIC ACID, BIS(1-METHYLETHYL)-, S-(2,3-DICHLORO-2-PROPENYL) ESTER (OR) DIALLATE

. Waste code: U063
. Waste name: DIBENZ[A,H]ANTHRACENE

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. Waste code: U064
. Waste name: BENZO[RST]PENTAPHENE (OR) DIBENZO[A,I]PYRENE

. Waste code: U066
. Waste name: 1,2-DIBROMO-3-CHLOROPROPANE (OR) PROPANE, 1,2-DIBROMO-3-CHLORO-

. Waste code: U067
. Waste name: ETHANE, 1,2-DIBROMO- (OR) ETHYLENE DIBROMIDE

. Waste code: U068
. Waste name: METHANE, DIBROMO- (OR) METHYLENE BROMIDE

. Waste code: U069
. Waste name: 1,2-BENZENEDICARBOXYLIC ACID, DIBUTYL ESTER (OR) DIBUTYL PHTHALATE

. Waste code: U070
. Waste name: BENZENE, 1,2-DICHLORO- (OR) O-DICHLOROBENZENE

. Waste code: U071
. Waste name: BENZENE, 1,3-DICHLORO- (OR) M-DICHLOROBENZENE

. Waste code: U072
. Waste name: BENZENE, 1,4-DICHLORO- (OR) P-DICHLOROBENZENE

. Waste code: U073
. Waste name: [1,1'-BIPHENYL]-4,4'-DIAMINE, 3,3'-DICHLORO- (OR) 3,3'-DICHLOROBENZIDINE

. Waste code: U074
. Waste name: 1,4-DICHLORO-2-BUTENE (I,T) (OR) 2-BUTENE, 1,4-DICHLORO- (I,T)

. Waste code: U075
. Waste name: DICHLORODIFLUOROMETHANE (OR) METHANE, DICHLORODIFLUORO-

. Waste code: U076
. Waste name: ETHANE, 1,1-DICHLORO- (OR) ETHYLIDENE DICHLORIDE

. Waste code: U077
. Waste name: ETHANE, 1,2-DICHLORO- (OR) ETHYLENE DICHLORIDE

. Waste code: U078
. Waste name: 1,1-DICHLOROETHYLENE (OR) ETHENE, 1,1-DICHLORO-

. Waste code: U079
. Waste name: 1,2-DICHLOROETHYLENE (OR) ETHENE, 1,2-DICHLORO-,(E)-

. Waste code: U080
. Waste name: METHANE, DICHLORO- (OR) METHYLENE CHLORIDE

. Waste code: U081
. Waste name: 2,4-DICHLOROPHENOL (OR) PHENOL, 2,4-DICHLORO-

. Waste code: U082
. Waste name: 2,6-DICHLOROPHENOL (OR) PHENOL, 2,6-DICHLORO-

. Waste code: U083
. Waste name: PROPANE, 1,2-DICHLORO- (OR) PROPYLENE DICHLORIDE

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. Waste code: U084
. Waste name: 1,3-DICHLOROPROPENE (OR) 1-PROPENE, 1,3-DICHLORO-

. Waste code: U085
. Waste name: 1,2:3,4-DIEPOXYBUTANE (I,T) (OR) 2,2'-BIOXIRANE

. Waste code: U086
. Waste name: HYDRAZINE, 1,2-DIETHYL- (OR) N,N'-DIETHYLHYDRAZINE

. Waste code: U087
. Waste name: O,O-DIETHYL S-METHYL DITHIOPHOSPHATE (OR) PHOSPHORODITHIOIC ACID, O,O-DIETHYL S-METHYL ESTER

. Waste code: U088
. Waste name: 1,2-BENZENEDICARBOXYLIC ACID, DIETHYL ESTER (OR) DIETHYL PHTHALATE

. Waste code: U089
. Waste name: DIETHYLSTILBESTEROL (OR) PHENOL, 4,4'-(1,2-DIETHYL-1,2-ETHENEDIYL)BIS, (E)-

. Waste code: U090
. Waste name: 1,3-BENZODIOXOLE, 5-PROPYL- (OR) DIHYDROSAFROLE

. Waste code: U091
. Waste name: [1,1'-BIPHENYL]-4,4'-DIAMINE, 3,3'-DIMETHOXY- (OR) 3,3'-DIMETHOXYBENZIDINE

. Waste code: U092
. Waste name: DIMETHYLAMINE (I) (OR) METHANAMINE, N-METHYL- (I)

. Waste code: U093
. Waste name: BENZENAMINE, N,N-DIMETHYL-4-(PHENYLAZO)- (OR) P-DIMETHYLAMINOAZOBENZENE

. Waste code: U094
. Waste name: 7,12-DIMETHYLBENZ[A]ANTHRACENE (OR) BENZ[A]ANTHRACENE, 7,12-DIMETHYL-

. Waste code: U095
. Waste name: [1,1'-BIPHENYL]-4,4'-DIAMINE, 3,3'-DIMETHYL- (OR) 3,3'-DIMETHYLBENZIDINE

. Waste code: U096
. Waste name: ALPHA,ALPHA-DIMETHYLBENZYLHYDROPEROXIDE (R) (OR) HYDROPEROXIDE, 1-METHYL-1-PHENYLETHYL- (R)

. Waste code: U097
. Waste name: CARBAMIC CHLORIDE, DIMETHYL- (OR) DIMETHYLCARBAMOYL CHLORIDE

. Waste code: U098
. Waste name: 1,1-DIMETHYLHYDRAZINE (OR) HYDRAZINE, 1,1-DIMETHYL-

. Waste code: U099
. Waste name: 1,2-DIMETHYLHYDRAZINE (OR) HYDRAZINE, 1,2-DIPHENYL-

. Waste code: U101
. Waste name: 2,4-DIMETHYLPHENOL (OR) PHENOL, 2,4-DIMETHYL-

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. Waste code: U102
. Waste name: 1,2-BENZENEDICARBOXYLIC ACID, DIMETHYL ESTER (OR) DIMETHYL PHTHALATE

. Waste code: U103
. Waste name: DIMETHYL SULFATE (OR) SULFURIC ACID, DIMETHYL ESTER

. Waste code: U105
. Waste name: 2,4-DINITROTOLUENE (OR) BENZENE, 1-METHYL-2,4-DINITRO-

. Waste code: U106
. Waste name: 2,6-DINITROTOLUENE (OR) BENZENE, 2-METHYL-1,3-DINITRO-

. Waste code: U107
. Waste name: 1,2-BENZENEDICARBOXYLIC ACID, DIOCTYL ESTER (OR) DI-N-OCTYL PHTHALATE

. Waste code: U108
. Waste name: 1,4-DIETHYLENEOXIDE (OR) 1,4-DIOXANE

. Waste code: U109
. Waste name: 1,2-DIPHENYLHYDRAZINE (OR) HYDRAZINE, 1,2-DIPHENYL-

. Waste code: U110
. Waste name: 1-PROPANIMINE, N-PROPYL-(I) (OR) DIPROPYLAMINE (I)

. Waste code: U111
. Waste name: 1-PROPANAMINE, N-NITROSO-N-PROPYL- (OR) DI-N-PROPYLNITROSAMINE

. Waste code: U112
. Waste name: ACETIC ACID, ETHYL ESTER (I) (OR) ETHYL ACETATE (I)

. Waste code: U113
. Waste name: 2-PROPENOIC ACID, ETHYL ESTER (I) (OR) ETHYL ACRYLATE (I)

. Waste code: U114
. Waste name: CARBAMODITHIOIC ACID, 1,2-ETHANEDIYLBIS-, SALTS & ESTERS (OR) ETHYLENEBISDITHIOCARBAMIC ACID, SALTS & ESTERS

. Waste code: U115
. Waste name: ETHYLENE OXIDE (I,T) (OR) OXIRANE (I,T)

. Waste code: U116
. Waste name: 2-IMIDAZOLIDINETHIONE (OR) ETHYLENETHIOUREA

. Waste code: U117
. Waste name: ETHANE, 1,1'-OXYBIS-(I) (OR) ETHYL ETHER (I)

. Waste code: U118
. Waste name: 2-PROPENOIC ACID, 2-METHYL-, ETHYL ESTER (OR) ETHYL METHACRYLATE

. Waste code: U119
. Waste name: ETHYL METHANESULFONATE (OR) METHANESULFONIC ACID, ETHYL ESTER

. Waste code: U120
. Waste name: FLUORANTHENE

. Waste code: U121
. Waste name: METHANE, TRICHLOROFLUORO- (OR) TRICHLOROMONOFLUOROMETHANE

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. Waste code: U122
. Waste name: FORMALDEHYDE

. Waste code: U123
. Waste name: FORMIC ACID (C,T)

. Waste code: U124
. Waste name: FURAN (I) (OR) FURFURAN (I)

. Waste code: U125
. Waste name: 2-FURANCARBOXALDEHYDE (I) (OR) FURFURAL (I)

. Waste code: U126
. Waste name: GLYCIDYLALDEHYDE (OR) OXIRANECARBOXYALDEHYDE

. Waste code: U127
. Waste name: BENZENE, HEXACHLORO- (OR) HEXACHLOROBENZENE

. Waste code: U128
. Waste name: 1,3-BUTADIENE, 1,1,2,3,4,4-HEXACHLORO- (OR) HEXACHLOROBUTADIENE

. Waste code: U129
. Waste name: CYCLOHEXANE, 1,2,3,4,5,6-HEXACHLORO-, (1ALPHA, 2ALPHA, 3BETA, 4ALPHA, 5ALPHA, 6BETA)- (OR) LINDANE

. Waste code: U130
. Waste name: 1,3-CYCLOPENTADIENE, 1,2,3,4,5,5-HEXACHLORO- (OR) HEXACHLOROCYCLOPENTADIENE

. Waste code: U131
. Waste name: ETHANE, HEXACHLORO- (OR) HEXACHLOROETHANE

. Waste code: U132
. Waste name: HEXACHLOROPHENE (OR) PHENOL, 2,2'-METHYLENEBIS[3,4,6-TRICHLORO-

. Waste code: U133
. Waste name: HYDRAZINE (R,T)

. Waste code: U134
. Waste name: HYDROFLUORIC ACID (C,T) (OR) HYDROGEN FLUORIDE (C,T)

. Waste code: U135
. Waste name: HYDROGEN SULFIDE (OR) HYDROGEN SULFIDE H2S

. Waste code: U136
. Waste name: ARSINIC ACID, DIMETHYL- (OR) CACODYLIC ACID

. Waste code: U137
. Waste name: INDENO[1,2,3-CD]PYRENE

. Waste code: U138
. Waste name: METHANE, IODO- (OR) METHYL IODIDE

. Waste code: U140
. Waste name: 1-PROPANOL, 2-METHYL- (I,T) (OR) ISOBUTYL ALCOHOL (I,T)

. Waste code: U141

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. Waste name: 1,3-BENZODIOXOLE, 5-(1-PROPENYL)- (OR) ISOSAFROLE

. Waste code: U142
. Waste name: 1,3,4-METHENO-2H-CYCLOBUTA[CD]PENTALEN-2-ONE, 1,1A,3,3A,4,5,5,5A,5B,6-DECACHLOROOCTAHYDRO- (OR) KEPONE

. Waste code: U143
. Waste name: 2-BUTENOIC ACID, 2-METHYL-, 7-[[2,3-DIHYDROXY-2-(1-METHOXYETHYL)-3-METHYL-1-OXOBUTOXY]METHYL]-2,3,5,7A-TETRAHYDRO-1H-PYRROLIZIN-1-YL ESTER, [1S-[1ALPHA(Z), 7(2S*,3R*), 7AALPHA]]- (OR) LASIOCARPINE

. Waste code: U144
. Waste name: ACETIC ACID, LEAD(2+) SALT (OR) LEAD ACETATE

. Waste code: U145
. Waste name: LEAD PHOSPHATE (OR) PHOSPHORIC ACID, LEAD(2+) SALT (2:3)

. Waste code: U146
. Waste name: LEAD SUBACETATE (OR) LEAD, BIS(ACETATO-O)TETRAHYDROXYTRI-

. Waste code: U147
. Waste name: 2,5-FURANDIONE (OR) MALEIC ANHYDRIDE

. Waste code: U148
. Waste name: 3,6-PYRIDAZINEDIONE, 1,2-DIHYDRO- (OR) MALEIC HYDRAZIDE

. Waste code: U149
. Waste name: MALONONITRILE (OR) PROPANEDINITRILE

. Waste code: U150
. Waste name: L-PHENYLALANINE, 4-[BIS(2-CHLOROETHYL)AMINO]- (OR) MELPHALAN

. Waste code: U151
. Waste name: MERCURY

. Waste code: U152
. Waste name: 2-PROPENENITRILE, 2-METHYL- (I,T) (OR) METHACRYLONITRILE (I,T)

. Waste code: U153
. Waste name: METHANETHIOL (I,T) (OR) THIOMETHANOL (I,T)

. Waste code: U154
. Waste name: METHANOL (I) (OR) METHYL ALCOHOL (I)

. Waste code: U155
. Waste name: 1,2-ETHANEDIAMINE, N,N-DIMETHYL-N'-2-PYRIDINYL-N'-(2-THIENYLMETHYL)- (OR) METHAPYRILENE

. Waste code: U156
. Waste name: CARBONOCHLORIDIC ACID, METHYL ESTER, (I,T) (OR) METHYL CHLOROCARBONATE (I,T)

. Waste code: U157
. Waste name: 3-METHYLCHOLANTHRENE (OR) BENZ[J]ACEANTHRYLENE, 1,2-DIHYDRO-3-METHYL-

. Waste code: U158

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. Waste name: 4,4'-METHYLENEBIS(2-CHLOROANILINE) (OR) BENZENAMINE, 4,4'-METHYLENEBIS[2-CHLORO-

. Waste code: U159
. Waste name: 2-BUTANONE (I,T) (OR) METHYL ETHYL KETONE (MEK) (I,T)

. Waste code: U160
. Waste name: 2-BUTANONE, PEROXIDE (R,T) (OR) METHYL ETHYL KETONE PEROXIDE (R,T)

. Waste code: U161
. Waste name: 4-METHYL-2-PENTANONE (I) (OR) METHYL ISOBUTYL KETONE (I) (OR) PENTANOL, 4-METHYL-

. Waste code: U162
. Waste name: 2-PROPENOIC ACID, 2-METHYL-, METHYL ESTER (I,T) (OR) METHYL METHACRYLATE (I,T)

. Waste code: U163
. Waste name: GUANIDINE, N-METHYL-N'-NITRO-N-NITROSO- (OR) MNNG

. Waste code: U164
. Waste name: 4(1H)-PYRIMIDINONE, 2,3-DIHYDRO-6-METHYL-2-THIOXO- (OR) METHYLTHIOURACIL

. Waste code: U165
. Waste name: NAPHTHALENE

. Waste code: U166
. Waste name: 1,4-NAPHTHALENEDIONE (OR) 1,4-NAPHTHOQUINONE

. Waste code: U167
. Waste name: 1-NAPTHALENAMINE (OR) ALPHA-NAPHTHYLAMINE

. Waste code: U168
. Waste name: 2-NAPTHALENAMINE (OR) BETA-NAPHTHYLAMINE

. Waste code: U169
. Waste name: BENZENE, NITRO- (OR) NITROBENZENE (I,T)

. Waste code: U170
. Waste name: P-NITROPHENOL (I,T) (OR) PHENOL, 4-NITRO-

. Waste code: U171
. Waste name: 2-NITROPROPANE (I,T) (OR) PROPANE, 2-NITRO- (I,T)

. Waste code: U172
. Waste name: 1-BUTANAMINE, N-BUTYL-N-NITROSO- (OR) N-NITROSODI-N-BUTYLAMINE

. Waste code: U173
. Waste name: ETHANOL, 2,2'-(NITROSOIMINO)BIS- (OR) N-NITROSODIETHANOLAMINE

. Waste code: U174
. Waste name: ETHANAMINE, N-ETHYL-N-NITROSO- (OR) N-NITROSODIETHYLAMINE

. Waste code: U176
. Waste name: N-NITROSO-N-ETHYLUREA (OR) UREA, N-ETHYL-N-NITROSO-

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. Waste code: U177
. Waste name: N-NITROSO-N-METHYLUREA (OR) UREA, N-METHYL-N-NITROSO-

. Waste code: U178
. Waste name: CARBAMIC ACID, METHYLNITROSO-, ETHYL ESTER (OR) N-NITROSO-N-METHYLURETHANE

. Waste code: U179
. Waste name: N-NITROSOPIPERIDINE (OR) PIPERIDINE, 1-NITROSO-

. Waste code: U180
. Waste name: N-NITROSOPYRROLIDINE (OR) PYRROLIDINE, 1-NITROSO-

. Waste code: U181
. Waste name: 5-NITRO-O-TOLUIDINE (OR) BENZENAMINE, 2-METHYL-5-NITRO

. Waste code: U182
. Waste name: 1,3,5-TRIOXANE, 2,4,6-TRIMETHYL- (OR) PARALDEHYDE

. Waste code: U183
. Waste name: BENZENE, PENTACHLORO- (OR) PENTACHLOROBENZENE

. Waste code: U184
. Waste name: ETHANE, PENTACHLORO- (OR) PENTACHLOROETHANE

. Waste code: U185
. Waste name: BENZENE, PENTACHLORONITRO- (OR) PENTACHLORONITROBENZENE (PCNB)

. Waste code: U186
. Waste name: 1,3-PENTADIENE (I) (OR) 1-METHYLBUTADIENE (I)

. Waste code: U187
. Waste name: ACETAMIDE, N-(4-ETHOXYPHENYL)- (OR) PHENACETIN

. Waste code: U188
. Waste name: PHENOL

. Waste code: U189
. Waste name: PHOSPHORUS SULFIDE (R) (OR) SULFUR PHOSPHIDE (R)

. Waste code: U190
. Waste name: 1,3-ISOBENZOFURANDIONE (OR) PHTHALIC ANHYDRIDE

. Waste code: U191
. Waste name: 2-PICOLINE (OR) PYRIDINE, 2-METHYL-

. Waste code: U192
. Waste name: BENZAMIDE, 3,5-DICHLORO-N-(1,1-DIMETHYL-2-PROPYNYL)- (OR) PRONAMIDE

. Waste code: U193
. Waste name: 1,2-OXATHIOLANE, 2,2-DIOXIDE (OR) 1,3-PROPANE SULTONE

. Waste code: U194
. Waste name: 1-PROPANAMINE (I,T) (OR) N-PROPYLAMINE (I,T)

. Waste code: U196
. Waste name: PYRIDINE

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. Waste code: U197
. Waste name: 2,5-CYCLOHEXADIENE-1,4-DIONE (OR) P-BENZOQUINONE

. Waste code: U200
. Waste name: RESERPINE (OR) YOHIMBAN-16-CARBOXYLIC ACID, 11,17-DIMETHOXY-18-[(3,4,5-TRIMETHOXYBENZOYL)OXY]-, METHYL ESTER, (3BETA, 16BETA, 17ALPHA, 18BETA, 20ALPHA)-

. Waste code: U201
. Waste name: 1,3-BENZENEDIOL (OR) RESORCINOL

. Waste code: U203
. Waste name: 1,3-BENZODIOXOLE, 5-(2-PROPENYL)- (OR) SAFROLE

. Waste code: U204
. Waste name: SELENIOUS ACID (OR) SELENIUM DIOXIDE

. Waste code: U205
. Waste name: SELENIUM SULFIDE (OR) SELENIUM SULFIDE SES2 (R,T)

. Waste code: U206
. Waste name: D-GLUCOSE, 2-DEOXY-2-[[(METHYLNITROSOAMINO)-CARBONYL]AMINO]- (OR) GLUCOPYRANOSE, 2-DEOXY-2-(3-METHYL-3-NITROSOUREIDO)-,D- (OR) STREPTOZOTOCIN

. Waste code: U207
. Waste name: 1,2,4,5-TETRACHLOROBENZENE (OR) BENZENE, 1,2,4,5-TETRACHLORO-

. Waste code: U208
. Waste name: 1,1,1,2-TETRACHLOROETHANE (OR) ETHANE, 1,1,1,2-TETRACHLORO-

. Waste code: U209
. Waste name: 1,1,2,2-TETRACHLOROETHANE (OR) ETHANE, 1,1,2,2-TETRACHLORO-

. Waste code: U210
. Waste name: ETHENE, TETRACHLORO- (OR) TETRACHLOROETHYLENE

. Waste code: U211
. Waste name: CARBON TETRACHLORIDE (OR) METHANE, TETRACHLORO-

. Waste code: U213
. Waste name: FURAN, TETRAHYDRO-(I) (OR) TETRAHYDROFURAN (I)

. Waste code: U214
. Waste name: ACETIC ACID, THALLIUM(1+) SALT (OR) THALLIUM(I) ACETATE

. Waste code: U215
. Waste name: CARBONIC ACID, DITHALLIUM(1+) SALT (OR) THALLIUM(I) CARBONATE

. Waste code: U216
. Waste name: THALLIUM CHLORIDE TLCL (OR) THALLIUM(I) CHLORIDE

. Waste code: U217
. Waste name: NITRIC ACID, THALLIUM(1+) SALT (OR) THALLIUM(I) NITRATE

. Waste code: U218
. Waste name: ETHANETHIOAMIDE (OR) THIOACETAMIDE

PANASONIC AVIONICS CORPORATION (Continued) **1024877571**

. Waste code: U219
. Waste name: THIOUREA

. Waste code: U220
. Waste name: BENZENE, METHYL- (OR) TOLUENE

. Waste code: U221
. Waste name: BENZENEDIAMINE, AR-METHYL- (OR) TOLUENEDIAMINE

. Waste code: U222
. Waste name: BENZENAMINE, 2-METHYL-, HYDROCHLORIDE (OR) O-TOLUIDINE HYDROCHLORIDE

. Waste code: U223
. Waste name: BENZENE, 1,3-DIISOCYANATOMETHYL- (R,T) (OR) TOLUENE DIISOCYANATE (R,T)

. Waste code: U225
. Waste name: BROMOFORM (OR) METHANE, TRIBROMO-

. Waste code: U226
. Waste name: ETHANE, 1,1,1-TRICHLORO- (OR) METHYL CHLOROFORM

. Waste code: U227
. Waste name: 1,1,2-TRICHLOROETHANE (OR) ETHANE, 1,1,2-TRICHLORO-

. Waste code: U228
. Waste name: ETHENE, TRICHLORO- (OR) TRICHLOROETHYLENE

. Waste code: U234
. Waste name: 1,3,5-TRINITROBENZENE (R,T) (OR) BENZENE, 1,3,5-TRINITRO-

. Waste code: U235
. Waste name: 1-PROPANOL, 2,3-DIBROMO-, PHOSPHATE (3:1) (OR) TRIS(2,3,-DIBROMOPROPYL) PHOSPHATE

. Waste code: U236
. Waste name: 2,7-NAPHTHALENEDISULFONIC ACID,3,3'-[(3,3'-DIMETHYL[1,1'-BIPHENYL]-4,4'-DIYL)BIS(AZO)BIS[5-AMINO -4-HYDROXY]-, TETRASODIUM SALT (OR) TRYPAN BLUE

. Waste code: U237
. Waste name: 2,4-(1H,3H)-PYRIMIDINEDIONE, 5-[BIS(2-CHLOROETHYL)AMINO]- (OR) URACIL MUSTARD

. Waste code: U238
. Waste name: CARBAMIC ACID, ETHYL ESTER (OR) ETHYL CARBAMATE (URETHANE)

. Waste code: U239
. Waste name: BENZENE, DIMETHYL- (I,T) (OR) XYLENE (I)

. Waste code: U240
. Waste name: 2,4-D, SALTS & ESTERS (OR) ACETIC ACID, (2,4-DICHLOROPHENOXY)-, SALTS & ESTERS (OR) DICHLOROPHENOXYACETIC ACID 2,4-D

. Waste code: U243
. Waste name: 1-PROPENE, 1,1,2,3,3,3-HEXACHLORO- (OR) HEXACHLOROPROPENE

. Waste code: U244

PANASONIC AVIONICS CORPORATION (Continued) **1024877571**

. Waste name: THIOPEROXYDICARBONIC DIAMIDE [(H2N)C(S)]2S2, TETRAMETHYL- (OR) THIRAM

. Waste code: U246
. Waste name: CYANOGEN BROMIDE (CN)BR

. Waste code: U247
. Waste name: BENZENE, 1,1'-(2,2,2-TRICHLOROETHYLIDENE)BIS[4-METHOXY- (OR) METHOXYCHLOR

. Waste code: U248
. Waste name: 2H-1-BENZOPYRAN-2-ONE, 4-HYDROXY-3-(3-OXO-1-PHENYL-BUTYL)-, & SALTS, WHEN PRESENT AT CONCENTRATIONS OF 0.3% OR LESS (OR) WARFARIN, & SALTS, WHEN PRESENT AT CONCENTRATIONS OF 0.3% OR LESS

. Waste code: U249
. Waste name: ZINC PHOSPHIDE ZN3P2, WHEN PRESENT AT CONCENTRATIONS OF 10% OR LESS

. Waste code: U271
. Waste name: BENOMYL (OR) CARBAMIC ACID, [1-[(BUTYLAMINO)CARBONYL]-1H-BENZIMIDAZOL-2-YL]-, METHYL ESTER

. Waste code: U278
. Waste name: BENDIOCARB (OR) 1,3-BENZODIOXOL-4-OL, 2,2-DIMETHYL-, METHYL CARBAMATE

. Waste code: U279
. Waste name: CARBARYL (OR) 1-NAPHTHALENOL, METHYLCARBAMATE

. Waste code: U280
. Waste name: BARBAN (OR) CARBAMIC ACID, (3-CHLOROPHENYL)-, 4-CHLORO-2-BUTYNYL ESTER

. Waste code: U328
. Waste name: BENZENAMINE, 2-METHYL- (OR) O-TOLUIDINE

. Waste code: U353
. Waste name: BENZENAMINE, 4-METHYL- (OR) P-TOLUIDINE

. Waste code: U359
. Waste name: ETHANOL, 2-ETHOXY- (OR) ETHYLENE GLYCOL MONOETHYL ETHER

. Waste code: U364
. Waste name: BENDIOCARB PHENOL (OR) 1,3-BENZODIOXOL-4-OL, 2,2-DIMETHYL-

. Waste code: U367
. Waste name: 7-BENZOFURANOL, 2,3-DIHYDRO-2,2-DIMETHYL- (OR) CARBOFURAN PHENOL

. Waste code: U372
. Waste name: CARBAMIC ACID, 1H-BENZIMIDAZOL-2-YL, METHYL ESTER (OR) CARBENDAZIM

. Waste code: U373
. Waste name: CARBAMIC ACID, PHENYL-, 1-METHYLETHYL ESTER (OR) PROPHAM

. Waste code: U378
. Waste name: CARBAMODITHIOIC ACID, (HYDROXYMETHYL) METHYL-, MONOPOTASSIUM SALT (OR) POTASSIUM N-HYDROXYMETHYL- N-METHYLDI-THIOCARBAMATE

. Waste code: U387
. Waste name: CARBAMOTHIOIC ACID, DIPROPYL-, S-(PHENYLMETHYL) ESTER (OR)

PANASONIC AVIONICS CORPORATION (Continued) **1024877571**

PROSULFOCARB

. Waste code: U389
. Waste name: CARBAMOTHIOIC ACID, BIS(1-METHYLETHYL)-, S-(2,3,3-TRICHLORO-2-PROPENYL) ESTER (OR) TRIALLATE

. Waste code: U394
. Waste name: A2213 (OR) ETHANIMIDOTHIOIC ACID, 2-(DIMETHYLAMINO)-N-HYDROXY-2-OXO-, METHYL ESTER

. Waste code: U395
. Waste name: DIETHYLENE GLYCOL, DICARBAMATE (OR) ETHANOL, 2,2'-OXYBIS-, DICARBAMATE

. Waste code: U404
. Waste name: ETHANAMINE, N,N-DIETHYL- (OR) TRIETHYLAMINE

. Waste code: U409
. Waste name: CARBAMIC ACID, [1,2-PHENYLENEBIS (IMINOCARBONOTHIOYL)]BIS-, DIMETHYL ESTER (OR) THIOPHANATE-METHYL

. Waste code: U410
. Waste name: ETHANIMIDOTHIOIC ACID, N,N'-[THIOBIS[(METHYLIMINO)CARBONYLOXY]]BIS-, DIMETHYL ESTER (OR) THIODICARB

. Waste code: U411
. Waste name: PHENOL, 2-(1-METHYLETHOXY)-, METHYLCARBAMATE (OR) PROPOXUR

. Waste code: U480
. Waste name: 2,4,6, TRIBROMPHENOL (I.E.; DISCARDED COMMERCIAL CHEMICAL PRODUCTS, OFF-SPECIFICATION SPECIES, CONTAINER RESIDUES, AND SPILL RESIDUES THEREOF)

Violation Status: No violations found

O67 **PANASONIC** **CERS HAZ WASTE** **S121023442**
NNE **26200 ENTERPRISE WAY** **NPDES** **N/A**
1/8-1/4 **LAKE FOREST, CA 92630** **CERS**
0.243 mi.
1285 ft. **Site 5 of 5 in cluster O**

Relative: Higher
Actual: 683 ft.

CERS HAZ WASTE:
Name: PANASONIC AVIONICS CORPORATION BUILDING 1
Address: 26200 ENTERPRISE WAY
City,State,Zip: LAKE FOREST, CA 92630
Site ID: 411994
CERS ID: 10547698
CERS Description: Hazardous Waste Generator

NPDES:
Name: PANASONIC
Address: 26200 ENTERPRISE WAY
City,State,Zip: LAKE FOREST, CA 92630
Facility Status: Active
NPDES Number: CAS000001
Region: 8
Agency Number: 0
Regulatory Measure ID: 482999
Place ID: Not reported

PANASONIC (Continued) **S121023442**

Order Number:	97-03-DWQ
WDID:	8 30NEC003081
Regulatory Measure Type:	Enrollee
Program Type:	Industrial
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	03/20/2017
Termination Date Of Regulatory Measure:	Not reported
Expiration Date Of Regulatory Measure:	Not reported
Discharge Address:	26200 Enterprise Way
Discharge Name:	Panasonic
Discharge City:	Lake Forest
Discharge State:	California
Discharge Zip:	92630
Status:	Not reported
Status Date:	Not reported
Operator Name:	Not reported
Operator Address:	Not reported
Operator City:	Not reported
Operator State:	Not reported
Operator Zip:	Not reported

NPDES as of 03/2018:

NPDES Number:	CAS000001
Status:	Active
Agency Number:	0
Region:	8
Regulatory Measure ID:	482999
Order Number:	97-03-DWQ
Regulatory Measure Type:	Enrollee
Place ID:	Not reported
WDID:	8 30NEC003081
Program Type:	Industrial
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	03/20/2017
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	Panasonic
Discharge Address:	26200 Enterprise Way
Discharge City:	Lake Forest
Discharge State:	California
Discharge Zip:	92630
Received Date:	Not reported
Processed Date:	Not reported
Status:	Not reported
Status Date:	Not reported
Place Size:	Not reported
Place Size Unit:	Not reported
Contact:	Not reported
Contact Title:	Not reported
Contact Phone:	Not reported
Contact Phone Ext:	Not reported
Contact Email:	Not reported
Operator Name:	Not reported
Operator Address:	Not reported
Operator City:	Not reported
Operator State:	Not reported
Operator Zip:	Not reported
Operator Contact:	Not reported

PANASONIC (Continued) **S121023442**

Operator Contact Title:	Not reported
Operator Contact Phone:	Not reported
Operator Contact Phone Ext:	Not reported
Operator Contact Email:	Not reported
Operator Type:	Not reported
Developer:	Not reported
Developer Address:	Not reported
Developer City:	Not reported
Developer State:	Not reported
Developer Zip:	Not reported
Developer Contact:	Not reported
Developer Contact Title:	Not reported
Constype Linear Utility Ind:	Not reported
Emergency Phone:	Not reported
Emergency Phone Ext:	Not reported
Constype Above Ground Ind:	Not reported
Constype Below Ground Ind:	Not reported
Constype Cable Line Ind:	Not reported
Constype Comm Line Ind:	Not reported
Constype Commertial Ind:	Not reported
Constype Electrical Line Ind:	Not reported
Constype Gas Line Ind:	Not reported
Constype Industrial Ind:	Not reported
Constype Other Description:	Not reported
Constype Other Ind:	Not reported
Constype Recons Ind:	Not reported
Constype Residential Ind:	Not reported
Constype Transport Ind:	Not reported
Constype Utility Description:	Not reported
Constype Utility Ind:	Not reported
Constype Water Sewer Ind:	Not reported
Dir Discharge Uswater Ind:	Not reported
Receiving Water Name:	Not reported
Certifier:	Not reported
Certifier Title:	Not reported
Certification Date:	Not reported
Primary Sic:	Not reported
Secondary Sic:	Not reported
Tertiary Sic:	Not reported
NPDES Number:	Not reported
Status:	Not reported
Agency Number:	Not reported
Region:	8
Regulatory Measure ID:	482999
Order Number:	Not reported
Regulatory Measure Type:	Industrial
Place ID:	Not reported
WDID:	8 30NEC003081
Program Type:	Not reported
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	Not reported
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	Not reported
Discharge Address:	Not reported
Discharge City:	Not reported

PANASONIC (Continued) **S121023442**

Discharge State:	Not reported
Discharge Zip:	Not reported
Received Date:	01/31/2017
Processed Date:	03/20/2017
Status:	Active
Status Date:	03/20/2017
Place Size:	500000
Place Size Unit:	SqFt
Contact:	Thayne Thomas
Contact Title:	Site Manager
Contact Phone:	949-462-1416
Contact Phone Ext:	Not reported
Contact Email:	thayne.thomas@panasonic.aero
Operator Name:	Panasonic
Operator Address:	26200 Enterprise Way
Operator City:	Lake Forest
Operator State:	California
Operator Zip:	92630
Operator Contact:	Thayne Thomas
Operator Contact Title:	Site Manager
Operator Contact Phone:	949-462-1416
Operator Contact Phone Ext:	Not reported
Operator Contact Email:	thayne.thomas@panasonic.aero
Operator Type:	Private Business
Developer:	Not reported
Developer Address:	Not reported
Developer City:	Not reported
Developer State:	California
Developer Zip:	Not reported
Developer Contact:	Not reported
Developer Contact Title:	Not reported
Constype Linear Utility Ind:	Not reported
Emergency Phone:	949-283-3088
Emergency Phone Ext:	Not reported
Constype Above Ground Ind:	Not reported
Constype Below Ground Ind:	Not reported
Constype Cable Line Ind:	Not reported
Constype Comm Line Ind:	Not reported
Constype Commertial Ind:	Not reported
Constype Electrical Line Ind:	Not reported
Constype Gas Line Ind:	Not reported
Constype Industrial Ind:	Not reported
Constype Other Description:	Not reported
Constype Other Ind:	Not reported
Constype Recons Ind:	Not reported
Constype Residential Ind:	Not reported
Constype Transport Ind:	Not reported
Constype Utility Description:	Not reported
Constype Utility Ind:	Not reported
Constype Water Sewer Ind:	Not reported
Dir Discharge Uswater Ind:	N
Receiving Water Name:	Serrano Creek
Certifier:	Thayne Thomas
Certifier Title:	Site Manager
Certification Date:	31-JAN-17
Primary Sic:	3669-Communications Equipment, NEC
Secondary Sic:	Not reported

PANASONIC (Continued) **S121023442**

Tertiary Sic: Not reported

Name: PANASONIC
Address: 26200 ENTERPRISE WAY
City,State,Zip: LAKE FOREST, CA 92630
Facility Status: Not reported
NPDES Number: Not reported
Region: Not reported
Agency Number: Not reported
Regulatory Measure ID: Not reported
Place ID: Not reported
Order Number: Not reported
WDID: 8 30NEC003081
Regulatory Measure Type: Industrial
Program Type: Not reported
Adoption Date Of Regulatory Measure: Not reported
Effective Date Of Regulatory Measure: Not reported
Termination Date Of Regulatory Measure: Not reported
Expiration Date Of Regulatory Measure: Not reported
Discharge Address: Not reported
Discharge Name: Not reported
Discharge City: Not reported
Discharge State: Not reported
Discharge Zip: Not reported
Status: Active
Status Date: 03/20/2017
Operator Name: Panasonic
Operator Address: 26200 Enterprise Way
Operator City: Lake Forest
Operator State: California
Operator Zip: 92630

NPDES as of 03/2018:
NPDES Number: CAS000001
Status: Active
Agency Number: 0
Region: 8
Regulatory Measure ID: 482999
Order Number: 97-03-DWQ
Regulatory Measure Type: Enrollee
Place ID: Not reported
WDID: 8 30NEC003081
Program Type: Industrial
Adoption Date Of Regulatory Measure: Not reported
Effective Date Of Regulatory Measure: 03/20/2017
Expiration Date Of Regulatory Measure: Not reported
Termination Date Of Regulatory Measure: Not reported
Discharge Name: Panasonic
Discharge Address: 26200 Enterprise Way
Discharge City: Lake Forest
Discharge State: California
Discharge Zip: 92630
Received Date: Not reported
Processed Date: Not reported
Status: Not reported
Status Date: Not reported
Place Size: Not reported

PANASONIC (Continued) **S121023442**

Place Size Unit:	Not reported
Contact:	Not reported
Contact Title:	Not reported
Contact Phone:	Not reported
Contact Phone Ext:	Not reported
Contact Email:	Not reported
Operator Name:	Not reported
Operator Address:	Not reported
Operator City:	Not reported
Operator State:	Not reported
Operator Zip:	Not reported
Operator Contact:	Not reported
Operator Contact Title:	Not reported
Operator Contact Phone:	Not reported
Operator Contact Phone Ext:	Not reported
Operator Contact Email:	Not reported
Operator Type:	Not reported
Developer:	Not reported
Developer Address:	Not reported
Developer City:	Not reported
Developer State:	Not reported
Developer Zip:	Not reported
Developer Contact:	Not reported
Developer Contact Title:	Not reported
Constype Linear Utility Ind:	Not reported
Emergency Phone:	Not reported
Emergency Phone Ext:	Not reported
Constype Above Ground Ind:	Not reported
Constype Below Ground Ind:	Not reported
Constype Cable Line Ind:	Not reported
Constype Comm Line Ind:	Not reported
Constype Commertial Ind:	Not reported
Constype Electrical Line Ind:	Not reported
Constype Gas Line Ind:	Not reported
Constype Industrial Ind:	Not reported
Constype Other Description:	Not reported
Constype Other Ind:	Not reported
Constype Recons Ind:	Not reported
Constype Residential Ind:	Not reported
Constype Transport Ind:	Not reported
Constype Utility Description:	Not reported
Constype Utility Ind:	Not reported
Constype Water Sewer Ind:	Not reported
Dir Discharge Uswater Ind:	Not reported
Receiving Water Name:	Not reported
Certifier:	Not reported
Certifier Title:	Not reported
Certification Date:	Not reported
Primary Sic:	Not reported
Secondary Sic:	Not reported
Tertiary Sic:	Not reported
NPDES Number:	Not reported
Status:	Not reported
Agency Number:	Not reported
Region:	8
Regulatory Measure ID:	482999

PANASONIC (Continued) **S121023442**

Order Number:	Not reported
Regulatory Measure Type:	Industrial
Place ID:	Not reported
WDID:	8 30NEC003081
Program Type:	Not reported
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	Not reported
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	Not reported
Discharge Address:	Not reported
Discharge City:	Not reported
Discharge State:	Not reported
Discharge Zip:	Not reported
Received Date:	01/31/2017
Processed Date:	03/20/2017
Status:	Active
Status Date:	03/20/2017
Place Size:	500000
Place Size Unit:	SqFt
Contact:	Thayne Thomas
Contact Title:	Site Manager
Contact Phone:	949-462-1416
Contact Phone Ext:	Not reported
Contact Email:	thayne.thomas@panasonic.aero
Operator Name:	Panasonic
Operator Address:	26200 Enterprise Way
Operator City:	Lake Forest
Operator State:	California
Operator Zip:	92630
Operator Contact:	Thayne Thomas
Operator Contact Title:	Site Manager
Operator Contact Phone:	949-462-1416
Operator Contact Phone Ext:	Not reported
Operator Contact Email:	thayne.thomas@panasonic.aero
Operator Type:	Private Business
Developer:	Not reported
Developer Address:	Not reported
Developer City:	Not reported
Developer State:	California
Developer Zip:	Not reported
Developer Contact:	Not reported
Developer Contact Title:	Not reported
Constype Linear Utility Ind:	Not reported
Emergency Phone:	949-283-3088
Emergency Phone Ext:	Not reported
Constype Above Ground Ind:	Not reported
Constype Below Ground Ind:	Not reported
Constype Cable Line Ind:	Not reported
Constype Comm Line Ind:	Not reported
Constype Commertial Ind:	Not reported
Constype Electrical Line Ind:	Not reported
Constype Gas Line Ind:	Not reported
Constype Industrial Ind:	Not reported
Constype Other Description:	Not reported
Constype Other Ind:	Not reported
Constype Recons Ind:	Not reported

PANASONIC (Continued) **S121023442**

Constype Residential Ind:	Not reported
Constype Transport Ind:	Not reported
Constype Utility Description:	Not reported
Constype Utility Ind:	Not reported
Constype Water Sewer Ind:	Not reported
Dir Discharge Uswater Ind:	N
Receiving Water Name:	Serrano Creek
Certifier:	Thayne Thomas
Certifier Title:	Site Manager
Certification Date:	31-JAN-17
Primary Sic:	3669-Communications Equipment, NEC
Secondary Sic:	Not reported
Tertiary Sic:	Not reported

CERS:

Name:	PANASONIC
Address:	26200 ENTERPRISE WAY
City,State,Zip:	LAKE FOREST, CA 92630
Site ID:	538961
CERS ID:	852856
CERS Description:	Industrial Facility Storm Water

Violations:

Site ID:	538961
Site Name:	Panasonic
Violation Date:	10-02-2017
Citation:	2014-0057-DWQ - Industrial General Permit
Violation Description:	SW - Failure to Obtain Permit
Violation Notes:	DISCHARGER FAILED TO RECERTIFY THE NEC BY OCTOBER 1, 2017
Violation Division:	Water Boards
Violation Program:	INDSTW
Violation Source:	SMARTS

Site ID:	538961
Site Name:	Panasonic
Violation Date:	04-23-2019
Citation:	2014-0057-DWQ - Industrial General Permit
Violation Description:	SW - Failure to meet NEC criteria
Violation Notes:	Pallets of baled cardboard were observed around the facility. Parts for cubicles were stored outside under tarps and metal parts in boxes were observed nearby. A wooden container with a large gap at the top was observed storing metal shelving.
Violation Division:	Water Boards
Violation Program:	INDSTW
Violation Source:	SMARTS

Site ID:	538961
Site Name:	Panasonic
Violation Date:	12-26-2018
Citation:	2014-0057-DWQ - Industrial General Permit
Violation Description:	SW - Failure to meet NEC criteria
Violation Notes:	Regional Board staff conducted a No Exposure Certification (NEC) inspection of the above facility on December 26, 2018. Multiple pallets containing cardboard remnants were observed near an open topped dumpster in the southeastern corner of the facility. In addition, multiple wooden crates and pallets containing miscellaneous

PANASONIC (Continued) **S121023442**

materials (cardboard and wood) were noted in areas without cover. Overall, the facility yard is disorganized and contains large amounts of exposed materials. Therefore, this facility is currently in violation of the NEC requirements as set for in the Industrial General Permit. The Legally Responsible Person will be notified about the violations. The facility will be given until Monday, January 7, 2019 to come into compliance. If evidence is not provided by said deadline, the Regional Board will deny NEC coverage and issue a Notice of Non-Compliance.

Violation Division: Water Boards
Violation Program: INDSTW
Violation Source: SMARTS

Evaluation:

Eval General Type: Compliance Evaluation Inspection
Eval Date: 12-26-2018
Violations Found: Yes
Eval Type: Industrial Storm Water Compliance Evaluation
Eval Notes: Regional Board staff conducted a No Exposure Certification (NEC) inspection of the above facility on December 26, 2018. Multiple pallets containing cardboard remnants were observed near an open topped dumpster in the southeastern corner of the facility. In addition, multiple wooden crates and pallets containing miscellaneous materials (cardboard and wood) were noted in areas without cover. Overall, the facility yard is disorganized and contains large amounts of exposed materials.
Eval Division: Water Boards
Eval Program: INDSTW
Eval Source: SMARTS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-23-2019
Violations Found: Yes
Eval Type: Industrial Storm Water Compliance Evaluation
Eval Notes: Regional Board Staff conducted a No Exposure Certification compliance inspection for the above facility on April 23, 2019. Staff met with Mr. Daniel Baumbach, Security. Pallets of baled cardboard were observed around the facility. Parts for cubicles were stored outside under tarps and metal parts in boxes were observed nearby. A wooden container with a large gap at the top was observed storing metal shelving. As this does not meet the NEC requirements, staff informed Mr. Baumbach that the materials will need to be moved indoors or placed under a storm-resistant shelter.
Eval Division: Water Boards
Eval Program: INDSTW
Eval Source: SMARTS

Enforcement Action:

Site ID: 538961
Site Name: Panasonic
Site Address: 26200 ENTERPRISE WAY
Site City: LAKE FOREST
Site Zip: 92630
Enf Action Date: 01-04-2019
Enf Action Type: Industrial Storm Water Enforcement
Enf Action Description: Industrial Storm Water Enforcement

PANASONIC (Continued) **S121023442**

Enf Action Notes:	The Legally Responsible Person was notified of the violations on 12-26-2018. The facility will be given until Monday, January 7, 2019 to come into compliance. If evidence is not provided by said deadline, the Regional Board will deny NEC coverage and issue a Notice of Non-Compliance.
Enf Action Division:	Water Boards
Enf Action Program:	INDSTW
Enf Action Source:	SMARTS
Site ID:	538961
Site Name:	Panasonic
Site Address:	26200 ENTERPRISE WAY
Site City:	LAKE FOREST
Site Zip:	92630
Enf Action Date:	04-24-2019
Enf Action Type:	Industrial Storm Water Enforcement
Enf Action Description:	Industrial Storm Water Enforcement
Enf Action Notes:	Pallets of baled cardboard were observed around the facility. Parts for cubicles were stored outside under tarps and metal parts in boxes were observed nearby. A wooden container with a large gap at the top was observed storing metal shelving.
Enf Action Division:	Water Boards
Enf Action Program:	INDSTW
Enf Action Source:	SMARTS
Site ID:	538961
Site Name:	Panasonic
Site Address:	26200 ENTERPRISE WAY
Site City:	LAKE FOREST
Site Zip:	92630
Enf Action Date:	05-01-2019
Enf Action Type:	Notice of Non-Compliance for Non-Filers
Enf Action Description:	Notice of Non-Compliance for Non-Filers
Enf Action Notes:	Denial of NEC coverage and issuance of NNC
Enf Action Division:	Water Boards
Enf Action Program:	INDSTW
Enf Action Source:	SMARTS
Site ID:	538961
Site Name:	Panasonic
Site Address:	26200 ENTERPRISE WAY
Site City:	LAKE FOREST
Site Zip:	92630
Enf Action Date:	10-05-2017
Enf Action Type:	Industrial Storm Water Enforcement
Enf Action Description:	Industrial Storm Water Enforcement
Enf Action Notes:	DISCHARGER FAILED TO RECERTIFY THE NEC BY OCTOBER 1, 2017
Enf Action Division:	Water Boards
Enf Action Program:	INDSTW
Enf Action Source:	SMARTS

Affiliation:

Affiliation Type Desc:	Owner/Operator
Entity Name:	Panasonic
Entity Title:	Operator
Affiliation Address:	26200 Enterprise Way
Affiliation City:	Lake Forest

PANASONIC (Continued) **S121023442**

Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92630
Affiliation Phone: Not reported

Name: PANASONIC AVIONICS CORPORATION BUILDING 1
Address: 26200 ENTERPRISE WAY
City,State,Zip: LAKE FOREST, CA 92630
Site ID: 411994
CERS ID: 10547698
CERS Description: Chemical Storage Facilities

Evaluation:
Eval General Type: Other/Unknown
Eval Date: 02-02-2018
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Reviewed and accepted annual certification documents submitted to CERS on 1/9/18 with comment regarding adding locations of fire extinguisher(s) in and/or near disclosed material must be added to site map and submitting revised site map in next submission.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-18-2014
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to site to conduct hazardous materials chemical inventory and business emergency plan inspection. I walked through the facility and inspected hazardous materials storage ares. The facility has liquid nitrogen that meets the required disclosure quantities. Facility conducts employee training and maintains records of topics covered and employees trained. All required documents have been electronically submitted to E-submit and will be reviewed for approval by this Agency.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 06-20-2014
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Received inspection report signed by facility contact.
Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 06-30-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: On site to discuss corrections needed for site map that was submitted on 2/18/15 and declined, with Jason Whitt, facility contact who submitted documents.

PANASONIC (Continued) **S121023442**

Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	07-08-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	I received a copy of a fish toxicity/bioassay results for samples collected on 6/26/14, from the cooling tower and CNC machine coolant solution. Test results indicate that cooling tower liquid and machine coolant are not hazardous and do not have to be managed as hazardous waste.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	07-09-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Updated waste stream page with information regarding spent machine coolant. It was analyzed on 6/26/14 and it is not hazardous.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	07-14-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Updated site map submitted to E-submit on 7/13/15, was reviewed and accepted.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-22-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Updated facility contact information after notification from company.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	03-30-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted annual certification documents submitted to CERS on 2/28/17 with comment to list G Fire Code Hazard ClassesG on inventory forms in next submission.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS

PANASONIC (Continued) **S121023442**

Eval General Type:	Other/Unknown
Eval Date:	06-20-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	The documents submitted on 4/1/14 has been reviewed and declined with the following considerations: The yes box for recycling more than 100 kg/month of excluded or exempted recyclable materials (per HSC 25143.2) is checked. Please provide Recyclable Materials Report to this Agency. During the onsite inspection conducted on 6/18/14, it was stated that the largest container of isopropyl alcohol (IPA) is 1 gallon and there is less than 55 gallons stored on site. Therefore, IPA must not be reported and the Hazardous Materials Inventory Chemical Description sheet must be removed. Sulfuric acid in lead acid batteries is reportable, if sulfuric acid electrolyte (40% by weight) is at or greater than 55 gallons. Sulfuric acid must be reported in gallons and not in pounds, as reported. The reported volume (35 pounds) for one forklift battery, as confirmed during onsite inspection conducted on 6/18/14, appears to be high. If this is a reportable chemical, the CAS# [Truncated]
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-30-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct routine hazardous waste inspection. Dan Smolinka granted consent to conduct inspection. I walked throughout the facility and inspected Building #1, #2 and #3 where hazardous waste is stored. All waste container (drums and boxes) are stored closed and labeled. Manifests were reviewed. Facility has business emergency plan and it is electronic (company's intranet). Evacuation plan/site map are posted throughout the building.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Other/Unknown
Eval Date:	02-22-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Updated facility contact information after notification from company.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Other/Unknown
Eval Date:	07-08-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to E-submit on 7/6/15 were reviewed and declined since the site map does not show water and electrical shutoffs.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS

PANASONIC (Continued) **S121023442**

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	08-17-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Inspector Comments: On site to conduct routine hazardous waste inspection. Dan Smolinka granted consent to conduct inspection. I walked throughout the facility and inspected Building #1, #2 and #3 where hazardous waste is stored. All waste container (drums and boxes) are stored closed and labeled. Manifests were reviewed. Facility has business emergency plan and it is electronic (company's intranet). Evacuation plan/site map are posted throughout the building.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-23-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted annual certification documents submitted to E-submit on 2/22/16.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-24-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Documents submitted to E-submit on 2/18/15 were reviewed and declined since the site map does not show the locations of the evacuation staging areas (if shown not clear), electrical shutoff, water shutoff, storm and sewer drains. A revised site map must be provided.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-08-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct hazardous materials chemical inventory and business emergency plan inspection. Paul Paxton granted consent to conduct inspection. I walked through the facility, perimeter and inspected hazardous material storage areas outside the building. There has been changes in types and/or volumes of the hazardous material stored on site since last inspection or previous reporting period. Facility now has two nitrogen tanks, rather than three tanks and is storing 55 gallons of new coolant. Nitrogen tanks and coolant are stored in locked enclosures. The size of the new nitrogen tank must be verified to update G Largest ContainerG size on the nitrogen inventory form. Also, an inventory form must be submitted for the coolant. Training in hazardous materials management is provided for employees annually. Training records are available electronically. FacilityG s business emergency plan is available online on company's intranet. Evacuation plan/site [Truncated]
Eval Division:	Orange County Environmental Health

PANASONIC (Continued) **S121023442**

Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-08-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Paul Paxton granted consent to conduct inspection. I walked throughout the facility and inspected Building #1, #2 and #3 where hazardous waste is stored. All waste container (drums and boxes) are stored closed and labeled. Manifests were reviewed. FacilityG s business emergency plan is available online on company's intranet. Evacuation plan/site map are posted throughout the building.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	06-17-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Purged file.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-18-2014
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	On site to conduct routine hazardous waste inspection. Dan Smolinka and Paul Paxton granted consent to conduct inspection. I walked through all buildings where hazardous waste is stored and inspected waste storage areas. Facility has purchased CNC machines and is generating machine coolant waste. According to Mr. Smolinka, the hauler has tested the spent coolant and determined that it may managed as "non hazardous." Tests results are not available on site and analytical method is not known. Test results will be obtained from the hauler and a copy will be provided to this Agency to determine whether or not the spent coolant is hazardous or not. Spent coolant must be managed as hazardous waste until hazardous waste determination is made. All containers and two drums storing solids contaminated with isopropyl alcohol are closed and labeled properly. Manifests were reviewed. Facility has emergency contingency plan.
Eval Division:	Orange County Environmental Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	07-07-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed revised Hazardous Materials Inventory and Emergency Response and Training Plans submitted to CERS on 6/15/17. Hazardous Materials Inventory was not accepted since an inventory form for coolant located in the outside enclosure has not been submitted. Emergency Response

PANASONIC (Continued) **S121023442**

	and Training Plans was accepted.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	07-08-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Received email (forwarded from E-submit) from Jason Whitt at the facility regarding reporting sulfuric acid. I responded to email.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	08-07-2018
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Revised inventory forms submitted to CERS on 7/13/18 were reviewed and accepted.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	10-05-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Reviewed and accepted revised Hazardous Materials Inventory submitted to CERS on 9/18/17 which included reporting coolant.
Eval Division:	Orange County Environmental Health
Eval Program:	HMRRP
Eval Source:	CERS

Coordinates:

Site ID:	411994
Facility Name:	PANASONIC AVIONICS CORPORATION BUILDING 1
Env Int Type Code:	HMBP
Program ID:	10547698
Coord Name:	Not reported
Ref Point Type Desc:	Center of a facility or station.
Latitude:	33.665840
Longitude:	-117.673200

Affiliation:

Affiliation Type Desc:	CUPA District
Entity Name:	Orange County Env Health
Entity Title:	Not reported
Affiliation Address:	1241 East Dyer RoadSuite 120
Affiliation City:	Santa Ana
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92705-5611
Affiliation Phone:	(714) 433-6406

PANASONIC (Continued) **S121023442**

Affiliation Type Desc:	Document Preparer
Entity Name:	Shozo Hirano
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	26200 ENTERPRISE WAY
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92630
Affiliation Phone:	Not reported

Affiliation Type Desc:	Operator
Entity Name:	PANASONIC AVIONICS CORPORATION BUILDING 1
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(949) 672-2000

Affiliation Type Desc:	Parent Corporation
Entity Name:	PANASONIC
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Property Owner
Entity Name:	Panasonic Avionics Corporation
Entity Title:	Not reported
Affiliation Address:	26200 ENTERPRISE WAY
Affiliation City:	LAKE FOREST
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92630
Affiliation Phone:	(949) 672-2000

Affiliation Type Desc:	Identification Signer
Entity Name:	Raul Gonzalez
Entity Title:	Manager, Environmental Health, Safety & Security
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported

PANASONIC (Continued) **S121023442**

Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner
Entity Name: PANASONIC AVIONICS CORPORATION
Entity Title: Not reported
Affiliation Address: 26200 ENTERPRISE WY
Affiliation City: LAKE FOREST
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 92630
Affiliation Phone: (949) 672-2000

Affiliation Type Desc: Environmental Contact
Entity Name: RAUL GONZALEZ
Entity Title: Not reported
Affiliation Address: 26200 ENTERPRISE WAY
Affiliation City: LAKE FOREST
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92630
Affiliation Phone: Not reported

Name: BLOOM ENERGY - PANASONIC (PNS0000)
Address: 26200 ENTERPRISE WAY
City,State,Zip: LAKE FOREST, CA 92630
Site ID: 446149
CERS ID: 10778131
CERS Description: Chemical Storage Facilities

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-30-2019
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site to conduct new hazardous materials chemical inventory and business emergency plan inspection. This in an unmanned site. System has Fuel Cell Emergency Shut Down and Fuel Cell Gas Shut off Valve. HMBP documents inside locked box with phone number to access documents, is mounted on the equipment. Emergency contact phone number is also posted on equipment.
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Coordinates:
Site ID: 446149
Facility Name: Bloom Energy - Panasonic (PNS0000)
Env Int Type Code: HMBP
Program ID: 10778131
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 33.666060
Longitude: -117.673200

PANASONIC (Continued) **S121023442**

Affiliation:

Affiliation Type Desc:	Operator
Entity Name:	Bloom Energy
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(408) 543-1500

Affiliation Type Desc:	Parent Corporation
Entity Name:	Bloom Energy
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	4353 N 1st St., FL 4
Affiliation City:	San Jose
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	95134
Affiliation Phone:	Not reported

Affiliation Type Desc:	Environmental Contact
Entity Name:	Bloom Energy EHS Director
Entity Title:	Not reported
Affiliation Address:	4353 N 1st St., FL 4
Affiliation City:	San Jose
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	95134
Affiliation Phone:	Not reported

Affiliation Type Desc:	Identification Signer
Entity Name:	Bao Ngo
Entity Title:	EHS Manager
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	CUPA District
Entity Name:	Orange County Env Health
Entity Title:	Not reported
Affiliation Address:	1241 East Dyer RoadSuite 120
Affiliation City:	Santa Ana
Affiliation State:	CA

PANASONIC (Continued) **S121023442**

Affiliation Country:	Not reported
Affiliation Zip:	92705-5611
Affiliation Phone:	(714) 433-6406
Affiliation Type Desc:	Legal Owner
Entity Name:	Bloom Energy
Entity Title:	Not reported
Affiliation Address:	4353 N 1st St., FL 4
Affiliation City:	San Jose
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	95134
Affiliation Phone:	(408) 543-1500

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68 **CHEVRON** **LUST** **U003659611**
East **20731 LAKE FOREST** **SWEEPS UST** **N/A**
1/4-1/2 **LAKE FOREST, CA 92630** **Cortese**
0.287 mi. **HIST CORTESE**
1514 ft. **CERS**

Relative: **Higher**

Actual: **705 ft.**

LUST:

Name:	CHEVRON
Address:	20731 LAKE FOREST
City,State,Zip:	LAKE FOREST, CA 92630
Lead Agency:	ORANGE COUNTY LOP
Case Type:	LUST Cleanup Site
Geo Track:	http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0605902102
Global Id:	T0605902102
Latitude:	33.6458268
Longitude:	-117.6890547
Status:	Completed - Case Closed
Status Date:	04/20/1998
Case Worker:	KL
RB Case Number:	083003083T
Local Agency:	ORANGE COUNTY LOP
File Location:	Local Agency
Local Case Number:	97UT037
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

LUST:

Global Id:	T0605902102
Contact Type:	Local Agency Caseworker
Contact Name:	JAMES STROZIER
Organization Name:	ORANGE COUNTY LOP
Address:	1241 E. DYER ROAD SUITE 120
City:	SANTA ANA
Email:	jstrozier@ochca.com
Phone Number:	7144336273
Global Id:	T0605902102
Contact Type:	Local Agency Caseworker
Contact Name:	KEVIN LAMBERT
Organization Name:	ORANGE COUNTY LOP
Address:	1241 E DYER ROAD SUITE 120
City:	SANTA ANA

CHEVRON (Continued) **U003659611**

Email: klambert@ochca.com
Phone Number: 7144336261

Global Id: T0605902102
Contact Type: Regional Board Caseworker
Contact Name: MIGUEL OVIEDO
Organization Name: SANTA ANA RWQCB (REGION 8)
Address: 3737 Main Street, Suite 500
City: RIVERSIDE
Email: miguel.oviedo@waterboards.ca.gov
Phone Number: 9517823238

LUST:
Global Id: T0605902102
Action Type: Other
Date: 09/12/1997
Action: Leak Discovery

Global Id: T0605902102
Action Type: ENFORCEMENT
Date: 03/02/1998
Action: LOP Case Closure Summary to RB

Global Id: T0605902102
Action Type: Other
Date: 09/12/1997
Action: Leak Reported

LUST:
Global Id: T0605902102
Status: Open - Case Begin Date
Status Date: 09/12/1997

Global Id: T0605902102
Status: Completed - Case Closed
Status Date: 04/20/1998

LUST REG 8:
Name: CHEVRON
Address: 20731 LAKE FOREST
City: LAKE FOREST
Region: 8
County: Orange
Regional Board: Santa Ana Region
Facility Status: Case Closed
Case Number: 083003083T
Local Case Num: 97UT037
Case Type: Soil only
Substance: Gasoline
Qty Leaked: 0
Abate Method: Not reported
Cross Street: Not reported
Enf Type: Not reported
Funding: Not reported
How Discovered: Tank Closure

CHEVRON (Continued) **U003659611**

How Stopped:	Close Tank
Leak Cause:	Unknown
Leak Source:	Unknown
Global ID:	T0605902102
How Stopped Date:	9/9/9999
Enter Date:	Not reported
Date Confirmation of Leak Began:	Not reported
Date Preliminary Assessment Began:	Not reported
Discover Date:	9/12/1997
Enforcement Date:	Not reported
Close Date:	4/20/1998
Date Prelim Assessment Workplan Submitted:	Not reported
Date Pollution Characterization Began:	Not reported
Date Remediation Plan Submitted:	Not reported
Date Remedial Action Underway:	Not reported
Date Post Remedial Action Monitoring:	Not reported
Enter Date:	Not reported
GW Qualifies:	Not reported
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.6458268
Longitude:	-117.6890547
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	1
MTBE Tested:	Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.
MTBE Class:	*
Staff:	TME
Staff Initials:	JS
Lead Agency:	Local Agency
Local Agency:	30000L
Hydr Basin #:	Not reported
Beneficial:	MUN
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported

Summary: Not reported

ORANGE CO. LUST:

Name:	CHEVRON
Address:	20731 LAKE FOREST DR
City,State,Zip:	LAKE FOREST, CA 92630
Region:	ORANGE
Facility Id:	97UT037
Released Substance:	Gasoline-Automotive (motor gasoline and additives), leaded & unleaded
Date Closed:	04/20/1998
Record ID:	RO0001932

SWEEPS UST:

Name:	CHEVRON
Address:	20731 LAKE FOREST DR

CHEVRON (Continued) **U003659611**

City: LAKE FOREST
Status: Active
Comp Number: 11761
Number: 9
Board Of Equalization: Not reported
Referral Date: 09-30-92
Action Date: 09-15-92
Created Date: 02-29-88
Owner Tank Id: Not reported
SWRCB Tank Id: 30-000-011761-000001
Tank Status: A
Capacity: 12000
Active Date: Not reported
Tank Use: M.V. FUEL
STG: P
Content: REG UNLEADED
Number Of Tanks: 3

Name: CHEVRON
Address: 20731 LAKE FOREST DR
City: LAKE FOREST
Status: Active
Comp Number: 11761
Number: 9
Board Of Equalization: Not reported
Referral Date: 09-30-92
Action Date: 09-15-92
Created Date: 02-29-88
Owner Tank Id: Not reported
SWRCB Tank Id: 30-000-011761-000002
Tank Status: A
Capacity: 12000
Active Date: Not reported
Tank Use: M.V. FUEL
STG: P
Content: REG UNLEADED
Number Of Tanks: Not reported

Name: CHEVRON
Address: 20731 LAKE FOREST DR
City: LAKE FOREST
Status: Active
Comp Number: 11761
Number: 9
Board Of Equalization: Not reported
Referral Date: 09-30-92
Action Date: 09-15-92
Created Date: 02-29-88
Owner Tank Id: Not reported
SWRCB Tank Id: 30-000-011761-000003
Tank Status: A
Capacity: 12000
Active Date: Not reported
Tank Use: M.V. FUEL
STG: P
Content: DIESEL
Number Of Tanks: Not reported

CHEVRON (Continued) **U003659611**

CORTESE:

Name:	CHEVRON
Address:	20731 LAKE FOREST
City,State,Zip:	LAKE FOREST, CA 92630
Region:	CORTESE
Envirostor Id:	Not reported
Global ID:	T0605902102
Site/Facility Type:	LUST CLEANUP SITE
Cleanup Status:	COMPLETED - CASE CLOSED
Status Date:	Not reported
Site Code:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Owner:	Not reported
Enf Type:	Not reported
Swat R:	Not reported
Flag:	active
Order No:	Not reported
Waste Discharge System No:	Not reported
Effective Date:	Not reported
Region 2:	Not reported
WID Id:	Not reported
Solid Waste Id No:	Not reported
Waste Management Uit Name:	Not reported
File Name:	Active Open

HIST CORTESE:

edr_fname:	CHEVRON
edr_fadd1:	20731
City,State,Zip:	LAKE FOREST, CA 92630
Region:	CORTESE
Facility County Code:	30
Reg By:	LTNKA
Reg Id:	083003083T

CERS:

Name:	CHEVRON
Address:	20731 LAKE FOREST
City,State,Zip:	LAKE FOREST, CA 92630
Site ID:	242907
CERS ID:	T0605902102
CERS Description:	Leaking Underground Storage Tank Cleanup Site

Affiliation:

Affiliation Type Desc:	Local Agency Caseworker
Entity Name:	JAMES STROZIER - ORANGE COUNTY LOP
Entity Title:	Not reported
Affiliation Address:	1241 E. DYER ROAD SUITE 120
Affiliation City:	SANTA ANA
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	7144336273
Affiliation Type Desc:	Regional Board Caseworker
Entity Name:	MIGUEL OVIEDO - SANTA ANA RWQCB (REGION 8)

CHEVRON (Continued) **U003659611**

Entity Title: Not reported
Affiliation Address: 3737 Main Street, Suite 500
Affiliation City: RIVERSIDE
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: 9517823238

Affiliation Type Desc: Local Agency Caseworker
Entity Name: KEVIN LAMBERT - ORANGE COUNTY LOP
Entity Title: Not reported
Affiliation Address: 1241 E DYER ROAD SUITE 120
Affiliation City: SANTA ANA
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: 7144336261

Q69 **BEACON BAY CAR WASH** **LUST** **S105774228**
ENE **20602 LAKE FOREST** **Cortese** **N/A**
1/4-1/2 **LAKE FOREST, CA 92630** **CERS**
0.376 mi.
1987 ft. **Site 1 of 3 in cluster Q**

Relative:
Higher

Actual:
701 ft.

LUST:
Name: BEACON BAY CAR WASH
Address: 20602 LAKE FOREST
City,State,Zip: LAKE FOREST, CA 92630
Lead Agency: ORANGE COUNTY LOP
Case Type: LUST Cleanup Site
Geo Track: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0605999998
Global Id: T0605999998
Latitude: 33.663041
Longitude: -117.666454
Status: Completed - Case Closed
Status Date: 09/12/2002
Case Worker: KL
RB Case Number: 083003899T
Local Agency: ORANGE COUNTY LOP
File Location: Local Agency
Local Case Number: 02UT003
Potential Media Affect: Under Investigation
Potential Contaminants of Concern: Gasoline
Site History: Not reported

LUST:
Global Id: T0605999998
Contact Type: Local Agency Caseworker
Contact Name: JAMES STROZIER
Organization Name: ORANGE COUNTY LOP
Address: 1241 E. DYER ROAD SUITE 120
City: SANTA ANA
Email: jstrozier@ochca.com
Phone Number: 7144336273

Global Id: T0605999998
Contact Type: Local Agency Caseworker

BEACON BAY CAR WASH (Continued) **S105774228**

Contact Name: KEVIN LAMBERT
Organization Name: ORANGE COUNTY LOP
Address: 1241 E DYER ROAD SUITE 120
City: SANTA ANA
Email: klambert@ochca.com
Phone Number: 7144336261

LUST:
Global Id: T0605999998
Action Type: ENFORCEMENT
Date: 09/12/2002
Action: Closure/No Further Action Letter

LUST:
Global Id: T0605999998
Status: Completed - Case Closed
Status Date: 09/12/2002

Global Id: T0605999998
Status: Open - Case Begin Date
Status Date: 09/12/2002

LUST REG 8:
Name: BEACON BAY CAR WASH
Address: 20602 LAKE FOREST
City: LAKE FOREST
Region: 8
County: Orange
Regional Board: Santa Ana Region
Facility Status: Case Closed
Case Number: 083003899T
Local Case Num: 02UT003
Case Type: Undefined
Substance: Gasoline
Qty Leaked: 0
Abate Method: Not reported
Cross Street: Not reported
Enf Type: Not reported
Funding: Not reported
How Discovered: Tank Closure
How Stopped: Close Tank
Leak Cause: Unknown
Leak Source: Unknown
Global ID: T0605999998
How Stopped Date: 9/9/9999
Enter Date: Not reported
Date Confirmation of Leak Began: Not reported
Date Preliminary Assessment Began: Not reported
Discover Date: 1/1/1965
Enforcement Date: Not reported
Close Date: 9/12/2002
Date Prelim Assessment Workplan Submitted: Not reported
Date Pollution Characterization Began: Not reported
Date Remediation Plan Submitted: Not reported
Date Remedial Action Underway: Not reported

BEACON BAY CAR WASH (Continued) **S105774228**

Date Post Remedial Action Monitoring:	Not reported
Enter Date:	Not reported
GW Qualifies:	Not reported
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.662755
Longitude:	-117.667306
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	1
MTBE Tested:	Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.
MTBE Class:	*
Staff:	NOM
Staff Initials:	JS
Lead Agency:	Local Agency
Local Agency:	30000L
Hydr Basin #:	Not reported
Beneficial:	MUN
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported

Summary: Not reported

ORANGE CO. LUST:

Name:	BEACON BAY CAR WASH
Address:	20602 LAKE FOREST DR
City,State,Zip:	LAKE FOREST, CA 92630
Region:	ORANGE
Facility Id:	02UT003
Released Substance:	Gasoline-Automotive (motor gasoline and additives), leaded & unleaded
Date Closed:	09/12/2002
Record ID:	RO0003032

CORTESE:

Name:	BEACON BAY CAR WASH
Address:	20602 LAKE FOREST
City,State,Zip:	LAKE FOREST, CA 92630
Region:	CORTESE
Envirostor Id:	Not reported
Global ID:	T0605999998
Site/Facility Type:	LUST CLEANUP SITE
Cleanup Status:	COMPLETED - CASE CLOSED
Status Date:	Not reported
Site Code:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Owner:	Not reported
Enf Type:	Not reported
Swat R:	Not reported
Flag:	active
Order No:	Not reported

BEACON BAY CAR WASH (Continued) **S105774228**

Waste Discharge System No:	Not reported
Effective Date:	Not reported
Region 2:	Not reported
WID Id:	Not reported
Solid Waste Id No:	Not reported
Waste Management Uit Name:	Not reported
File Name:	Active Open

CERS:

Name:	BEACON BAY CAR WASH
Address:	20602 LAKE FOREST
City,State,Zip:	LAKE FOREST, CA 92630
Site ID:	233682
CERS ID:	T0605999998
CERS Description:	Leaking Underground Storage Tank Cleanup Site

Affiliation:

Affiliation Type Desc:	Local Agency Caseworker
Entity Name:	JAMES STROZIER - ORANGE COUNTY LOP
Entity Title:	Not reported
Affiliation Address:	1241 E. DYER ROAD SUITE 120
Affiliation City:	SANTA ANA
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	7144336273

Affiliation Type Desc:	Local Agency Caseworker
Entity Name:	KEVIN LAMBERT - ORANGE COUNTY LOP
Entity Title:	Not reported
Affiliation Address:	1241 E DYER ROAD SUITE 120
Affiliation City:	SANTA ANA
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	7144336261

Q70 **ARCO** **LUST** **U003937792**
ENE **20572 LAKE FOREST** **Cortese** **N/A**
1/4-1/2 **LAKE FOREST, CA 92630** **CERS**
0.410 mi.
2167 ft. **Site 2 of 3 in cluster Q**

Relative:
Higher

Actual:
700 ft.

LUST:

Name:	ARCO
Address:	20572 LAKE FOREST
City,State,Zip:	LAKE FOREST, CA 92630
Lead Agency:	ORANGE COUNTY LOP
Case Type:	LUST Cleanup Site
Geo Track:	http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0605947685
Global Id:	T0605947685
Latitude:	33.663244
Longitude:	-117.665983
Status:	Completed - Case Closed
Status Date:	05/16/2003
Case Worker:	KL
RB Case Number:	Not reported

ARCO (Continued) **U003937792**

Local Agency: ORANGE COUNTY LOP
File Location: Local Agency Warehouse
Local Case Number: 02UT008
Potential Media Affect: Soil
Potential Contaminants of Concern: Gasoline
Site History: Not reported

LUST:
Global Id: T0605947685
Contact Type: Local Agency Caseworker
Contact Name: JAMES STROZIER
Organization Name: ORANGE COUNTY LOP
Address: 1241 E. DYER ROAD SUITE 120
City: SANTA ANA
Email: jstrozier@ochca.com
Phone Number: 7144336273

Global Id: T0605947685
Contact Type: Local Agency Caseworker
Contact Name: KEVIN LAMBERT
Organization Name: ORANGE COUNTY LOP
Address: 1241 E DYER ROAD SUITE 120
City: SANTA ANA
Email: klambert@ochca.com
Phone Number: 7144336261

Global Id: T0605947685
Contact Type: Regional Board Caseworker
Contact Name: VALERIE JAHN-BULL
Organization Name: SANTA ANA RWQCB (REGION 8)
Address: 3737 MAIN STREET, SUITE 500
City: RIVERSIDE
Email: valerie.jahn-bull@waterboards.ca.gov
Phone Number: 9517824903

LUST:
Global Id: T0605947685
Action Type: Other
Date: 02/26/2002
Action: Leak Discovery

Global Id: T0605947685
Action Type: ENFORCEMENT
Date: 05/16/2003
Action: Closure/No Further Action Letter

Global Id: T0605947685
Action Type: REMEDIATION
Date: 07/30/2002
Action: Not reported

Global Id: T0605947685
Action Type: Other
Date: 03/04/2002
Action: Leak Reported

ARCO (Continued) **U003937792**

LUST:
Global Id: T0605947685
Status: Open - Case Begin Date
Status Date: 02/26/2002

Global Id: T0605947685
Status: Open - Site Assessment
Status Date: 02/26/2002

Global Id: T0605947685
Status: Completed - Case Closed
Status Date: 05/16/2003

ORANGE CO. LUST:
Name: ARCO
Address: 20572 LAKE FOREST DR
City,State,Zip: LAKE FOREST, CA 92630
Region: ORANGE
Facility Id: 02UT008
Released Substance: Gasoline-Automotive (motor gasoline and additives), leaded & unleaded
Date Closed: 05/16/2003
Record ID: RO0003049

CORTESE:
Name: ARCO
Address: 20572 LAKE FOREST
City,State,Zip: LAKE FOREST, CA 92630
Region: CORTESE
Envirostor Id: Not reported
Global ID: T0605947685
Site/Facility Type: LUST CLEANUP SITE
Cleanup Status: COMPLETED - CASE CLOSED
Status Date: Not reported
Site Code: Not reported
Latitude: Not reported
Longitude: Not reported
Owner: Not reported
Enf Type: Not reported
Swat R: Not reported
Flag: active
Order No: Not reported
Waste Discharge System No: Not reported
Effective Date: Not reported
Region 2: Not reported
WID Id: Not reported
Solid Waste Id No: Not reported
Waste Management Uit Name: Not reported
File Name: Active Open

CERS:
Name: ARCO
Address: 20572 LAKE FOREST
City,State,Zip: LAKE FOREST, CA 92630
Site ID: 252421

ARCO (Continued) **U003937792**

CERS ID: T0605947685
CERS Description: Leaking Underground Storage Tank Cleanup Site

Affiliation:
Affiliation Type Desc: Local Agency Caseworker
Entity Name: JAMES STROZIER - ORANGE COUNTY LOP
Entity Title: Not reported
Affiliation Address: 1241 E. DYER ROAD SUITE 120
Affiliation City: SANTA ANA
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: 7144336273

Affiliation Type Desc: Local Agency Caseworker
Entity Name: KEVIN LAMBERT - ORANGE COUNTY LOP
Entity Title: Not reported
Affiliation Address: 1241 E DYER ROAD SUITE 120
Affiliation City: SANTA ANA
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: 7144336261

Affiliation Type Desc: Regional Board Caseworker
Entity Name: VALERIE JAHN-BULL - SANTA ANA RWQCB (REGION 8)
Entity Title: Not reported
Affiliation Address: 3737 MAIN STREET, SUITE 500
Affiliation City: RIVERSIDE
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: 9517824903

Q71 **ARCO AM/PM** **LUST S105774214**
ENE **20572 LAKE FOREST DR** **SWEEPS UST N/A**
1/4-1/2 **LAKE FOREST, CA 92630**
0.410 mi.
2167 ft. **Site 3 of 3 in cluster Q**

Relative: **Higher**
Actual: **700 ft.**

LUST REG 8:
Name: ARCO
Address: 20572 LAKE FOREST DR
City: LAKE FOREST
Region: 8
County: Orange
Regional Board: Santa Ana Region
Facility Status: Case Closed
Case Number: Not reported
Local Case Num: 02UT008
Case Type: Soil only
Substance: Gasoline
Qty Leaked: 0
Abate Method: Not reported
Cross Street: Not reported
Enf Type: CLOS
Funding: Not reported

ARCO AM/PM (Continued) **S105774214**

How Discovered:	UM
How Stopped:	Other Means
Leak Cause:	Unknown
Leak Source:	Piping
Global ID:	T0605947685
How Stopped Date:	9/9/9999
Enter Date:	Not reported
Date Confirmation of Leak Began:	Not reported
Date Preliminary Assessment Began:	2/26/2002
Discover Date:	2/26/2002
Enforcement Date:	Not reported
Close Date:	5/16/2003
Date Prelim Assessment Workplan Submitted:	Not reported
Date Pollution Characterization Began:	Not reported
Date Remediation Plan Submitted:	Not reported
Date Remedial Action Underway:	Not reported
Date Post Remedial Action Monitoring:	Not reported
Enter Date:	Not reported
GW Qualifies:	Not reported
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	0
Longitude:	0
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	1
MTBE Tested:	Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.
MTBE Class:	*
Staff:	VJJ
Staff Initials:	JS
Lead Agency:	Local Agency
Local Agency:	30000L
Hydr Basin #:	Not reported
Beneficial:	MUN
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported

Summary: Not reported

SWEEPS UST:

Name:	ARCO AM/PM
Address:	20572 LAKE FOREST DR
City:	LAKE FOREST
Status:	Active
Comp Number:	12020
Number:	9
Board Of Equalization:	Not reported
Referral Date:	09-30-92
Action Date:	09-15-92
Created Date:	02-29-88
Owner Tank Id:	Not reported
SWRCB Tank Id:	30-000-012020-000001

ARCO AM/PM (Continued) **S105774214**

Tank Status: A
Capacity: 10000
Active Date: Not reported
Tank Use: M.V. FUEL
STG: P
Content: LEADED
Number Of Tanks: 4

Name: ARCO AM/PM
Address: 20572 LAKE FOREST DR
City: LAKE FOREST
Status: Active
Comp Number: 12020
Number: 9
Board Of Equalization: Not reported
Referral Date: 09-30-92
Action Date: 09-15-92
Created Date: 02-29-88
Owner Tank Id: Not reported
SWRCB Tank Id: 30-000-012020-000002
Tank Status: A
Capacity: 10000
Active Date: Not reported
Tank Use: M.V. FUEL
STG: P
Content: DIESEL
Number Of Tanks: Not reported

Name: ARCO AM/PM
Address: 20572 LAKE FOREST DR
City: LAKE FOREST
Status: Active
Comp Number: 12020
Number: 9
Board Of Equalization: Not reported
Referral Date: 09-30-92
Action Date: 09-15-92
Created Date: 02-29-88
Owner Tank Id: Not reported
SWRCB Tank Id: 30-000-012020-000003
Tank Status: A
Capacity: 10000
Active Date: Not reported
Tank Use: M.V. FUEL
STG: P
Content: REG UNLEADED
Number Of Tanks: Not reported

Name: ARCO AM/PM
Address: 20572 LAKE FOREST DR
City: LAKE FOREST
Status: Active
Comp Number: 12020
Number: 9
Board Of Equalization: Not reported
Referral Date: 09-30-92
Action Date: 09-15-92

ARCO AM/PM (Continued) **S105774214**

Created Date:	02-29-88
Owner Tank Id:	Not reported
SWRCB Tank Id:	30-000-012020-000004
Tank Status:	A
Capacity:	10000
Active Date:	Not reported
Tank Use:	M.V. FUEL
STG:	P
Content:	REG UNLEADED
Number Of Tanks:	Not reported

72
WSW
1/4-1/2
0.499 mi.
2634 ft.

LOS ALISOS WATER DISTRICT
21802 WISTERIA
LAKE FOREST, CA 92630

LUST **S105023648**
HIST CORTESE **N/A**
CERS

Relative:
Lower

Actual:
614 ft.

LUST:

Name:	LOS ALISOS WATER DISTRICT
Address:	21802 WISTERIA
City,State,Zip:	LAKE FOREST, CA 92630
Lead Agency:	ORANGE COUNTY LOP
Case Type:	LUST Cleanup Site
Geo Track:	http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0605901013
Global Id:	T0605901013
Latitude:	33.6561764
Longitude:	-117.6846135
Status:	Completed - Case Closed
Status Date:	02/28/1990
Case Worker:	KL
RB Case Number:	083001324T
Local Agency:	ORANGE COUNTY LOP
File Location:	Local Agency
Local Case Number:	89UT157
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Diesel
Site History:	Not reported

LUST:

Global Id:	T0605901013
Contact Type:	Local Agency Caseworker
Contact Name:	JAMES STROZIER
Organization Name:	ORANGE COUNTY LOP
Address:	1241 E. DYER ROAD SUITE 120
City:	SANTA ANA
Email:	jstrozier@ochca.com
Phone Number:	7144336273

Global Id:	T0605901013
Contact Type:	Local Agency Caseworker
Contact Name:	KEVIN LAMBERT
Organization Name:	ORANGE COUNTY LOP
Address:	1241 E DYER ROAD SUITE 120
City:	SANTA ANA
Email:	klambert@ochca.com
Phone Number:	7144336261

LOS ALISOS WATER DISTRICT (Continued) **S105023648**

LUST:
Global Id: T0605901013
Action Type: Other
Date: 08/30/1989
Action: Leak Discovery

Global Id: T0605901013
Action Type: Other
Date: 08/30/1989
Action: Leak Reported

Global Id: T0605901013
Action Type: ENFORCEMENT
Date: 11/25/2019
Action: File review

LUST:
Global Id: T0605901013
Status: Open - Case Begin Date
Status Date: 08/30/1989

Global Id: T0605901013
Status: Completed - Case Closed
Status Date: 02/28/1990

ORANGE CO. LUST:
Name: LOS ALISOS WATER DISTRICT
Address: 21802 WISTERIA ST
City,State,Zip: LAKE FOREST, CA 92630
Region: ORANGE
Facility Id: 89UT157
Released Substance: Diesel fuel oil and additives, Nos.1-D, 2-D, 2-4
Date Closed: 02/28/1990
Record ID: RO0002861

HIST CORTESE:
edr_fname: LOS ALISOS WATER DISTRICT
edr_fadd1: 21802 WISTERIA
City,State,Zip: EL TORO, CA 92630
Region: CORTESE
Facility County Code: 30
Reg By: LTNKA
Reg Id: 083001324T

CERS:
Name: LOS ALISOS WATER DISTRICT
Address: 21802 WISTERIA
City,State,Zip: LAKE FOREST, CA 92630
Site ID: 213690
CERS ID: T0605901013
CERS Description: Leaking Underground Storage Tank Cleanup Site

Affiliation:
Affiliation Type Desc: Local Agency Caseworker

LOS ALISOS WATER DISTRICT (Continued) **S105023648**

Entity Name:	KEVIN LAMBERT - ORANGE COUNTY LOP
Entity Title:	Not reported
Affiliation Address:	1241 E DYER ROAD SUITE 120
Affiliation City:	SANTA ANA
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	7144336261
Affiliation Type Desc:	Local Agency Caseworker
Entity Name:	JAMES STROZIER - ORANGE COUNTY LOP
Entity Title:	Not reported
Affiliation Address:	1241 E. DYER ROAD SUITE 120
Affiliation City:	SANTA ANA
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	7144336273

Count: 1 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
LAKE FOREST	S105774118	LOS ALISOS WATER DISTRICT	21802 WISTERIA	92630	LUST, Cortese

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 07/29/2020
Date Data Arrived at EDR: 08/03/2020
Date Made Active in Reports: 08/25/2020
Number of Days to Update: 22

Source: EPA
Telephone: N/A
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 07/29/2020
Date Data Arrived at EDR: 08/03/2020
Date Made Active in Reports: 08/25/2020
Number of Days to Update: 22

Source: EPA
Telephone: N/A
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Federal Delisted NPL site list

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 07/29/2020
Date Data Arrived at EDR: 08/03/2020
Date Made Active in Reports: 08/25/2020
Number of Days to Update: 22

Source: EPA
Telephone: N/A
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Quarterly

Federal CERCLIS list

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 04/03/2019
Date Data Arrived at EDR: 04/05/2019
Date Made Active in Reports: 05/14/2019
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 07/02/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 07/29/2020
Date Data Arrived at EDR: 08/03/2020
Date Made Active in Reports: 08/25/2020
Number of Days to Update: 22

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 07/29/2020
Date Data Arrived at EDR: 08/03/2020
Date Made Active in Reports: 08/25/2020
Number of Days to Update: 22

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/25/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 57

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/25/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/25/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/25/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/25/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 05/15/2020
Date Data Arrived at EDR: 05/19/2020
Date Made Active in Reports: 06/18/2020
Number of Days to Update: 30

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 08/04/2020
Next Scheduled EDR Contact: 11/23/2020
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 02/13/2020
Date Data Arrived at EDR: 02/20/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 85

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 08/24/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

US INST CONTROLS: Institutional Controls Sites List

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 02/13/2020
Date Data Arrived at EDR: 02/20/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 85

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 08/24/2020
Next Scheduled EDR Contact: 12/07/2020
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 03/22/2020
Date Data Arrived at EDR: 03/24/2020
Date Made Active in Reports: 06/18/2020
Number of Days to Update: 86

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

State- and tribal - equivalent NPL

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 04/28/2020
Date Made Active in Reports: 07/13/2020
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 07/27/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 04/28/2020
Date Made Active in Reports: 07/13/2020
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 07/27/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 05/11/2020
Date Data Arrived at EDR: 05/12/2020
Date Made Active in Reports: 07/27/2020
Number of Days to Update: 76

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 08/10/2020
Next Scheduled EDR Contact: 11/23/2020
Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

LUST REG 2: Fuel Leak List

Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-622-2433
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: No Update Planned

LUST REG 3: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

LUST REG 4: Underground Storage Tank Leak List

Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

LUST REG 9: Leaking Underground Storage Tank Report

Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: No Update Planned

LUST REG 8: Leaking Underground Storage Tanks

California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

LUST REG 6L: Leaking Underground Storage Tank Case Listing
For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27
Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 6V: Leaking Underground Storage Tank Case Listing
Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22
Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 1: Active Toxic Site Investigation
Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29
Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-570-3769
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 7: Leaking Underground Storage Tank Case Listing
Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27
Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST: Leaking Underground Fuel Tank Report (GEOTRACKER)
Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/19/2020
Number of Days to Update: 71
Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84
Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/26/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 78
Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84
Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/29/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84
Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 04/08/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84
Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 04/15/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84
Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 04/08/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84
Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

CPS-SLIC: Statewide SLIC Cases (GEOTRACKER)
Cleanup Program Sites (CPS; also known as Site Cleanups [SC] and formerly known as Spills, Leaks, Investigations, and Cleanups [SLIC] sites) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/19/2020
Number of Days to Update: 71
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: No Update Planned

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 6L: SLIC Sites
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35
Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36
Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11
Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17
Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: No Update Planned

State and tribal registered storage tank lists

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 02/01/2020
Date Data Arrived at EDR: 03/19/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 82
Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 07/06/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Varies

MILITARY UST SITES: Military UST Sites (GEOTRACKER)
Military ust sites

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/19/2020
Number of Days to Update: 71
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

UST: Active UST Facilities
Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/20/2020
Number of Days to Update: 72

Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Semi-Annually

UST CLOSURE: Proposed Closure of Underground Storage Tank (UST) Cases
UST cases that are being considered for closure by either the State Water Resources Control Board or the Executive Director have been posted for a 60-day public comment period. UST Case Closures being proposed for consideration by the State Water Resources Control Board. These are primarily UST cases that meet closure criteria under the decisional framework in State Water Board Resolution No. 92-49 and other Board orders. UST Case Closures proposed for consideration by the Executive Director pursuant to State Water Board Resolution No. 2012-0061. These are cases that meet the criteria of the Low-Threat UST Case Closure Policy. UST Case Closure Review Denials and Approved Orders.

Date of Government Version: 05/26/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/20/2020
Number of Days to Update: 72

Source: State Water Resources Control Board
Telephone: 916-327-7844
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

AST: Aboveground Petroleum Storage Tank Facilities
A listing of aboveground storage tank petroleum storage tank locations.

Date of Government Version: 07/06/2016
Date Data Arrived at EDR: 07/12/2016
Date Made Active in Reports: 09/19/2016
Number of Days to Update: 69

Source: California Environmental Protection Agency
Telephone: 916-327-5092
Last EDR Contact: 06/10/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/26/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 78

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 04/03/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 04/08/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 04/08/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 07/23/2020
Next Scheduled EDR Contact: 11/01/2020
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 04/29/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/13/2020
Number of Days to Update: 85

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

VCP: Voluntary Cleanup Program Properties

Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 04/28/2020
Date Made Active in Reports: 07/13/2020
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 07/27/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Quarterly

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

INDIAN VCP R1: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 06/17/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Varies

State and tribal Brownfields sites

BROWNFIELDS: Considered Brownfieds Sites Listing
A listing of sites the SWRCB considers to be Brownfields since these are sites have come to them through the MOA Process.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/24/2020
Date Made Active in Reports: 06/05/2020
Number of Days to Update: 73

Source: State Water Resources Control Board
Telephone: 916-323-7905
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites
Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 06/01/2020
Date Data Arrived at EDR: 06/02/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 06/02/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT: Waste Management Unit Database
Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: No Update Planned

SWRCY: Recycler Database
A listing of recycling facilities in California.

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/19/2020
Number of Days to Update: 71

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing
A listing of registered waste tire haulers.

Date of Government Version: 05/28/2020
Date Data Arrived at EDR: 05/29/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 75

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 08/04/2020
Next Scheduled EDR Contact: 11/23/2020
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Varies

ODI: Open Dump Inventory
An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land
A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176

Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 07/31/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 03/18/2020
Date Data Arrived at EDR: 03/19/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 82

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 08/19/2020
Next Scheduled EDR Contact: 12/07/2020
Data Release Frequency: No Update Planned

HIST CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21

Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 04/28/2020
Date Made Active in Reports: 07/13/2020
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 07/27/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Quarterly

CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 06/30/2019
Date Data Arrived at EDR: 05/28/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 07/09/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Varies

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: No Update Planned

CERS HAZ WASTE: CERS HAZ WASTE

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, and RCRA LQ HW Generator programs.

Date of Government Version: 04/20/2020
Date Data Arrived at EDR: 04/21/2020
Date Made Active in Reports: 07/13/2020
Number of Days to Update: 83

Source: CalEPA
Telephone: 916-323-2514
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Quarterly

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 03/18/2020
Date Data Arrived at EDR: 03/19/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 82

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 08/19/2020
Next Scheduled EDR Contact: 12/07/2020
Data Release Frequency: Quarterly

PFAS: PFAS Contamination Site Location Listing

A listing of PFAS contaminated sites included in the GeoTracker database.

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/19/2020
Number of Days to Update: 71

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

Local Lists of Registered Storage Tanks

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

UST MENDOCINO: Mendocino County UST Database

A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 05/20/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/06/2020
Number of Days to Update: 78

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 08/17/2020
Next Scheduled EDR Contact: 12/07/2020
Data Release Frequency: Annually

HIST UST: Hazardous Substance Storage Container Database

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SAN FRANCISCO AST: Aboveground Storage Tank Site Listing
Aboveground storage tank sites

Date of Government Version: 05/04/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 07/17/2020
Number of Days to Update: 72

Source: San Francisco County Department of Public Health
Telephone: 415-252-3896
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

CA FID UST: Facility Inventory Database
The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24

Source: California Environmental Protection Agency
Telephone: 916-341-5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CERS TANKS: California Environmental Reporting System (CERS) Tanks
List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs.

Date of Government Version: 04/20/2020
Date Data Arrived at EDR: 04/21/2020
Date Made Active in Reports: 07/09/2020
Number of Days to Update: 79

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Quarterly

Local Land Records

LIENS: Environmental Liens Listing
A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 05/28/2020
Date Data Arrived at EDR: 05/29/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 75

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 08/25/2020
Next Scheduled EDR Contact: 12/14/2020
Data Release Frequency: Varies

LIENS 2: CERCLA Lien Information
A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 07/29/2020
Date Data Arrived at EDR: 08/03/2020
Date Made Active in Reports: 08/25/2020
Number of Days to Update: 22

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Semi-Annually

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 06/01/2020
Date Data Arrived at EDR: 06/02/2020
Date Made Active in Reports: 08/14/2020
Number of Days to Update: 73

Source: DTSC and SWRCB
Telephone: 916-323-3400
Last EDR Contact: 06/02/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 02/27/2020
Date Data Arrived at EDR: 03/24/2020
Date Made Active in Reports: 06/18/2020
Number of Days to Update: 86

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 06/23/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

CHMIRS: California Hazardous Material Incident Report System

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 03/31/2020
Date Data Arrived at EDR: 04/21/2020
Date Made Active in Reports: 07/09/2020
Number of Days to Update: 79

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Semi-Annually

LDS: Land Disposal Sites Listing (GEOTRACKER)

Land Disposal sites (Landfills) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/19/2020
Number of Days to Update: 71

Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing (GEOTRACKER)

Military sites (consisting of: Military UST sites; Military Privatized sites; and Military Cleanup sites [formerly known as DoD non UST]) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/19/2020
Number of Days to Update: 71

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 06/06/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/22/2013
Number of Days to Update: 50

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/25/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/18/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 86

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 08/13/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 07/09/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/11/2018
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 574

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 07/06/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 08/05/2020
Next Scheduled EDR Contact: 11/23/2020
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/24/2020
Date Made Active in Reports: 06/18/2020
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 07/31/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 08/06/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 06/21/2017
Date Made Active in Reports: 01/05/2018
Number of Days to Update: 198

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 06/17/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 02/05/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 79

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 08/14/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 03/01/2020
Date Data Arrived at EDR: 04/21/2020
Date Made Active in Reports: 07/15/2020
Number of Days to Update: 85

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 07/29/2020
Date Data Arrived at EDR: 08/03/2020
Date Made Active in Reports: 08/25/2020
Number of Days to Update: 22

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 01/31/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 08/03/2020
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 07/15/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

PRP: Potentially Responsible Parties
A listing of verified Potentially Responsible Parties

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 34

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Quarterly

PADS: PCB Activity Database System
PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 10/09/2019
Date Data Arrived at EDR: 10/11/2019
Date Made Active in Reports: 12/20/2019
Number of Days to Update: 70

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 07/13/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System
The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 06/30/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

MLTS: Material Licensing Tracking System
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 10/25/2019
Date Data Arrived at EDR: 10/25/2019
Date Made Active in Reports: 01/15/2020
Number of Days to Update: 82

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 07/20/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 01/15/2020
Number of Days to Update: 42
Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 06/05/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 01/12/2017
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 251
Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 06/01/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 09/13/2019
Date Data Arrived at EDR: 11/06/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 96
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 08/06/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/01/2019
Date Data Arrived at EDR: 07/01/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 84
Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 06/24/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 01/02/2020
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/17/2020
Number of Days to Update: 80

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 07/27/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Quarterly

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 06/30/2020
Date Data Arrived at EDR: 07/15/2020
Date Made Active in Reports: 07/21/2020
Number of Days to Update: 6

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 07/06/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2015
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 09/28/2017
Number of Days to Update: 218

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 07/07/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 08/08/2017
Date Data Arrived at EDR: 09/11/2018
Date Made Active in Reports: 09/14/2018
Number of Days to Update: 3

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 08/30/2019
Date Data Arrived at EDR: 11/15/2019
Date Made Active in Reports: 01/28/2020
Number of Days to Update: 74

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 08/21/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 07/29/2020
Date Data Arrived at EDR: 08/03/2020
Date Made Active in Reports: 08/25/2020
Number of Days to Update: 22

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 05/01/2020
Date Data Arrived at EDR: 05/21/2020
Date Made Active in Reports: 08/13/2020
Number of Days to Update: 84

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 08/25/2020
Next Scheduled EDR Contact: 12/07/2020
Data Release Frequency: Semi-Annually

MINES VIOLATIONS: MSHA Violation Assessment Data

Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

Date of Government Version: 05/28/2020
Date Data Arrived at EDR: 05/28/2020
Date Made Active in Reports: 08/13/2020
Number of Days to Update: 77

Source: DOL, Mine Safety & Health Admi
Telephone: 202-693-9424
Last EDR Contact: 08/26/2020
Next Scheduled EDR Contact: 12/14/2020
Data Release Frequency: Quarterly

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 05/06/2020
Date Data Arrived at EDR: 05/27/2020
Date Made Active in Reports: 08/13/2020
Number of Days to Update: 78

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 05/27/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 05/21/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 03/05/2020
Date Data Arrived at EDR: 03/06/2020
Date Made Active in Reports: 05/29/2020
Number of Days to Update: 84

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 06/19/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 02/03/2020
Date Data Arrived at EDR: 03/03/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 86

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 08/26/2020
Next Scheduled EDR Contact: 12/14/2020
Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 01/17/2019
Date Made Active in Reports: 04/01/2019
Number of Days to Update: 74

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 07/09/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 04/04/2020
Date Data Arrived at EDR: 04/07/2020
Date Made Active in Reports: 06/26/2020
Number of Days to Update: 80

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 07/02/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Quarterly

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 07/26/2018
Date Made Active in Reports: 10/05/2018
Number of Days to Update: 71

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 08/19/2020
Next Scheduled EDR Contact: 12/07/2020
Data Release Frequency: Varies

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 05/18/2020
Date Data Arrived at EDR: 05/19/2020
Date Made Active in Reports: 08/03/2020
Number of Days to Update: 76

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 08/17/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Quarterly

CA BOND EXP. PLAN: Bond Expenditure Plan

Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6

Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CORTESE: "Cortese" Hazardous Waste & Substances Sites List

The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/24/2020
Date Made Active in Reports: 06/05/2020
Number of Days to Update: 73

Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

CUPA LIVERMORE-PLEASANTON: CUPA Facility Listing

list of facilities associated with the various CUPA programs in Livermore-Pleasanton

Date of Government Version: 05/01/2019
Date Data Arrived at EDR: 05/14/2019
Date Made Active in Reports: 07/17/2019
Number of Days to Update: 64

Source: Livermore-Pleasanton Fire Department
Telephone: 925-454-2361
Last EDR Contact: 08/14/2020
Next Scheduled EDR Contact: 11/23/2020
Data Release Frequency: Varies

CUPA SAN FRANCISCO CO: CUPA Facility Listing

Cupa facilities

Date of Government Version: 05/04/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 07/17/2020
Number of Days to Update: 72

Source: San Francisco County Department of Environmental Health
Telephone: 415-252-3896
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

KERN CO CUPA: Hazardous Material Business Plan

A listing of sites included in the Kern County Hazardous Material Business Plan.

Date of Government Version: 04/29/2020
Date Data Arrived at EDR: 05/05/2020
Date Made Active in Reports: 08/26/2020
Number of Days to Update: 113

Source: Kern County Public Health
Telephone: 661-321-3000
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

DRYCLEANERS: Cleaner Facilities

A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 06/04/2020
Date Data Arrived at EDR: 06/05/2020
Date Made Active in Reports: 08/17/2020
Number of Days to Update: 73

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 08/24/2020
Next Scheduled EDR Contact: 12/13/2020
Data Release Frequency: Annually

DRYCLEAN AVAQMD: Antelope Valley Air Quality Management District Drycleaner Listing

A listing of dry cleaners in the Antelope Valley Air Quality Management District.

Date of Government Version: 05/28/2020
Date Data Arrived at EDR: 05/29/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 75

Source: Antelope Valley Air Quality Management District
Telephone: 661-723-8070
Last EDR Contact: 08/25/2020
Next Scheduled EDR Contact: 12/14/2020
Data Release Frequency: Varies

DRYCLEAN SOUTH COAST: South Coast Air Quality Management District Drycleaner Listing

A listing of dry cleaners in the South Coast Air Quality Management District

Date of Government Version: 03/25/2020
Date Data Arrived at EDR: 03/26/2020
Date Made Active in Reports: 06/15/2020
Number of Days to Update: 81

Source: South Coast Air Quality Management District
Telephone: 909-396-3211
Last EDR Contact: 08/17/2020
Next Scheduled EDR Contact: 12/07/2020
Data Release Frequency: Varies

EMI: Emissions Inventory Data

Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 06/24/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 59

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 06/16/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: Varies

ENF: Enforcement Action Listing

A listing of Water Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Violation, Expedited Payment Letter, and Staff Enforcement Letter.

Date of Government Version: 04/03/2020
Date Data Arrived at EDR: 04/07/2020
Date Made Active in Reports: 04/15/2020
Number of Days to Update: 8

Source: State Water Resoruces Control Board
Telephone: 916-445-9379
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing
Financial Assurance information

Date of Government Version: 04/09/2020
Date Data Arrived at EDR: 04/10/2020
Date Made Active in Reports: 07/01/2020
Number of Days to Update: 82

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information Listing
A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 05/14/2020
Date Data Arrived at EDR: 05/15/2020
Date Made Active in Reports: 07/27/2020
Number of Days to Update: 73

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 08/04/2020
Next Scheduled EDR Contact: 11/23/2020
Data Release Frequency: Varies

HAZNET: Facility and Manifest Data
Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method. This database begins with calendar year 1993.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 04/15/2020
Date Made Active in Reports: 07/02/2020
Number of Days to Update: 78

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 07/06/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Annually

ICE: ICE
Contains data pertaining to the Permitted Facilities with Inspections / Enforcements sites tracked in Envirostor.

Date of Government Version: 05/18/2020
Date Data Arrived at EDR: 05/19/2020
Date Made Active in Reports: 07/31/2020
Number of Days to Update: 73

Source: Department of Toxic Subsances Control
Telephone: 877-786-9427
Last EDR Contact: 08/17/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Quarterly

HIST CORTESE: Hazardous Waste & Substance Site List
The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

Date of Government Version: 04/01/2001
Date Data Arrived at EDR: 01/22/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/22/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

HWP: EnviroStor Permitted Facilities Listing
Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 05/18/2020
Date Data Arrived at EDR: 05/18/2020
Date Made Active in Reports: 07/31/2020
Number of Days to Update: 74

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 08/17/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Quarterly

HWT: Registered Hazardous Waste Transporter Database

A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 04/06/2020
Date Data Arrived at EDR: 04/08/2020
Date Made Active in Reports: 06/26/2020
Number of Days to Update: 79

Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 07/07/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Quarterly

MINES: Mines Site Location Listing

A listing of mine site locations from the Office of Mine Reclamation.

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/19/2020
Number of Days to Update: 71

Source: Department of Conservation
Telephone: 916-322-1080
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

MWMP: Medical Waste Management Program Listing

The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

Date of Government Version: 05/28/2020
Date Data Arrived at EDR: 06/02/2020
Date Made Active in Reports: 08/14/2020
Number of Days to Update: 73

Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 06/02/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Varies

NPDES: NPDES Permits Listing

A listing of NPDES permits, including stormwater.

Date of Government Version: 05/12/2020
Date Data Arrived at EDR: 05/12/2020
Date Made Active in Reports: 07/28/2020
Number of Days to Update: 77

Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 08/10/2020
Next Scheduled EDR Contact: 11/23/2020
Data Release Frequency: Quarterly

PEST LIC: Pesticide Regulation Licenses Listing

A listing of licenses and certificates issued by the Department of Pesticide Regulation. The DPR issues licenses and/or certificates to: Persons and businesses that apply or sell pesticides; Pest control dealers and brokers; Persons who advise on agricultural pesticide applications.

Date of Government Version: 06/01/2020
Date Data Arrived at EDR: 06/02/2020
Date Made Active in Reports: 08/14/2020
Number of Days to Update: 73

Source: Department of Pesticide Regulation
Telephone: 916-445-4038
Last EDR Contact: 06/02/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Quarterly

PROC: Certified Processors Database

A listing of certified processors.

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/19/2020
Number of Days to Update: 71

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

NOTIFY 65: Proposition 65 Records

Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 03/12/2020
Date Data Arrived at EDR: 03/13/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 69

Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 08/20/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: No Update Planned

UIC: UIC Listing

A listing of wells identified as underground injection wells, in the California Oil and Gas Wells database.

Date of Government Version: 06/06/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/20/2020
Number of Days to Update: 72

Source: Deaprtment of Conservation
Telephone: 916-445-2408
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

UIC GEO: Underground Injection Control Sites (GEOTRACKER)

Underground control injection sites

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/19/2020
Number of Days to Update: 71

Source: State Water Resource Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

WASTEWATER PITS: Oil Wastewater Pits Listing

Water officials discovered that oil producers have been dumping chemical-laden wastewater into hundreds of unlined pits that are operating without proper permits. Inspections completed by the Central Valley Regional Water Quality Control Board revealed the existence of previously unidentified waste sites. The water boards review found that more than one-third of the region's active disposal pits are operating without permission.

Date of Government Version: 11/19/2019
Date Data Arrived at EDR: 01/07/2020
Date Made Active in Reports: 03/09/2020
Number of Days to Update: 62

Source: RWQCB, Central Valley Region
Telephone: 559-445-5577
Last EDR Contact: 07/09/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Varies

WDS: Waste Discharge System

Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9

Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: No Update Planned

WIP: Well Investigation Program Case List

Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009
Date Data Arrived at EDR: 07/21/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 13

Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 06/17/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: No Update Planned

MILITARY PRIV SITES: Military Privatized Sites (GEOTRACKER)

Military privatized sites

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/19/2020
Number of Days to Update: 71

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

PROJECT: Project Sites (GEOTRACKER)
Projects sites

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/19/2020
Number of Days to Update: 71

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

WDR: Waste Discharge Requirements Listing
In general, the Waste Discharge Requirements (WDRs) Program (sometimes also referred to as the "Non Chapter 15 (Non 15) Program") regulates point discharges that are exempt pursuant to Subsection 20090 of Title 27 and not subject to the Federal Water Pollution Control Act. Exemptions from Title 27 may be granted for nine categories of discharges (e.g., sewage, wastewater, etc.) that meet, and continue to meet, the preconditions listed for each specific exemption. The scope of the WDRs Program also includes the discharge of wastes classified as inert, pursuant to section 20230 of Title 27.

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/20/2020
Number of Days to Update: 72

Source: State Water Resources Control Board
Telephone: 916-341-5810
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

CIWQS: California Integrated Water Quality System
The California Integrated Water Quality System (CIWQS) is a computer system used by the State and Regional Water Quality Control Boards to track information about places of environmental interest, manage permits and other orders, track inspections, and manage violations and enforcement activities.

Date of Government Version: 06/01/2020
Date Data Arrived at EDR: 06/02/2020
Date Made Active in Reports: 08/14/2020
Number of Days to Update: 73

Source: State Water Resources Control Board
Telephone: 866-794-4977
Last EDR Contact: 06/02/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Varies

CERS: CalEPA Regulated Site Portal Data
The CalEPA Regulated Site Portal database combines data about environmentally regulated sites and facilities in California into a single database. It combines data from a variety of state and federal databases, and provides an overview of regulated activities across the spectrum of environmental programs for any given location in California. These activities include hazardous materials and waste, state and federal cleanups, impacted ground and surface waters, and toxic materials

Date of Government Version: 04/20/2020
Date Data Arrived at EDR: 04/21/2020
Date Made Active in Reports: 07/13/2020
Number of Days to Update: 83

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

NON-CASE INFO: Non-Case Information Sites (GEOTRACKER)
Non-Case Information sites

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/19/2020
Number of Days to Update: 71

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

OTHER OIL GAS: Other Oil & Gas Projects Sites (GEOTRACKER)
Other Oil & Gas Projects sites

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/19/2020
Number of Days to Update: 71
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

PROD WATER PONDS: Produced Water Ponds Sites (GEOTRACKER)
Produced water ponds sites

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/19/2020
Number of Days to Update: 71
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

SAMPLING POINT: Sampling Point ? Public Sites (GEOTRACKER)
Sampling point - public sites

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/19/2020
Number of Days to Update: 71
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

WELL STIM PROJ: Well Stimulation Project (GEOTRACKER)
Includes areas of groundwater monitoring plans, a depiction of the monitoring network, and the facilities, boundaries, and subsurface characteristics of the oilfield and the features (oil and gas wells, produced water ponds, UIC wells, water supply wells, etc?) being monitored

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/19/2020
Number of Days to Update: 71
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

PCS: Permit Compliance System
PCS is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

Date of Government Version: 07/14/2011
Date Data Arrived at EDR: 08/05/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 55
Source: EPA, Office of Water
Telephone: 202-564-2496
Last EDR Contact: 06/08/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Semi-Annually

PCS INACTIVE: Listing of Inactive PCS Permits
An inactive permit is a facility that has shut down or is no longer discharging.

Date of Government Version: 11/05/2014
Date Data Arrived at EDR: 01/06/2015
Date Made Active in Reports: 05/06/2015
Number of Days to Update: 120
Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 07/09/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Semi-Annually

PCS ENF: Enforcement data
No description is available for this data

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 02/05/2015
Date Made Active in Reports: 03/06/2015
Number of Days to Update: 29

Source: EPA
Telephone: 202-564-2497
Last EDR Contact: 07/01/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Varies

MINES MRDS: Mineral Resources Data System
Mineral Resources Data System

Date of Government Version: 04/06/2018
Date Data Arrived at EDR: 10/21/2019
Date Made Active in Reports: 10/24/2019
Number of Days to Update: 3

Source: USGS
Telephone: 703-648-6533
Last EDR Contact: 05/21/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

HWTS: Hazardous Waste Tracking System
DTSC maintains the Hazardous Waste Tracking System that stores ID number information since the early 1980s and manifest data since 1993. The system collects both manifest copies from the generator and destination facility.

Date of Government Version: 04/08/2020
Date Data Arrived at EDR: 04/09/2020
Date Made Active in Reports: 07/01/2020
Number of Days to Update: 83

Source: Department of Toxic Substances Control
Telephone: 916-324-2444
Last EDR Contact: 08/02/2020
Next Scheduled EDR Contact: 10/18/2020
Data Release Frequency: Varies

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants
The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations
EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Resources Recycling and Recovery in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/13/2014
Number of Days to Update: 196

Source: Department of Resources Recycling and Recovery
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the State Water Resources Control Board in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/30/2013
Number of Days to Update: 182

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

COUNTY RECORDS

ALAMEDA COUNTY:

CS ALAMEDA: Contaminated Sites

A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 01/09/2019
Date Data Arrived at EDR: 01/11/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 53

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 06/30/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Semi-Annually

UST ALAMEDA: Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 06/30/2020
Date Data Arrived at EDR: 07/01/2020
Date Made Active in Reports: 07/17/2020
Number of Days to Update: 16

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 06/30/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA AMADOR: CUPA Facility List
Cupa Facility List

Date of Government Version: 05/18/2020
Date Data Arrived at EDR: 05/19/2020
Date Made Active in Reports: 06/01/2020
Number of Days to Update: 13

Source: Amador County Environmental Health
Telephone: 209-223-6439
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

BUTTE COUNTY:

CUPA BUTTE: CUPA Facility Listing
Cupa facility list.

Date of Government Version: 04/21/2017
Date Data Arrived at EDR: 04/25/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 106

Source: Public Health Department
Telephone: 530-538-7149
Last EDR Contact: 06/30/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA CALVERAS: CUPA Facility Listing
Cupa Facility Listing

Date of Government Version: 03/27/2020
Date Data Arrived at EDR: 03/31/2020
Date Made Active in Reports: 06/15/2020
Number of Days to Update: 76

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 06/17/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA COLUSA: CUPA Facility List
Cupa facility list.

Date of Government Version: 04/06/2020
Date Data Arrived at EDR: 04/23/2020
Date Made Active in Reports: 07/10/2020
Number of Days to Update: 78

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Semi-Annually

CONTRA COSTA COUNTY:

SL CONTRA COSTA: Site List
List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 04/01/2020
Date Data Arrived at EDR: 04/20/2020
Date Made Active in Reports: 07/06/2020
Number of Days to Update: 77

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA DEL NORTE: CUPA Facility List
Cupa Facility list

Date of Government Version: 04/16/2020
Date Data Arrived at EDR: 04/20/2020
Date Made Active in Reports: 07/08/2020
Number of Days to Update: 79

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 08/13/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA EL DORADO: CUPA Facility List
CUPA facility list.

Date of Government Version: 05/07/2020
Date Data Arrived at EDR: 05/07/2020
Date Made Active in Reports: 07/23/2020
Number of Days to Update: 77

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 08/13/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Varies

FRESNO COUNTY:

CUPA FRESNO: CUPA Resources List
Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 01/10/2020
Date Data Arrived at EDR: 03/31/2020
Date Made Active in Reports: 06/15/2020
Number of Days to Update: 76

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 06/30/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Semi-Annually

GLENN COUNTY:

CUPA GLENN: CUPA Facility List
Cupa facility list

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 49

Source: Glenn County Air Pollution Control District
Telephone: 830-934-6500
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: No Update Planned

HUMBOLDT COUNTY:

CUPA HUMBOLDT: CUPA Facility List
CUPA facility list.

Date of Government Version: 05/19/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 06/15/2020
Number of Days to Update: 26

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Semi-Annually

IMPERIAL COUNTY:

CUPA IMPERIAL: CUPA Facility List
Cupa facility list.

Date of Government Version: 04/09/2020
Date Data Arrived at EDR: 04/10/2020
Date Made Active in Reports: 07/01/2020
Number of Days to Update: 82

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INYO COUNTY:

CUPA INYO: CUPA Facility List
Cupa facility list.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/03/2018
Date Made Active in Reports: 06/14/2018
Number of Days to Update: 72

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Varies

KERN COUNTY:

UST KERN: Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 04/29/2020
Date Data Arrived at EDR: 05/05/2020
Date Made Active in Reports: 07/17/2020
Number of Days to Update: 73

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Quarterly

KINGS COUNTY:

CUPA KINGS: CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 05/11/2020
Date Data Arrived at EDR: 05/12/2020
Date Made Active in Reports: 07/27/2020
Number of Days to Update: 76

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 08/21/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Varies

LAKE COUNTY:

CUPA LAKE: CUPA Facility List
Cupa facility list

Date of Government Version: 04/20/2020
Date Data Arrived at EDR: 04/28/2020
Date Made Active in Reports: 07/14/2020
Number of Days to Update: 77

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 07/08/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Varies

LASSEN COUNTY:

CUPA LASSEN: CUPA Facility List
Cupa facility list

Date of Government Version: 01/30/2020
Date Data Arrived at EDR: 01/31/2020
Date Made Active in Reports: 04/09/2020
Number of Days to Update: 69

Source: Lassen County Environmental Health
Telephone: 530-251-8528
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

LOS ANGELES COUNTY:

AOCONCERN: Key Areas of Concerns in Los Angeles County
San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office. Date of Government Version: 3/30/2009 Exide Site area is a cleanup plan of lead-impacted soil surrounding the former Exide Facility as designated by the DTSC. Date of Government Version: 7/17/2017

Date of Government Version: 03/30/2009
Date Data Arrived at EDR: 03/31/2009
Date Made Active in Reports: 10/23/2009
Number of Days to Update: 206

Source: N/A
Telephone: N/A
Last EDR Contact: 06/10/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: No Update Planned

HMS LOS ANGELES: HMS: Street Number List
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 03/26/2020
Date Data Arrived at EDR: 03/26/2020
Date Made Active in Reports: 06/15/2020
Number of Days to Update: 81

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 06/30/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Semi-Annually

LF LOS ANGELES: List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 04/13/2020
Date Data Arrived at EDR: 04/14/2020
Date Made Active in Reports: 07/01/2020
Number of Days to Update: 78

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 07/13/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Varies

LF LOS ANGELES CITY: City of Los Angeles Landfills
Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 01/01/2019
Date Data Arrived at EDR: 01/15/2019
Date Made Active in Reports: 03/07/2019
Number of Days to Update: 51

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 07/08/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Varies

LOS ANGELES AST: Active & Inactive AST Inventory
A listing of active & inactive above ground petroleum storage tank site locations, located in the City of Los Angeles.

Date of Government Version: 06/01/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 58

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 06/25/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Varies

LOS ANGELES CO LF METHANE: Methane Producing Landfills

This data was created on April 30, 2012 to represent known disposal sites in Los Angeles County that may produce and emanate methane gas. The shapefile contains disposal sites within Los Angeles County that once accepted degradable refuse material. Information used to create this data was extracted from a landfill survey performed by County Engineers (Major Waste System Map, 1973) as well as historical records from CalRecycle, Regional Water Quality Control Board, and Los Angeles County Department of Public Health

Date of Government Version: 04/30/2012
Date Data Arrived at EDR: 04/17/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 42

Source: Los Angeles County Department of Public Works
Telephone: 626-458-6973
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: No Update Planned

LOS ANGELES HM: Active & Inactive Hazardous Materials Inventory

A listing of active & inactive hazardous materials facility locations, located in the City of Los Angeles.

Date of Government Version: 06/01/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 58

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 06/25/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Varies

LOS ANGELES UST: Active & Inactive UST Inventory

A listing of active & inactive underground storage tank site locations and underground storage tank historical sites, located in the City of Los Angeles.

Date of Government Version: 06/01/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 58

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 06/25/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Varies

SITE MIT LOS ANGELES: Site Mitigation List

Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 03/25/2020
Date Data Arrived at EDR: 04/14/2020
Date Made Active in Reports: 07/01/2020
Number of Days to Update: 78

Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 07/17/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Annually

UST EL SEGUNDO: City of El Segundo Underground Storage Tank

Underground storage tank sites located in El Segundo city.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 04/19/2017
Date Made Active in Reports: 05/10/2017
Number of Days to Update: 21

Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 07/08/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: No Update Planned

UST LONG BEACH: City of Long Beach Underground Storage Tank

Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 04/22/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/27/2019
Number of Days to Update: 65

Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

UST TORRANCE: City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 06/27/2019
Date Data Arrived at EDR: 07/30/2019
Date Made Active in Reports: 10/02/2019
Number of Days to Update: 64

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Semi-Annually

MADERA COUNTY:

CUPA MADERA: CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 02/24/2020
Date Data Arrived at EDR: 02/25/2020
Date Made Active in Reports: 05/07/2020
Number of Days to Update: 72

Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 08/04/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Varies

MARIN COUNTY:

UST MARIN: Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 09/26/2018
Date Data Arrived at EDR: 10/04/2018
Date Made Active in Reports: 11/02/2018
Number of Days to Update: 29

Source: Public Works Department Waste Management
Telephone: 415-473-6647
Last EDR Contact: 06/24/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Semi-Annually

MERCED COUNTY:

CUPA MERCED: CUPA Facility List
CUPA facility list.

Date of Government Version: 07/28/2020
Date Data Arrived at EDR: 07/30/2020
Date Made Active in Reports: 07/31/2020
Number of Days to Update: 1

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Varies

MONO COUNTY:

CUPA MONO: CUPA Facility List
CUPA Facility List

Date of Government Version: 05/15/2020
Date Data Arrived at EDR: 06/02/2020
Date Made Active in Reports: 08/14/2020
Number of Days to Update: 73

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 08/19/2020
Next Scheduled EDR Contact: 12/07/2020
Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA MONTEREY: CUPA Facility Listing
CUPA Program listing from the Environmental Health Division.

Date of Government Version: 07/13/2020
Date Data Arrived at EDR: 07/15/2020
Date Made Active in Reports: 07/31/2020
Number of Days to Update: 16

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 07/08/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Varies

NAPA COUNTY:

LUST NAPA: Sites With Reported Contamination
A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 01/09/2017
Date Data Arrived at EDR: 01/11/2017
Date Made Active in Reports: 03/02/2017
Number of Days to Update: 50

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 08/19/2020
Next Scheduled EDR Contact: 12/07/2020
Data Release Frequency: No Update Planned

UST NAPA: Closed and Operating Underground Storage Tank Sites
Underground storage tank sites located in Napa county.

Date of Government Version: 09/05/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 10/31/2019
Number of Days to Update: 52

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 08/19/2020
Next Scheduled EDR Contact: 12/07/2020
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA NEVADA: CUPA Facility List
CUPA facility list.

Date of Government Version: 05/06/2020
Date Data Arrived at EDR: 05/07/2020
Date Made Active in Reports: 07/24/2020
Number of Days to Update: 78

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Varies

ORANGE COUNTY:

IND_SITE ORANGE: List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 05/01/2020
Date Data Arrived at EDR: 05/08/2020
Date Made Active in Reports: 07/24/2020
Number of Days to Update: 77

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 07/31/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Annually

LUST ORANGE: List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 05/01/2020
Date Data Arrived at EDR: 05/08/2020
Date Made Active in Reports: 07/24/2020
Number of Days to Update: 77

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 07/31/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Quarterly

UST ORANGE: List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 05/01/2020
Date Data Arrived at EDR: 05/05/2020
Date Made Active in Reports: 07/17/2020
Number of Days to Update: 73

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Quarterly

PLACER COUNTY:

MS PLACER: Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/10/2020
Date Made Active in Reports: 08/24/2020
Number of Days to Update: 75

Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 08/25/2020
Next Scheduled EDR Contact: 12/14/2020
Data Release Frequency: Semi-Annually

PLUMAS COUNTY:

CUPA PLUMAS: CUPA Facility List
Plumas County CUPA Program facilities.

Date of Government Version: 03/31/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/26/2019
Number of Days to Update: 64

Source: Plumas County Environmental Health
Telephone: 530-283-6355
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

RIVERSIDE COUNTY:

LUST RIVERSIDE: Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 03/10/2020
Date Data Arrived at EDR: 03/11/2020
Date Made Active in Reports: 05/20/2020
Number of Days to Update: 70

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 06/10/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: Quarterly

UST RIVERSIDE: Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 03/10/2020
Date Data Arrived at EDR: 03/11/2020
Date Made Active in Reports: 05/20/2020
Number of Days to Update: 70

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 06/10/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

CS SACRAMENTO: Toxic Site Clean-Up List
List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 02/18/2020
Date Data Arrived at EDR: 03/31/2020
Date Made Active in Reports: 06/15/2020
Number of Days to Update: 76

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 07/02/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Quarterly

ML SACRAMENTO: Master Hazardous Materials Facility List

Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 02/24/2020
Date Data Arrived at EDR: 03/31/2020
Date Made Active in Reports: 06/17/2020
Number of Days to Update: 78

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 07/02/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Quarterly

SAN BENITO COUNTY:

CUPA SAN BENITO: CUPA Facility List

Cupa facility list

Date of Government Version: 04/24/2020
Date Data Arrived at EDR: 04/28/2020
Date Made Active in Reports: 07/13/2020
Number of Days to Update: 76

Source: San Benito County Environmental Health
Telephone: N/A
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

SAN BERNARDINO COUNTY:

PERMITS SAN BERNARDINO: Hazardous Material Permits

This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 02/25/2020
Date Data Arrived at EDR: 02/26/2020
Date Made Active in Reports: 05/07/2020
Number of Days to Update: 71

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

HMMD SAN DIEGO: Hazardous Materials Management Division Database

The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 06/01/2020
Date Data Arrived at EDR: 06/02/2020
Date Made Active in Reports: 08/14/2020
Number of Days to Update: 73

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 06/02/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Quarterly

LF SAN DIEGO: Solid Waste Facilities
San Diego County Solid Waste Facilities.

Date of Government Version: 04/18/2018
Date Data Arrived at EDR: 04/24/2018
Date Made Active in Reports: 06/19/2018
Number of Days to Update: 56
Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

SAN DIEGO CO LOP: Local Oversight Program Listing
A listing of all LOP release sites that are or were under the County of San Diego's jurisdiction. Included are closed or transferred cases, open cases, and cases that did not have a case type indicated. The cases without a case type are mostly complaints; however, some of them could be LOP cases.

Date of Government Version: 04/09/2020
Date Data Arrived at EDR: 04/10/2020
Date Made Active in Reports: 06/26/2020
Number of Days to Update: 77
Source: Department of Environmental Health
Telephone: 858-505-6874
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

SAN DIEGO CO SAM: Environmental Case Listing
The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010
Date Data Arrived at EDR: 06/15/2010
Date Made Active in Reports: 07/09/2010
Number of Days to Update: 24
Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 08/25/2020
Next Scheduled EDR Contact: 12/14/2020
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

LUST SAN FRANCISCO: Local Oversite Facilities
A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10
Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: No Update Planned

UST SAN FRANCISCO: Underground Storage Tank Information
Underground storage tank sites located in San Francisco county.

Date of Government Version: 05/04/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 07/17/2020
Number of Days to Update: 72
Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

UST SAN JOAQUIN: San Joaquin Co. UST
A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 06/22/2018
Date Data Arrived at EDR: 06/26/2018
Date Made Active in Reports: 07/11/2018
Number of Days to Update: 15
Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 06/10/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA SAN LUIS OBISPO: CUPA Facility List
Cupa Facility List.

Date of Government Version: 05/08/2020
Date Data Arrived at EDR: 05/08/2020
Date Made Active in Reports: 08/03/2020
Number of Days to Update: 87

Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Varies

SAN MATEO COUNTY:

BI SAN MATEO: Business Inventory
List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 02/20/2020
Date Data Arrived at EDR: 02/20/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 64

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 06/12/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Annually

LUST SAN MATEO: Fuel Leak List
A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 03/29/2019
Date Data Arrived at EDR: 03/29/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 61

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 06/03/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

CUPA SANTA BARBARA: CUPA Facility Listing
CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 09/08/2011
Date Data Arrived at EDR: 09/09/2011
Date Made Active in Reports: 10/07/2011
Number of Days to Update: 28

Source: Santa Barbara County Public Health Department
Telephone: 805-686-8167
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: No Update Planned

SANTA CLARA COUNTY:

CUPA SANTA CLARA: Cupa Facility List
Cupa facility list

Date of Government Version: 05/08/2020
Date Data Arrived at EDR: 05/12/2020
Date Made Active in Reports: 07/27/2020
Number of Days to Update: 76

Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Varies

HIST LUST SANTA CLARA: HIST LUST - Fuel Leak Site Activity Report
A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22

Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LUST SANTA CLARA: LOP Listing
A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 03/03/2014
Date Data Arrived at EDR: 03/05/2014
Date Made Active in Reports: 03/18/2014
Number of Days to Update: 13
Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 08/19/2020
Next Scheduled EDR Contact: 12/07/2020
Data Release Frequency: No Update Planned

SAN JOSE HAZMAT: Hazardous Material Facilities
Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 04/22/2020
Date Data Arrived at EDR: 04/24/2020
Date Made Active in Reports: 05/07/2020
Number of Days to Update: 13
Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Annually

SANTA CRUZ COUNTY:

CUPA SANTA CRUZ: CUPA Facility List
CUPA facility listing.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 05/23/2017
Number of Days to Update: 90
Source: Santa Cruz County Environmental Health
Telephone: 831-464-2761
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Varies

SHASTA COUNTY:

CUPA SHASTA: CUPA Facility List
Cupa Facility List.

Date of Government Version: 06/15/2017
Date Data Arrived at EDR: 06/19/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 51
Source: Shasta County Department of Resource Management
Telephone: 530-225-5789
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Varies

SOLANO COUNTY:

LUST SOLANO: Leaking Underground Storage Tanks
A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 06/04/2019
Date Data Arrived at EDR: 06/06/2019
Date Made Active in Reports: 08/13/2019
Number of Days to Update: 68
Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 08/25/2020
Next Scheduled EDR Contact: 12/14/2020
Data Release Frequency: Quarterly

UST SOLANO: Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 03/02/2020
Date Data Arrived at EDR: 03/04/2020
Date Made Active in Reports: 05/14/2020
Number of Days to Update: 71
Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 08/25/2020
Next Scheduled EDR Contact: 12/14/2020
Data Release Frequency: Quarterly

SONOMA COUNTY:

CUPA SONOMA: Cupa Facility List
Cupa Facility list

Date of Government Version: 02/25/2020
Date Data Arrived at EDR: 02/26/2020
Date Made Active in Reports: 03/11/2020
Number of Days to Update: 14

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 06/30/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Varies

LUST SONOMA: Leaking Underground Storage Tank Sites
A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 04/03/2020
Date Data Arrived at EDR: 04/08/2020
Date Made Active in Reports: 06/26/2020
Number of Days to Update: 79

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 06/17/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

STANISLAUS COUNTY:

CUPA STANISLAUS: CUPA Facility List
Cupa facility list

Date of Government Version: 02/04/2020
Date Data Arrived at EDR: 02/05/2020
Date Made Active in Reports: 04/15/2020
Number of Days to Update: 70

Source: Stanislaus County Department of Ennvironmental Protection
Telephone: 209-525-6751
Last EDR Contact: 07/06/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Varies

SUTTER COUNTY:

UST SUTTER: Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 05/26/2020
Date Data Arrived at EDR: 05/28/2020
Date Made Active in Reports: 08/13/2020
Number of Days to Update: 77

Source: Sutter County Environmental Health Services
Telephone: 530-822-7500
Last EDR Contact: 08/25/2020
Next Scheduled EDR Contact: 12/14/2020
Data Release Frequency: Semi-Annually

TEHAMA COUNTY:

CUPA TEHAMA: CUPA Facility List
Cupa facilities

Date of Government Version: 05/18/2020
Date Data Arrived at EDR: 05/19/2020
Date Made Active in Reports: 07/31/2020
Number of Days to Update: 73

Source: Tehama County Department of Environmental Health
Telephone: 530-527-8020
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

TRINITY COUNTY:

CUPA TRINITY: CUPA Facility List
Cupa facility list

Date of Government Version: 04/09/2020
Date Data Arrived at EDR: 04/10/2020
Date Made Active in Reports: 07/01/2020
Number of Days to Update: 82

Source: Department of Toxic Substances Control
Telephone: 760-352-0381
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

TULARE COUNTY:

CUPA TULARE: CUPA Facility List
Cupa program facilities

Date of Government Version: 05/14/2020
Date Data Arrived at EDR: 05/15/2020
Date Made Active in Reports: 07/27/2020
Number of Days to Update: 73

Source: Tulare County Environmental Health Services Division
Telephone: 559-624-7400
Last EDR Contact: 08/06/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

TUOLUMNE COUNTY:

CUPA TUOLUMNE: CUPA Facility List
Cupa facility list

Date of Government Version: 04/23/2018
Date Data Arrived at EDR: 04/25/2018
Date Made Active in Reports: 06/25/2018
Number of Days to Update: 61

Source: Divison of Environmental Health
Telephone: 209-533-5633
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

VENTURA COUNTY:

BWT VENTURA: Business Plan, Hazardous Waste Producers, and Operating Underground Tanks
The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 03/26/2020
Date Data Arrived at EDR: 04/23/2020
Date Made Active in Reports: 07/09/2020
Number of Days to Update: 77

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 07/20/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Quarterly

LF VENTURA: Inventory of Illegal Abandoned and Inactive Sites
Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 12/01/2011
Date Data Arrived at EDR: 12/01/2011
Date Made Active in Reports: 01/19/2012
Number of Days to Update: 49

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 06/24/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: No Update Planned

LUST VENTURA: Listing of Underground Tank Cleanup Sites
Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008
Date Data Arrived at EDR: 06/24/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 37

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 08/04/2020
Next Scheduled EDR Contact: 11/23/2020
Data Release Frequency: No Update Planned

MED WASTE VENTURA: Medical Waste Program List
To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 03/26/2020
Date Data Arrived at EDR: 04/23/2020
Date Made Active in Reports: 07/09/2020
Number of Days to Update: 77
Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 07/20/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Quarterly

UST VENTURA: Underground Tank Closed Sites List
Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 05/26/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/20/2020
Number of Days to Update: 72
Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

YOLO COUNTY:

UST YOLO: Underground Storage Tank Comprehensive Facility Report
Underground storage tank sites located in Yolo county.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 04/01/2020
Date Made Active in Reports: 06/17/2020
Number of Days to Update: 77
Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 06/24/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Annually

YUBA COUNTY:

CUPA YUBA: CUPA Facility List
CUPA facility listing for Yuba County.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 04/29/2020
Date Made Active in Reports: 07/17/2020
Number of Days to Update: 79
Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 08/04/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 05/12/2020
Date Data Arrived at EDR: 05/12/2020
Date Made Active in Reports: 07/27/2020
Number of Days to Update: 76
Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 08/10/2020
Next Scheduled EDR Contact: 11/23/2020
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 04/10/2019
Date Made Active in Reports: 05/16/2019
Number of Days to Update: 36

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 07/09/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 01/01/2019
Date Data Arrived at EDR: 04/29/2020
Date Made Active in Reports: 07/10/2020
Number of Days to Update: 72

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 07/31/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 06/30/2018
Date Data Arrived at EDR: 07/19/2019
Date Made Active in Reports: 09/10/2019
Number of Days to Update: 53

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 07/09/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 10/02/2019
Date Made Active in Reports: 12/10/2019
Number of Days to Update: 69

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 06/19/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 76

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 06/04/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Annually

Oil/Gas Pipelines
Source: Endeavor Business Media
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data
Source: Endeavor Business Media
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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish and Wildlife
Telephone: 916-445-0411

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

20865-20795 CANADA ROAD
20865-20795 CANADA ROAD
LAKE FOREST, CA 92630

TARGET PROPERTY COORDINATES

Latitude (North):	33.660538 - 33° 39' 37.94''
Longitude (West):	117.675125 - 117° 40' 30.45''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	437404.8
UTM Y (Meters):	3724529.2
Elevation:	631 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	5636489 EL TORO, CA
Version Date:	2012

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

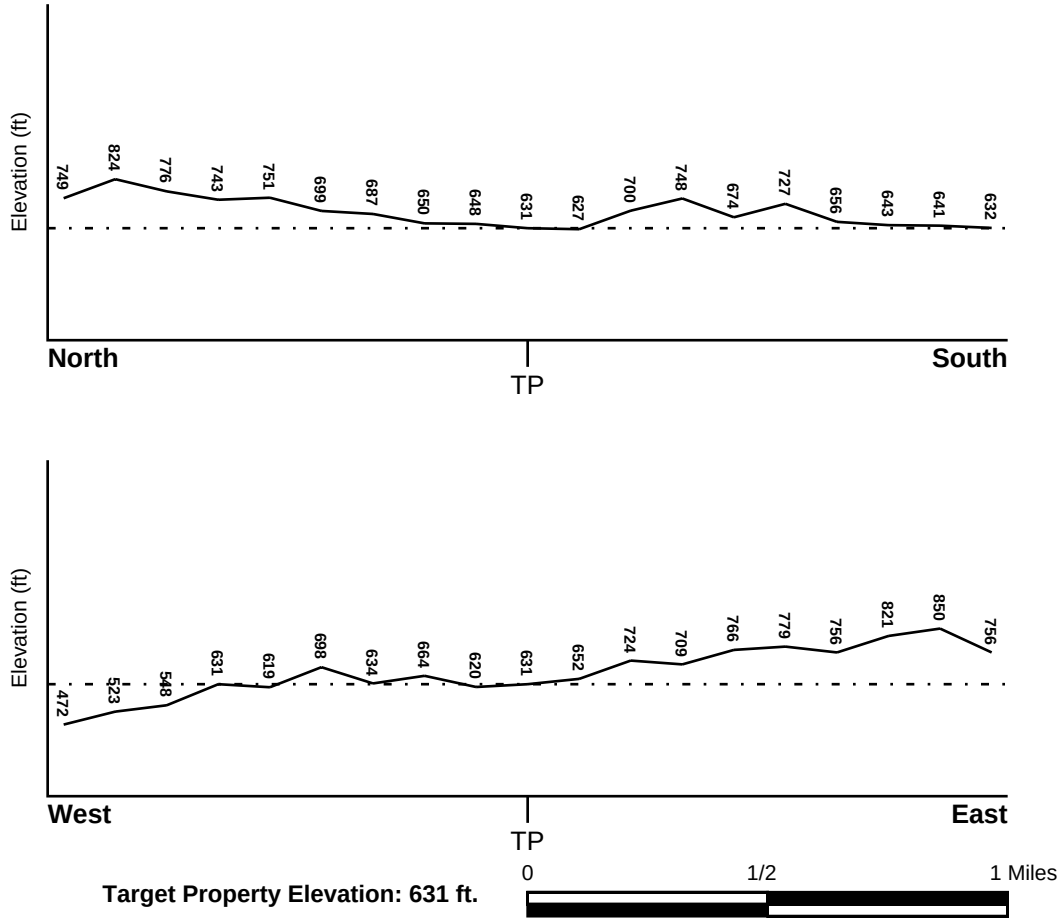
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General North

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
06059C0316J	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
06059C0315J	FEMA FIRM Flood data
06059C0314J	FEMA FIRM Flood data
06059C0318J	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
EL TORO	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

* ©1996 Site−specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

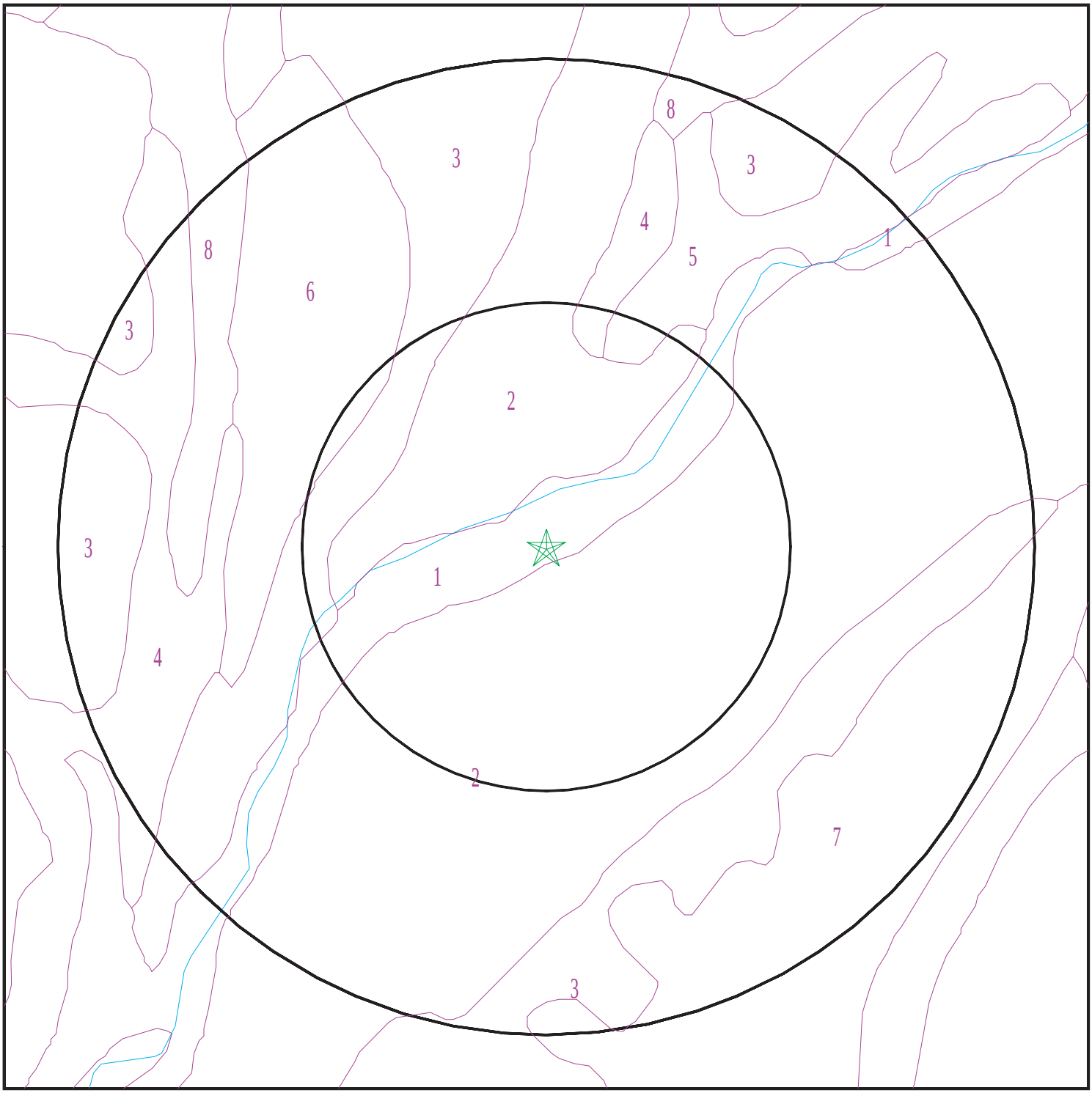
Era:	Cenozoic
System:	Tertiary
Series:	Miocene
Code:	Tm *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratified Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 06170828.2r



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME:	20865-20795 Canada Road	CLIENT:	Hillmann Environmental Co.
ADDRESS:	20865-20795 Canada Road Lake Forest CA 92630	CONTACT:	Shilpa Sunil
LAT/LONG:	33.660538 / 117.675125	INQUIRY #:	06170828.2r
		DATE:	August 27, 2020 4:12 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: RIVERWASH

Soil Surface Texture: sand

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class:
Hydric Status: All hydric

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 31 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	5 inches	sand	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141 Min: 42	Max: Min:
2	5 inches	59 inches	stratified coarse sand to sandy loam	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141 Min: 42	Max: Min:

Soil Map ID: 2

Soil Component Name: SORRENTO

Soil Surface Texture: loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	11 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 8.4 Min: 7.9
2	11 inches	61 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 8.4 Min: 7.9
3	61 inches	72 inches	stratified loamy fine sand to silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 8.4 Min: 7.9

Soil Map ID: 3

Soil Component Name: CIENEBA

Soil Surface Texture: sandy loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Somewhat excessively drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 0.42 Min: 0	Max: Min:
2	7 inches	11 inches	weathered bedrock	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 0.42 Min: 0	Max: Min:

Soil Map ID: 4

Soil Component Name: CAPISTRANO

Soil Surface Texture: sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	27 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 7.3 Min: 5.6
2	27 inches	64 inches	fine sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 7.3 Min: 5.6

Soil Map ID: 5

Soil Component Name: MYFORD

Soil Surface Texture: sandy loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Moderately well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	11 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 6.5 Min: 6.1

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
2	11 inches	18 inches	sandy clay	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 6.5 Min: 6.1
3	18 inches	27 inches	sandy clay loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 6.5 Min: 6.1
4	27 inches	70 inches	sandy clay loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 6.5 Min: 6.1
5	70 inches	79 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 6.5 Min: 6.1

Soil Map ID: 6

Soil Component Name: CALLEGUAS

Soil Surface Texture: clay loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	14 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 1.4 Min: 0	Max: Min:
2	14 inches	18 inches	weathered bedrock	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 1.4 Min: 0	Max: Min:

Soil Map ID: 7

Soil Component Name: CIENEBA

Soil Surface Texture: sandy loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Somewhat excessively drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	16 inches	sandy loam	Not reported	Not reported	Max: Min:	Max: Min:
2	16 inches	20 inches	weathered bedrock	Not reported	Not reported	Max: Min:	Max: Min:

Soil Map ID: 8

Soil Component Name: CAPISTRANO

Soil Surface Texture: sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	27 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 7.3 Min: 5.6
2	27 inches	64 inches	fine sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 7.3 Min: 5.6

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
B5	USGS40000136410	1/2 - 1 Mile East
7	USGS40000136558	1/2 - 1 Mile North

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

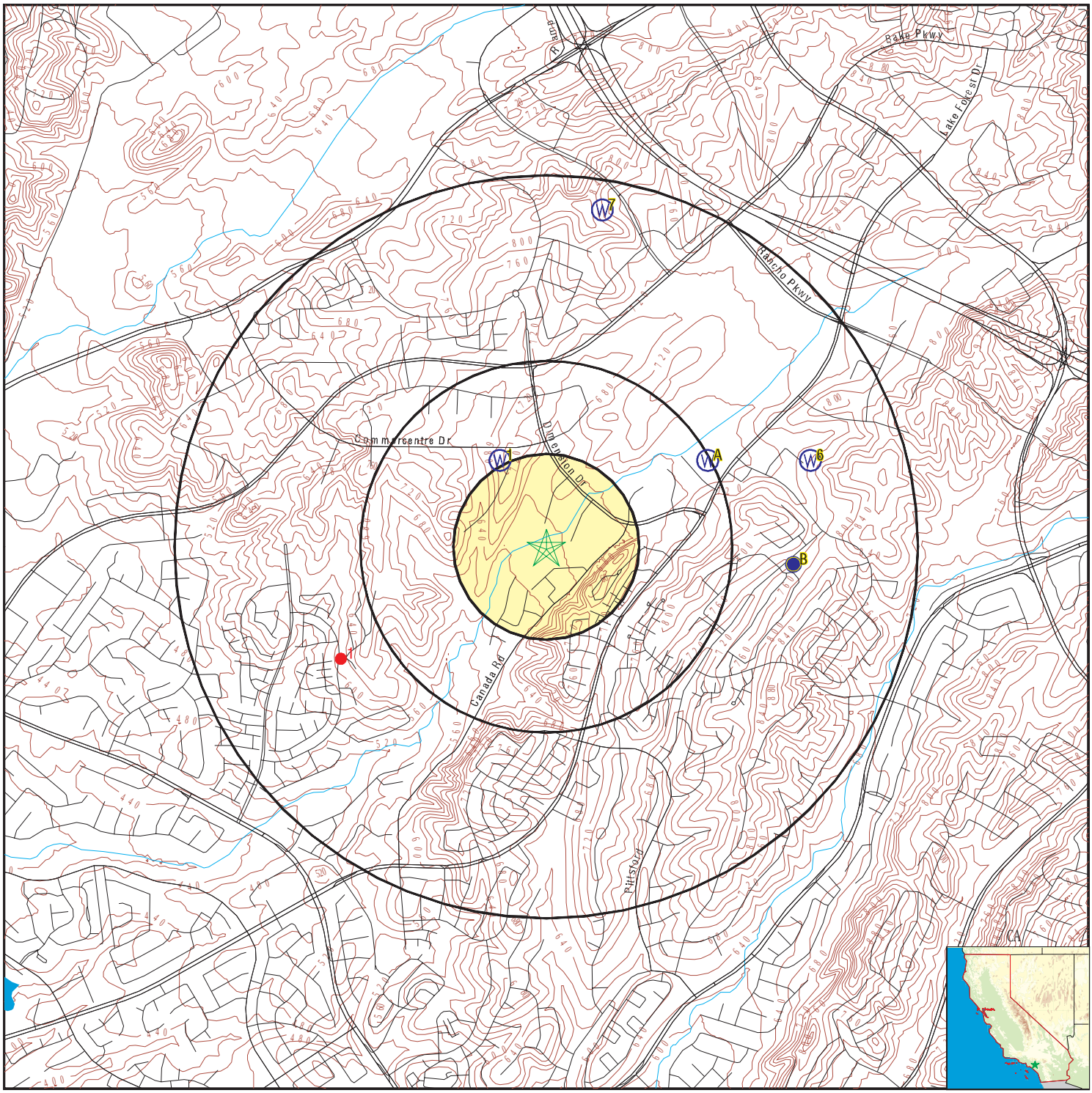
MAP ID	WELL ID	LOCATION FROM TP
1	6936	1/4 - 1/2 Mile NNW
A2	7045	1/4 - 1/2 Mile ENE
A3	7043	1/4 - 1/2 Mile ENE
B4	7046	1/2 - 1 Mile East
6	7044	1/2 - 1 Mile ENE

OTHER STATE DATABASE INFORMATION

STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	CAOG13000006089	1/2 - 1 Mile WSW

PHYSICAL SETTING SOURCE MAP - 06170828.2r



- County Boundary
- Major Roads
- Contour Lines
- Earthquake Fault Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons

- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- HD Closest Hydrogeological Data
- Oil, gas or related wells

SITE NAME:	20865-20795 Canada Road	CLIENT:	Hillmann Environmental Co.
ADDRESS:	20865-20795 Canada Road Lake Forest CA 92630	CONTACT:	Shilpa Sunil
		INQUIRY #:	06170828.2r
LAT/LONG:	33.660538 / 117.675125	DATE:	August 27, 2020 4:12 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

1
NNW
1/4 - 1/2 Mile
Higher

CA WELLS **6936**

Seq:	6936	Prim sta c:	06S/04W-09L04 S
Frds no:	3310012015	County:	33
District:	14	User id:	WAT
System no:	3310012	Water type:	G
Source nam:	SAN JACINTO WELL - ABANDONED	Station ty:	WELL/AMBNT/MUN/INTAKE
Latitude:	333950.0	Longitude:	1174035.0
Precision:	2	Status:	AB
Comment 1:	Not Reported	Comment 2:	Not Reported
Comment 3:	Not Reported	Comment 4:	Not Reported
Comment 5:	Not Reported	Comment 6:	Not Reported
Comment 7:	Not Reported		

System no:	3310012	System nam:	Elsinore Valley Mwd
Hqname:	Not Reported	Address:	P.O. BOX 3000
City:	LAKE ELSINORE	State:	CA
Zip:	92531	Zip ext:	Not Reported
Pop serv:	59200	Connection:	21140
Area serve:	LAKE ELSINORE VICINITY		

A2
ENE
1/4 - 1/2 Mile
Higher

CA WELLS **7045**

Seq:	7045	Prim sta c:	06S/08W-12L02 S
Frds no:	3010091004	County:	30
District:	08	User id:	TEE
System no:	3010091	Water type:	G
Source nam:	WELL 04	Station ty:	WELL/AMBNT/MUN/INTAKE
Latitude:	333950.0	Longitude:	1174000.0
Precision:	1	Status:	AU
Comment 1:	~ 1000’ NW OF THE INTERSECTION OF LAKE FOREST DR & DIMENSION DR.		
Comment 2:	Not Reported	Comment 3:	Not Reported
Comment 4:	Not Reported	Comment 5:	Not Reported
Comment 6:	Not Reported	Comment 7:	Not Reported

System no:	3010091	System nam:	Los Alisos Wd
Hqname:	Not Reported	Address:	P O BOX 699
City:	EL TORO	State:	Not Reported
Zip:	92630	Zip ext:	Not Reported
Pop serv:	38000	Connection:	11645
Area serve:	EL TORO		

A3
ENE
1/4 - 1/2 Mile
Higher

CA WELLS **7043**

Seq:	7043	Prim sta c:	06S/08W-01N01 S
Frds no:	3010091005	County:	30
District:	08	User id:	TEE
System no:	3010091	Water type:	G
Source nam:	WELL 07	Station ty:	WELL/AMBNT/MUN/INTAKE/SUPPLY

Latitude:	333950.0	Longitude:	1174000.0
Precision:	4	Status:	AU
Comment 1:	Not Reported	Comment 2:	Not Reported
Comment 3:	Not Reported	Comment 4:	Not Reported
Comment 5:	Not Reported	Comment 6:	Not Reported
Comment 7:	Not Reported		
System no:	3010091	System nam:	Los Alisos Wd
Hqname:	Not Reported	Address:	P O BOX 699
City:	EL TORO	State:	Not Reported
Zip:	92630	Zip ext:	Not Reported
Pop serv:	38000	Connection:	11645
Area serve:	EL TORO		

B4
East
1/2 - 1 Mile
Higher

CA WELLS 7046

Seq:	7046	Prim sta c:	06S/08W-12Q01 S
Frds no:	3010091002	County:	30
District:	08	User id:	TEE
System no:	3010091	Water type:	G
Source nam:	WELL 02	Station ty:	WELL/AMBNT/MUN/INTAKE
Latitude:	333936.0	Longitude:	1173946.0
Precision:	1	Status:	AU
Comment 1:	Not Reported		
Comment 2:	150'SE OF CANADA RD. & 1500' SW OF INTERSECTION OF CANADA RD & REGENCY		
Comment 3:	LN.	Comment 4:	Not Reported
Comment 5:	Not Reported	Comment 6:	Not Reported
Comment 7:	Not Reported		
System no:	3010091	System nam:	Los Alisos Wd
Hqname:	Not Reported	Address:	P O BOX 699
City:	EL TORO	State:	Not Reported
Zip:	92630	Zip ext:	Not Reported
Pop serv:	38000	Connection:	11645
Area serve:	EL TORO		

B5
East
1/2 - 1 Mile
Higher

FED USGS USGS40000136410

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	006S008W12Q001S	Type:	Well
Description:	Not Reported	HUC:	Not Reported
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Other aquifers	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1957
Well Depth:	740	Well Depth Units:	ft
Well Hole Depth:	800	Well Hole Depth Units:	ft

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

6
ENE
1/2 - 1 Mile
Higher

CA WELLS **7044**

Seq:	7044	Prim sta c:	06S/08W-12J01 S
Frds no:	3010091003	County:	30
District:	08	User id:	TEE
System no:	3010091	Water type:	G
Source nam:	WELL 03	Station ty:	WELL/AMBNT/MUN/INTAKE
Latitude:	333950.0	Longitude:	1173943.0
Precision:	1	Status:	AU
Comment 1:	75' NW OF THE PROPERTY AT 26778 SIMPATICA CIRCLE.		
Comment 2:	Not Reported	Comment 3:	Not Reported
Comment 4:	Not Reported	Comment 5:	Not Reported
Comment 6:	Not Reported	Comment 7:	Not Reported
System no:	3010091	System nam:	Los Alisos Wd
Hqname:	Not Reported	Address:	P O BOX 699
City:	EL TORO	State:	Not Reported
Zip:	92630	Zip ext:	Not Reported
Pop serv:	38000	Connection:	11645
Area serve:	EL TORO		

7
North
1/2 - 1 Mile
Higher

FED USGS **USGS40000136558**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	006S008W01N001S	Type:	Well
Description:	Not Reported	HUC:	Not Reported
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Other aquifers	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	Not Reported
Well Depth:	1000	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

1
WSW
1/2 - 1 Mile

OIL_GAS **CAOG13000006089**

API #:	0405901074	Well #:	14-1
Well Status:	Plugged	Well Type:	DH
Operator Name:	Morton and Sons	Lease Name:	El Toro Co.
Field Name:	Any Field	Area Name:	Any Area
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
92630	90	0

Federal EPA Radon Zone for ORANGE County: 3

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 92630

Number of sites tested: 2

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.400 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	Not Reported	Not Reported	Not Reported	Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish and Wildlife
Telephone: 916-445-0411

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Water Well Database
Source: Department of Water Resources
Telephone: 916-651-9648

California Drinking Water Quality Database
Source: Department of Public Health
Telephone: 916-324-2319
The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

OTHER STATE DATABASE INFORMATION

California Oil and Gas Well Locations
Source: Dept of Conservation, Geologic Energy Management Division
Telephone: 916-323-1779
Oil and Gas well locations in the state.

California Earthquake Fault Lines
Source: California Division of Mines and Geology
The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

RADON

State Database: CA Radon
Source: Department of Public Health
Telephone: 916-210-8558
Radon Database for California

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

STREET AND ADDRESS INFORMATION

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APPENDIX F

OTHER DOCUMENTS
(where applicable)

Department of Toxic Substances Control

Jared Blumenfeld
Secretary for
Environmental Protection

Meredith Williams, Ph.D.
Acting Director
1001 "I" Street
P.O. Box 806
Sacramento, California 95812-0806

Gavin Newsom
Governor

September 2, 2020

Shilpa Sunil
Hillmann Consulting, LLC
ssunil@hillmannconsulting.com

Public Records Request Number:
Location: 20865 Canada Road, Lake Forest CA 92630

Dear Requestor:

We have received your Public Records Act Request for records from the Department of Toxic Substances Control.

Our vendor has processed and uploaded TSDF manifest data with a generation date on or before June 29, 2018. Any TSDF copies with a generation date on or after June 30, 2018 are submitted to the e-Manifest system or processed by the federal EPA. Data processed by the federal EPA is not available in HWTS at this time.

After a thorough review of our files we have found that no EPA ID Number in HWTS records exist at this office pertaining to the sites/facilities referenced above.

If you have any questions, or would like further information regarding your request, please contact me at hwtsreports@dtsc.ca.gov.

Sincerely,

Bridget Fitzsenry
HWTS Reports

Printed on Recycled Paper

Shilpa Sunil

From: ASabino@aqmd.gov
Sent: Wednesday, August 19, 2020 9:52 AM
To: Shilpa Sunil
Cc: ob_pr_support_docs@aqmd.gov
Subject: SCAQMD Public Records Request# 1402594, -- Completion Letter

Shilpa Sunil
Hillmann Consulting Llc
1745 Orangewood Suite #201
Orange, Ca 92868

Ref: Request for Records; Control No. **1402594**, Received 8/13/2020
RE: P/O'S, NOV'S, N/C'S, & EMISSIONS SUM FOR 20795-20865 CANADA RD, LAKE FOREST, CA.

After a thorough search of this agency's records:

NO REQUESTED RECORDS WERE FOUND FOR THE ABOVE REFERENCED FACILITY OR FACILITY SITE.

Should you have any questions or need additional information, please do not hesitate to contact me at (909) 396-3700, Tuesday through Friday, between the hours of **8:00 a.m.** and **4:30 p.m.**

Sincerely,

Andrew Sabino
For Colleen Paine
Public Records Coordinator
Information Management

Regulatory / Medical Health Services
Environmental Health Division – Public Records Request

Name: Shilpa Sunil **Email:** ssunil@hillmannconsulting.com **Date:** 8/12/2020

1. Please use this form to describe and specify the records you need.
2. So that we can help you obtain the appropriate records, please describe the reason the records are being requested.

Hillmann is performing Phase I ESA and request records for 20865-20795 Cannada Road, lake Forest C/

3. For information on multiple sites (e.g., all sites on one street), provide a specific address number for each site. We are unable to conduct a search for a range of addresses.
4. Attach this completed form to your request at the Records Portal: orangecounty.nextrequest.com

Restaurants, Markets, Food Vehicles, and Other Food Facilities Note: Recent inspection reports for most food facilities are viewable free online: ocfoodinfo.com Inventory reports are available free online: ochealthinfo.com/eh/home/reports	
☐	Complaint Investigation
☐	Health Permit
☐	Application for the Health Permit
☐	Inspection report dated older than 2 years **Date(s) from** _____ **to** _____
☐	Food Plan Check Record SR Number_____

Hotel/Motel, Residential Housing	
☐	Complaint Investigation
☐	Inspection Report **Date(s) from** _____ **to** _____
☐	Notices sent to Owner

---Continued---

Hazardous Materials Programs

☑ **All Dates** ☐ **Date(s) from _____ to _____**

Inventory reports are available free online at ochealthinfo.com/eh/home/reports

CUPA (Please contact Anaheim Fire Dept to obtain CUPA records for addresses within Anaheim city limits.)

☑	Hazardous Materials Business Plan File (CERS) (Please contact these cities directly for Hazardous Materials Business Plan File, Chemical Disclosure, and Electronic Submittal: **Costa Mesa, Fountain Valley, Fullerton, Huntington Beach, La Habra, Orange**)
☑	Above Ground Petroleum Storage Tank (APST)
☐	Underground Storage Tank (Please contact these cities directly for UST records: Fullerton, Orange)
☑	Hazardous Waste
☐	Tiered Permitting
☑	CalARP
☐	Complaint record regarding specific Hazardous Materials facility
☑	Local Oversight Program (LOP)
☑	Underground Storage Tank (UST) removal record
☑	Industrial Cleanup Site
☑	Medical Waste Facility Record
☑	Solid Waste Facility

Other Programs

Date(s) from _____ to _____

☐	Body Art
☐	Public Pools/Spa - Please note the name of the **complex** where the pool is located: _____
☐	Pool complaint record
☐	Pool inspection report
☐	Pool Plan Check record SR# _____
☐	Beach water quality records; see also ocbeachinfo.com
☐	Cross Connection; backflow tester list can be found at ochealthinfo.com/eh/water/bftesters
☐	Liquid Waste Hauling
☐	Water Well records
☐	Other records:_____

1241 E. Dyer Road, Suite 120, Santa Ana, CA 92705
Telephone: (714) 433-6015
EHRecords@ochca.com
OrangeCounty.nextrequest.com

August 12, 2020

State of California
Department of Toxic Substances Control
Region 4 – Cypress Regional Office
5796 Corporate Avenue
Cypress, CA 90630-4732
Phone (714) 484-5337
Fax (714) 484-5318
PubReqAct@dtsc.ca.gov

RE: Environmental Files:

20865-20795 Canada Road, Lake Forest, California 92630
APNs: 610-301-07 and 610-301-20, 601-301-21
(**See below the Property Boundary map outlined in yellow**)

Dear Sir/Madam:

Hillmann Consulting, LLC, is conducting an environmental investigation of the above-referenced property (See below the Property Boundary map outlined in yellow). Under the Freedom of Information Act, we would like to request any information your office has regarding this property. If any records are located, we would like to obtain copies or schedule a file review. If no records are available, please contact me to confirm. Thank you for your assistance.

Sincerely,

Shilpa Sunil
Environmental Project Manager
ssunil@hillmannconsulting.com

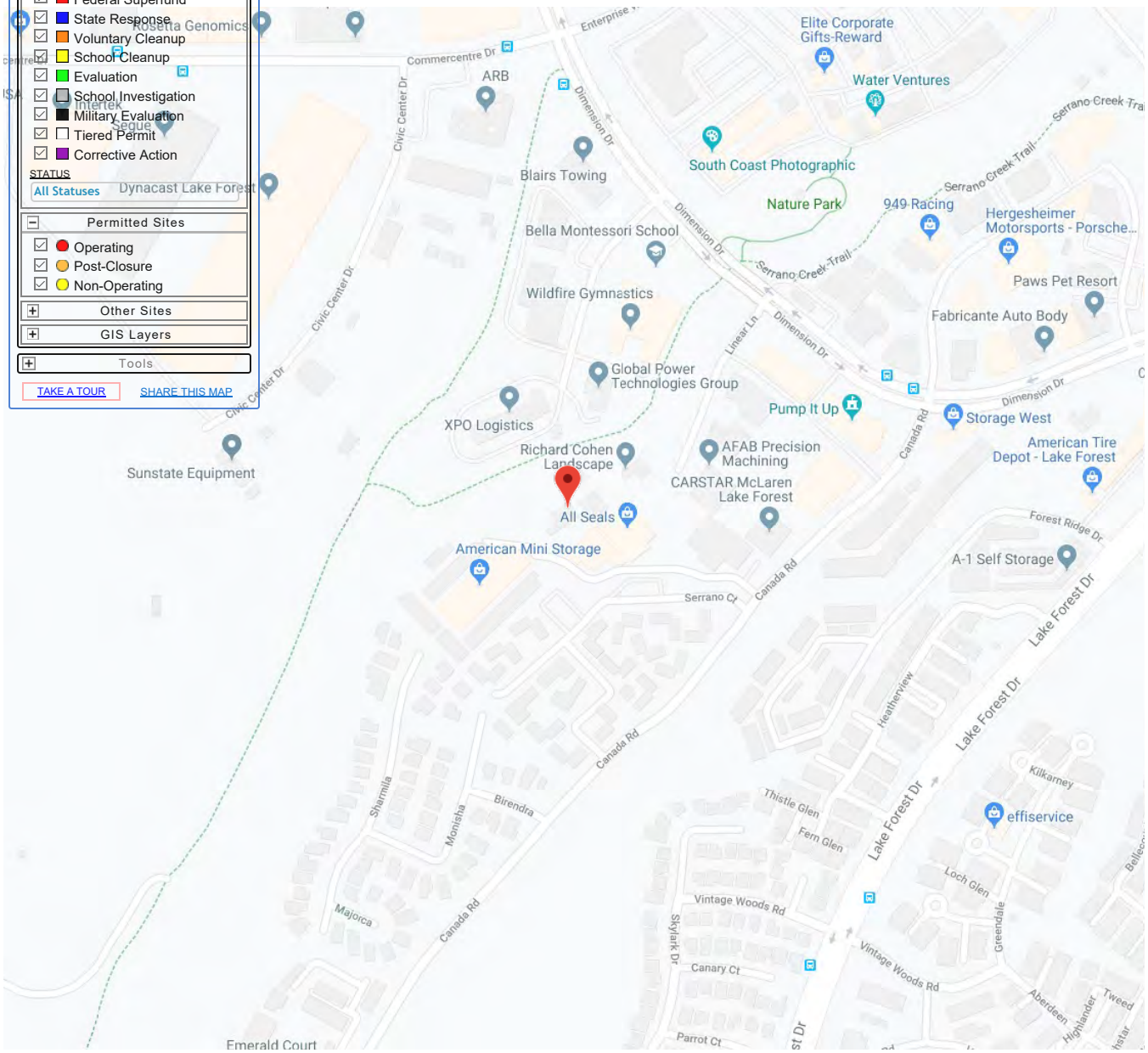
ENVIROSTOR

20865 Canada road lake forest ca

Map Address

- Sites and Facilities
  - Cleanup Sites
    - Federal Superfund
    - State Response
    - Voluntary Cleanup
    - School Cleanup
    - Evaluation
    - School Investigation
    - Military Evaluation
    - Tiered Permit
    - Corrective Action
    - STATUS: All Statuses
  - Permitted Sites
    - Operating
    - Post-Closure
    - Non-Operating
  - Other Sites
  - GIS Layers
- Tools

TAKE A TOUR | SHARE THIS MAP



Google 50 m Map data ©2019 Google

SITES CURRENTLY VISIBLE ON MAP — 0 SITES LISTED — EXPORT THIS LIST TO EXCEL

PROJECT NAME	STATUS	PROJECT TYPE	ADDRESS	CITY

U.S. Environmental Protection Agency

MyProperty

Environmental Databases Search

The search of EPA's Facility Registry System did not locate any records for the search criteria provided below:

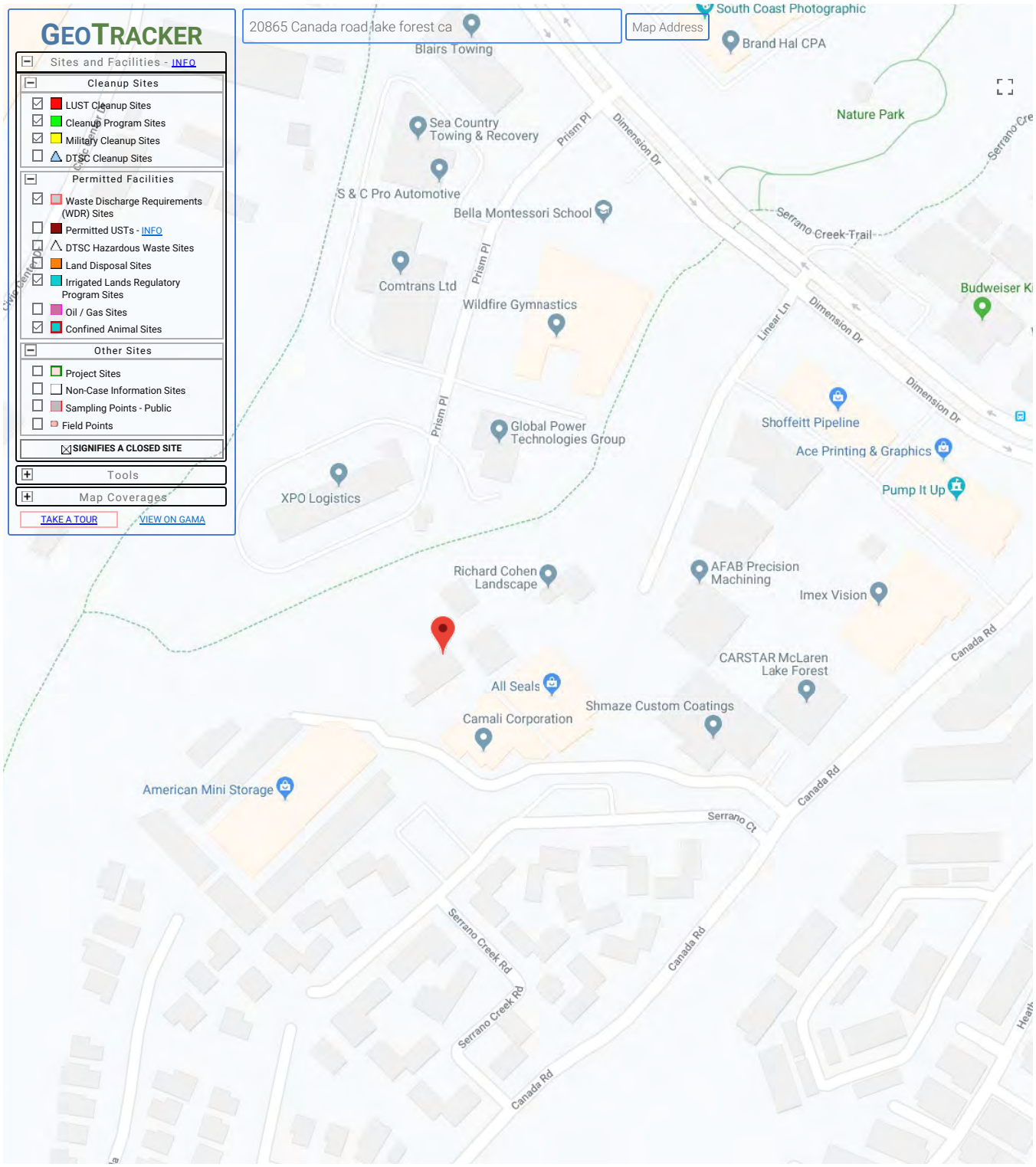
Search Criteria:

Street Address:	20865-20795 Canada Road
City, State:	Lake Forest, CA
Query executed on:	08/12/2020 07:33 PM **EST**

Contact the appropriate state, tribal or local agencies if you seek additional information.

Disclaimer

The MyProperty reports are provided solely for informational purposes. They do not provide legal advice, have legally binding effect, or expressly or implicitly create, expand, or limit any legal rights, obligations, responsibilities, expectations, or benefits in regard to any person. EPA maintains the application to enhance public access to environmental information. This service has continual data updates, and we will correct errors brought to our attention, as appropriate.



SITES CURRENTLY VISIBLE ON MAP

Shilpa Sunil

From: hwtsreports@DTSC <hwtsreports@dtsc.ca.gov>
Sent: Tuesday, June 11, 2019 1:40 PM
To: Shilpa Sunil; hwtsreports@DTSC
Subject: RE: Records Request -C37524 - Request 2019_0019 No Records Found
Attachments: 2019_0019_Shilpa_Sunil_No records found.doc

Hello Shilpa,

Please see attached, information related to your PRA request for:

20865 Canada Road, Lake Forest Ca

In this case after a thorough review of our files we have found that no EPA ID Number in HWTS records exist at this office pertaining to the sites/facilities referenced above.

Please let me know if you have any questions.

Enjoy your day!
Bridget

Bridget Fitzsenry
Office of Environmental Information Management
1001 I Street, 11th Floor
Sacramento, CA 95814
Office: (916) 323-3391
E-mail: HWTSREPORTS@dtsc.ca.gov

California Department of Toxic Substances Control

Please send all report request to: hwtsreports@dtsc.ca.gov. *Please be aware depending amount of requests at any given time, the wait could be up to two weeks before we can start on yours. Thank you, and enjoy your day ☺*

From: Shilpa Sunil [mailto:ssunil@hillmannconsulting.com]
Sent: Tuesday, June 11, 2019 11:53 AM
To: hwtsreports@DTSC <hwtsreports@dtsc.ca.gov>
Subject: Records Request -C37524
Importance: High

Dear Sir/Madam:

Property address: 20865 Canada Road, Lake Forest Ca

Hillmann Consulting, LLC is conducting an environmental investigation of the above referenced property. Under the Freedom of Information Act, we would like to request any information your office has regarding this property. If any records are located, we would like to obtain copies or schedule a file review. If no records are available, please contact me to confirm. Thank you for your assistance.

Sincerely,

Shilpa Sunil
Environmental Project Manager

Hillmann Consulting, LLC
1745 Orangewood Avenue, Suite# 201
Orange, CA 92868
Office (714) 634-9500
Cell (714) 313-2840

ssunil@hillmannconsulting.com
www.HillmannConsulting.com

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Shilpa Sunil

From: Leslie Bonkowski <BONKOWSL@irwd.com>
Sent: Thursday, June 20, 2019 3:17 PM
To: Shilpa Sunil
Subject: Environmental Files - 20865 Canada Road in Lake Forest
Attachments: Bonkowski, Leslie.vcf

Hello Shilpa,

In response to your Public Records Act request dated June 13, 2019, the Irvine Ranch Water District (District) doe not have any records responsive to your request (as the District does not maintain records for septic tanks).

The referenced property at 20865 Canada Road in Lake Forest receives domestic water service from the District; however, does not have sewer service which is a good indication that the property maintains a septic system.

Please note that the District does not have any records of a well at this site, which is most likely why this address is being serviced with domestic water. Since the District consolidated with the Los Alisos Water District in 2000, and historic documentation provided to the District is very limited.

Please confirm receipt of my email, so I may file your request.

Thank you,
Leslie

Irvine Ranch WATER DISTRICT
Leslie Bonkowski, District Secretary
949/453-5312

>>>>>>>>>>>>>>> Shilpa Sunil <ssunil@hillmannconsulting.com> 6/13/2019 9:22 AM >>>

Dear Sir/Madam:

Property address: **20865 Canada Road, Lake Forest Ca**

Hillmann Consulting, LLC is conducting an environmental investigation of the above referenced

property. Under the Freedom of Information Act, We would like to request any information your office has regarding this property such as environmental files (UST, groundwater, wells, etc.). The property appears to have septic system based on the age of the residential home and barn developed at the Property. Is there any way to find out further details about the septic system location if it's still in place or capped? If capped are there any records we could reference.

If any records are located, we would like to obtain copies or schedule a file review. If no records are available, please contact me to confirm. Thank you for your assistance.

Sincerely,

Thank You,

Shilpa Sunil

Environmental Project Manager

Hillmann Consulting, LLC

1745 Orangewood Avenue, Suite# 201

Orange, CA 92868

Office (714) 634-9500

Cell (714) 313-2840

ssunil@hillmannconsulting.com

www.HillmannConsulting.com

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Jared Blumenfeld
Secretary for
Environmental Protection

Department of Toxic Substances Control

Meredith Williams, Ph.D. Director
5796 Corporate Avenue
Cypress, California 90630

Gavin Newsom
Governor

August 17, 2020

Shipla Sunil
HILLMANN CONSULTING
ssunil@hillmannconsulting.com

PR4-081720-03
20795-20865 CANADA RD., LAKE FOREST, CA

Dear Requestor:

We have received your Public Records Act Request for records from Department of Toxic Substances Control (DTSC). After a thorough review of our files, no site records were found pertaining to the sites/facilities referenced above.

DTSC's Hazardous Waste Tracking System (HWTS) may have records that pertain to this request. This unit tracks toxic waste generators, transporters (manifests), and disposal facilities. If you are interested in this type of information, it can be identified by accessing the HWTS database http://hwts.dtsc.ca.gov/report_search.cfm?id=5. If you are interested in retrieving detailed reports, additional charges may apply. Please contact the HWTS by email at hwtsreports@dtsc.ca.gov or by phone at 800-6186942 for further information. For copies of manifest, please send an email to mcr@dtsc.ca.gov.

A large number of our records are available on EnviroStor, an online database that provides non-confidential, public access to DRSCs data management system. It tracks our cleanup, permitting, enforcement, and investigation efforts at hazardous waste facilities and sites with known or suspected contamination issues. EnviroStor is available 24/7, 365 days a year. The data reflects the latest updates as they are entered in the system. Access it from your computer or smartphone, the local library- anywhere Internet access is available. Just go to www.envirostor.dtsc.ca.gov. You'll find a step-by-step tour of EnviroStor under the "How To Use EnviroStor" menu on the website.

If you have any questions, would like further information regarding your request, please contact me at (714) 484-5337 or via email at CypressFileRoom@dtsc.ca.gov.

Sincerely,

Julie Johnson

Julie Johnson
Regional Records Coordinator

Printed on Recycled Paper

August 12, 2020

California Regional Water Quality Control Board – Santa Ana Region (8)
Underground Storage Tank (UST) File Review Division
3737 Main Street, Suite #500
Riverside, CA 92501-3348
Phone (951) 782-4499
Fax (951) 781-6288
FileReview8@waterboards.ca.gov

RE: Environmental Files:

20865-20795 Canada Road, Lake Forest, California 92630
APNs: 610-301-07 and 610-301-20, 601-301-21
(**See below the Property Boundary map outlined in yellow**)

Dear Sir/Madam:

Hillmann Consulting, LLC, is conducting an environmental investigation of the above-referenced property (See below the Property Boundary map outlined in yellow). Under the Freedom of Information Act, we would like to request any information your office has regarding this property. If any records are located, we would like to obtain copies or schedule a file review. If no records are available, please contact me to confirm. Thank you for your assistance.

Sincerely,

Shilpa Sunil
Environmental Project Manager
ssunil@hillmannconsulting.com

Shilpa Sunil

From: WB-RB8-FileReview8 <FileReview8@waterboards.ca.gov>
Sent: Tuesday, August 18, 2020 7:25 AM
To: Shilpa Sunil
Subject: RE: Records request - Lake Forest

Good morning,

After careful review of our records, we show we have no files for the following sites:

20865-20795 (except 20792) Canada Road, Lake Forest, California 92630

After careful review of our records, we show we have Storm Water information for the following site:
20792 Canada Road Lake Forest California 92630

The requested record can be accessed online by:
• Clicking this link
https://smarts.waterboards.ca.gov/smarts/PublicDataAccess/PublicNoiSearch.xhtml
• Enter street number into " Facility/Site Street:" Field
• Enter the site city (e.g."Irvine") into "Facility/ Site City:" Field
• Click on black underlined links to view attachments

If we can be of further assistance, please do not hesitate to contact us again.

Thank you,
File Review Desk
3737 Main St. Suite 500
Riverside, CA 92501

From: Shilpa Sunil <ssunil@hillmannconsulting.com>
Sent: Wednesday, August 12, 2020 4:30 PM
To: WB-RB8-FileReview8 <FileReview8@waterboards.ca.gov>
Subject: Records request - Lake Forest
Importance: High

EXTERNAL:

Dear Sir/ Madam

Please see attached records request.
Requesting records for : 20865-20795 Canada Road, Lake Forest, California 92630
APNs: 610-301-07 and 610-301-20, 601-301-21
Please see attached records request form. See below if the Property map

Hillmann Consulting, LLC is conducting an environmental investigation of the above referenced property. Under the Freedom of Information Act, we are requesting any information your office has regarding this property. If any

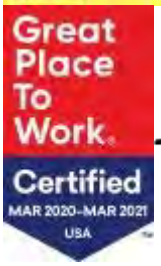
records are located, we would like to obtain copies or schedule a file review. If no records are available, please contact me to confirm. Thank you.

Thank You,
Shilpa Sunil

Environmental Project Manager

Hillmann Consulting, LLC
1745 Orangewood Avenue, Suite# 201
Orange, CA 92868
Office (714) 634-9500 Extn 408
Cell (714) 313-2840

ssunil@hillmannconsulting.com
www.HillmannConsulting.com



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Department of Toxic Substances Control

Jared Blumenfeld
Secretary for
Environmental Protection

Meredith Williams, Ph.D.
Director
5796 Corporate Avenue
Cypress, California 90630

Gavin Newsom
Governor

September 2, 2020

Shipla Sunil
HILLMANN CONSULTING
ssunil@hillmannconsulting.com

PR4-081720-08
ABSOLUTE GREEN ELECTRONICS RECYCLING 20761 CANADA ROAD, LAKE FOREST, CA

On 8/17/20 the Department of Toxic substances Control (DTSC) received your email of 8/17/20 requesting records under the Public Records Act. DTSC Cypress Office has identified site records responsive to your request and is in the process of gathering the requested records.

Please contact us to schedule an appointment to review these records. DTSC will notify you if any of the records will be withheld from disclosure under the Act. We recommend you bring a copier or arrange for a bonded copying service to make copies of the records.

A large number of our records are available on EnviroStor, an online database that provides non-confidential, public access to DTSCs data management system. It tracks our cleanup, permitting, enforcement, and investigation efforts at hazardous waste facilities and sites with known or suspected contamination issues. EnviroStor is available 24/7, 365 days a year. The data reflects the latest updates as they are entered in the system. Access it from your computer or smartphone, the local library – anywhere Internet access is available. Just go to www.envirostor.dtsc.ca.gov. You'll find a step-by-step tour of EnviroStor under the "How to Use EnviroStor" menu on the website.

If you have any questions or would like further information regarding your request, please contact me at (714) 484-5337 or email at CypressFileRoom@dtsc.ca.gov.

Sincerely,

Julie Johnson

Julie Johnson
Regional Records Coordinator

APPENDIX G

PROJECT PERSONNEL QUALIFICATIONS

HILLMANN CONSULTING

Shilpa Sunil

Environmental Project Manager

EDUCATION:

M.S. Environmental Engineering
University of California, Irvine

B.S. Environmental Engineering
University of Mysore (SJCE), Mysore, India

CERTIFICATIONS:

OSHA/ 10-hr Certification

CEQA Certification

YEARS OF EXPERIENCE:

With Hillmann: 2 years

Total: 10 years

PROFESSIONAL EXPERIENCE:

Ms. Sunil is an Environmental Professional with 10 years of experience in Environmental Engineering. Ms. Sunil is experienced in supporting several areas of Hillmann's practice including coordination of projects, project scope creation, investigatory projects, and corrective plan implementation.

As an Environmental Project Manager, Ms. Sunil has experience writing reports for site remediation for commercial property owners and preparing respective groundwater monitoring reports. She also writes Phase I and Phase II Environmental Site Assessments and Investigation reports as well as Supplemental Site Investigation Reports. She has experience working in a variety of buildings including multifamily residential properties, commercial office buildings, retail shopping centers, gasoline service stations, hotels, dry cleaning plants, auto repair shops, industrial buildings, aerospace manufacturers, plating facilities, and various manufacturing operations.

Representative experience includes:

Environmental Engineer, John L. Hunter and Associates, Inc: From 2015 to 2017, Ms. Sunil worked as an Environmental Engineer for John L. Hunter and Associates. Her responsibilities included reviewing Water Quality Management Plans, grading & drainage plans and conducting site verification inspections. She reviewed Standard Urban Storm Water Mitigation Plans; utilized SWRCB SMARTS database, assisted in Industrial Waste Plan review. She performed detailed review of grading plans, design specifications, hydro modifications analysis, and Storm Water Best Management Practice (BMP) calculations. She assisted with annual report preparation as part of NPDES permit requirements. Additionally, Ms. Sunil was responsible for reviewing work of private Professional Engineers for compliance with City standards and she assisted in determining engineering requirements for new developments.

Engineering Tech II, Orange County Public Works- OC Engineering: From July 2013 to December 2014, Ms. Sunil worked as an Engineer for Orange County Public Works. In this position, she reviewed permits requests, provided support of capital improvement and maintenance projects, and integrated environmental values into capital improvement projects by verifying the implementation of the federal National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA).

Staff Aid II, Orange County Public Works- OC Road, Capital Projects: From July 2012- July 2013, Ms. Sunil served as a Staff Aid for Orange County. In this position, she was responsible for the preparation of Water Quality Management Plans and Micro Station Drafting. She provided detailed review of grading plans, design specifications, hydro modification analysis, and Storm Water Best Management Practice Calculations. She assisted with annual report preparation as part of NPDES permit requirements.

Staff Aid II, Orange County Road, Traffic Engineering: From March 2010 to July 2012, Ms. Sunil was a Staff Aid for the Orange County Road and Traffic Engineering team. She performed traffic investigation, assisted the traffic committee and aided in work order preparation. She analyzed traffic flows, parking issues, and intersection capacities. Ms. Sunil provided written and verbal responses to residents of unincorporated Orange County.

Assistant Engineer, RBF Consulting, Irvine, CA: From August 2007 to January 2010, Ms. Sunil was an Assistant Engineer at RBF Consulting where she conducted comprehensive evaluations of watersheds including National Pollution Discharge Elimination Systems (NPDES) compliance, incorporated BMPs, assisted public and private sector clients with NPDES compliance services, and prepared and reviewed Storm Water Pollution Prevention Plans and Water Quality Management Plans.

J. Ryan Terwilliger

Operational Manager, West Coast

EDUCATION:

B.S. Environmental Science, University of Southern California, Los Angeles, CA

CERTIFICATION:

Cal-OSHA Certified Asbestos Consultant
CDPH Accredited Lead Inspector/Assessor/ Project Monitor

CA Certified Site Surveillance Technician

OSHA 40 - Hr HAZWOPER

YEARS OF EXPERIENCE:

With Hillmann: 4 years

Total: 8 years

PROFESSIONAL EXPERIENCE:

Mr. Terwilliger is responsible for business operations, fiscal management and field staff management for Hillmann's California Office. He also performs asbestos surveys and investigations to identify asbestos and lead materials associated with occupational hazards. He supervises work practices and controls in accordance with job specifications, current EPA, OSHA and State Regulations for Asbestos remediation projects in commercial, industrial and multi-family residential buildings. Mr. Terwilliger performs IAQ, mold and moisture investigations in commercial, industrial and residential facilities nationwide. He also performs awareness training for asbestos, lead and microbial agents. Mr. Terwilliger provides litigation support consultation.

Representative Experience Includes:

Tishman Speyer Properties, Various locations: Hillmann has provided the complete environmental program for Tishman Speyer's properties since 1987. Our services include environmental health and safety, industrial hygiene, phase I environmental site assessments, asbestos surveys, air monitoring, bid administration, O&M programs and indoor air quality programs on various commercial, industrial and multi-family residential properties. Mr. Terwilliger is an Environmental Scientist on this contract, conducting on-site environmental services including phase I site assessments and NPDES water quality testing.

Westfield – Environmental Program, Various locations: Since 2000, Hillmann has been providing an environmental program encompassing environmental health and safety, Phase I environmental site assessments, asbestos and lead surveys, air monitoring, bid administration and O&M programs, industrial hygiene and indoor air quality programs, and hazardous materials assessments on their mall properties throughout the county. Mr. Terwilliger is an Environmental Scientist on this contract performing industrial hygiene services that include indoor air quality monitoring, Phase I environmental site assessments, asbestos and lead surveys.

Brookfield Office Properties, Various sites, CA: Hillmann has been providing hazardous materials surveys, development abatement specifications, and managing the oversight activities during the abatement at various Brookfield owned sites throughout California. Mr. Terwilliger functions as a Project Manager for this contract.

California Department of Transportation, Central Valley and Northern CA: Hillmann has been performing asbestos and Lead-based Paint Surveys for the California Department of Transportation. Performed comprehensive asbestos containing materials and lead-based paint surveys of residential and commercial buildings that were slated for demolition and generated report of findings in order to aid the Department of Transportation (DOT) in facilitating the road improvement programs and building renovations throughout the

HILLMANN CONSULTING

Central Valley area. Also during the abatement of asbestos from DOT owned buildings, provided contractor oversight and air monitoring services for regulatory compliance.

Verizon, Various Sites, CA. Hillmann conducted hazardous materials surveys, development abatement specifications, and project monitoring during abatement at various Verizon owned sites throughout California. Mr. Terwilliger functioned as the Project Manager.

Public Storage, Los Angeles, CA: Hillman preformed comprehensive asbestos, lead-based paint and universal waste materials survey of commercial and industrial buildings throughout Southern California. Hazardous materials surveys were conducted prior to renovation for the storage units. Mr. Terwilliger developed abatement specifications and managed the abatement activities during the renovations of the buildings. He functioned as the Project Manager on this contract.

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CONSULTING

LIMITED SUBSURFACE INVESTIGATION REPORT

20865-20795 CANADA ROAD, LAKE FOREST, CALIFORNIA

Prepared For:

Great Scott Tree Service
10761 Court Avenue
Stanton, CA 90680

Hillmann Project Number C3-8120

September 25, 2020

Written By:
Hillmann Consulting, LLC

Dan Louks
Professional Geologist 4883

PROFESSIONAL GEOLOGIST
DANIEL R. LOUKS
NO. 4883
EXP. NOV. 30, 2021
STATE OF CALIFORNIA

HILLMANN
CONSULTING

September 25, 2020

Mr. Steve Guzowski
Great Scott Tree Service
10761 Court Avenue
Stanton, CA 90680

RE: Limited Subsurface Investigation Report
20865-20795 Canada Road
Lake Forest, California
Hillmann Project Number: C3-8120

Dear Mr. Guzowski:

Hillmann Consulting, LLC, is pleased to provide this Limited Phase II Subsurface Investigation Report prepared for the above referenced property.

This report is for the exclusive use of the entities named on the front cover, its affiliates, designates and assignees, rating agencies, prospective bond holders and bond holders, and no other party shall have any right to rely on any service provided by Hillmann Consulting, LLC, without prior written consent.

We appreciate the opportunity to provide environmental due diligence services. If you have any questions concerning this report, or if we can assist you in any other matter, please contact the Project Manager at 714-634-9500.

Very Truly Yours,
Hillmann Consulting, LLC

Brandon Clements
Partner; Western Regional Director

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1.0 INTRODUCTION / BACKGROUND

Hillmann Consulting, LLC (Hillmann) conducted a Limited Subsurface Investigation at 20865-20795 Canada Road, Lake Forest, California. The subject site consists of three adjoining parcels that together occupy approximately 6.71 acres. The Property is occupied by residential buildings and a horse barn and features extensive vegetative cover. The site is located in a mixed use commercial/residential area of Lake Forest and adjoins Serrano creek to the north-northwest (**Figure 1**). The site is being considered for purchase and reuse for parking or for commercial purposes.

In August 2020, Hillmann conducted a Phase I Environmental Site Assessment for the site. Results indicate the smallest of the three parcels (20795 Canada Road, occupying about 0.35 acres) was used for pesticide application and storage. In addition, a gasoline underground storage tank system (UST) was reported to have been used at 20865 Canada Road as indicated by interviews with on-site personnel, but no records were identified confirming that a UST had ever been used at the site. To determine if an existing UST or former UST excavation was present, a geophysical study was conducted at the Property on August 30, 2020 by C-Below. Results indicated no evidence of a UST, but a small anomaly was detected just south of the paved driveway, and upon physical investigation of the area, this appeared to be the former dispenser. In addition, the survey detected a septic system along the east side of the existing residence. The geophysical survey report is included as **Appendix E**. The layout of the site is shown on **Figure 2A** (20865 Canada Road) and **Figure 2B** (20795 Canada Road).

In September 2020, Hillmann completed a Limited Phase II Subsurface Investigation at the Property that included soil and soil gas sampling to identify potential contamination from the possible UST system (20865 Canada Road) and from past pesticide use and storage (20795 Canada Road). The objective of this work was to provide a preliminary assessment of the subsurface conditions in targeted areas of the site. The current investigation is an independent assessment of the site that was constrained by time and cost factors as part of a self-directed effort. The investigation included installation of three soil borings and soil gas sampling probes in targeted locations, and near-surface soil sampling for pesticide content. This investigation was not intended to meet the more stringent requirements of a regulatory driven assessment.

2.0 GEOLOGY/HYDROGEOLOGY

Based on the drilling logs, soils beneath the site consist of mixed deposits of silty sand, silty clay, and sand from near surface to 10 feet, the maximum depth of exploration. Groundwater was not encountered during drilling to 10 feet below grade. Descriptions of the sediments encountered during drilling are presented in the drilling logs (**Appendix C**).

Based on information provided by representatives of the Irvine Ranch Water District (IRWD) and Los Alisos Water District (LAWD) for another nearby site, groundwater in the vicinity of the subject Property varies seasonally between 70 feet and 140 feet below grade. IRWD and LAWD personnel indicated that the nearest well to the subject Property is located near the intersection of Lake Forest Drive and Regency Lane (Non-potable Well #4). Static

groundwater levels in this well have reportedly ranged from approximately 75 to 140 feet below grade surface.

3.0 SITE INVESTIGATION

On September 15, 2020, Hillmann installed three soil borings (B1-B3) to total depths ranging from 6 to 10 feet below grade in targeted locations near the possible former UST area and adjacent to the existing septic system at 20865 Canada Road. The borings were installed using hand auger tools and the locations are indicated on **Figure 2A**. In addition, four near surface soil samples were obtained at 0.5 feet below grade from the 0.35 acre parcel located at 20795 Canada Road, near the pesticide shed and in areas of likely application. The locations of the soil samples are indicated on **Figure 2B**.

During drilling, a California Professional Geologist described the soil using the Unified Soil Classification System. Soil samples were obtained at select depths in target borings and were preserved for analysis in laboratory glass jars sealed with Teflon tape and threaded caps. Select samples were analyzed for carbon chain hydrocarbons corresponding to gasoline, diesel fuel, and oil weights (C4-C12, C13-C22, and C23-C40 ranges, respectively) by EPA Method 8015M. The near surface samples were analyzed for organo-chlorine pesticides (OCP) by EPA Method 8081A and for arsenic, lead, and mercury by EPA Method 6010B/7471A. The soil samples were analyzed by A&R Laboratories of Ontario, California.

Each boring drilled within the former UST area was completed as a soil gas sampling probe (SG1-SG3) with sampling tips installed at maximum depth. The soil gas sampling probes consists of a plastic micro-porous vapor implants that are approximately 2 inches long with a 0.5-inch outside diameter, connected to 0.25-inch outside diameter nylaflow tubing that extended above the surface. The annulus around each vapor implant was backfilled with approximately 1 foot of screen-washed #3 sand. Six inches of dry bentonite was placed immediately above the sand pack, followed by one-foot of bentonite that was hydrated during placement. The bentonite was further sealed with neat cement to grade to provide a secure borehole seal. The probes were finished with gas-tight fittings at the surface pending vapor purging and sampling.

The probes were allowed to equilibrate for at least 48 hours before purging and sampling. Prior to vapor sampling, shut-in and leak tests were conducted on the probes. The probe head was attached to the sampling train assembly of Nylaflow tubing, valves, and fittings and connected to a purge pump. The pump was used to evacuate the sealed system using an applied vacuum of 100 inches of water column (in. WC). The vacuum on each probe was monitored for 90 seconds with the sampling train system sealed. After the shut-in test was validated, the sampling train was leak tested. Liquid isopropyl alcohol was applied around all connections in the sampling train to evaluate whether the system was sealed from ambient air leaks. A detection of 10 times the reporting limit of this compound might suggest that ambient air leakage had occurred.

The purpose of purging is to remove stagnant air from the vapor sampling train to ensure representative samples are obtained. The probes were purged using an adjustable vacuum pump set at 200 mL/minute. During purging, the soil gas was monitored for VOC, oxygen, and

carbon dioxide content using a Mini-Rae 2000 multi gas detector to ensure that non-atmospheric formation air was being sampled (**Appendix D**).

After purging three volumes through the system, vapor samples were collected from the probes on September 17, 2020. During sampling, the purge pump was operated at 200 mL/minute, and the vacuum was monitored to ensure it was below 100 in. WC. Vacuum applied below this level helps ensure chemical partitioning from pore water to soil gas and the stress on the air seals are both minimized. The samples were containerized in Tedlar bags which were delivered to the laboratory for analysis. Fresh tubing was used on each sampling train between holes. The soil gas samples were tested for VOC using EPA Method 8260B by A&R Laboratories of Ontario, California.

3.1 Laboratory Results

Results from soil sampling indicated none of the samples selected for analysis had detectable concentrations of petroleum hydrocarbons. These results are summarized in **Table 1A**. The results from near surface soil sampling at 20795 Canada Road indicated low concentrations of DDE and chlordane were detected in one sample (S1-0.5), and low concentrations of arsenic and/or lead were detected in each sample (S1-S4). No mercury was detected in any of the soil samples. The detected concentrations were compared to the Regional Screening Levels (RSLs) for soil which are based on human health risk factors for residential and commercial settings and are commonly used as screening tools. Results indicated none of the concentrations exceeds current residential or commercial screening levels. These result are summarized in **Table 1B**. The laboratory report from soil sampling is included in **Appendix B**.

Results from soil gas sampling indicated one sample had detectable concentrations of chloroform, with 0.21 ug/L in SG2-10. No other VOC was detected in any of the samples. There is no known or suspected source of chloroform at the site. The detected concentrations were compared to the Regional Screening Levels (RSLs) for soil gas which are based on human health risk factors for residential and commercial settings and are commonly used as screening tools. The screening criteria uses defined indoor air concentrations based on human health risk factors that are modified using attenuation factors provided by EPA (0.03) and DTSC (0.001). DTSC policy on which attenuation factor to use is currently under review but our understanding is that the current accepted screening level for commercial applications for chloroform is 0.53 ug/L. The more stringent screening levels (if applied) would be 0.018 ug/L. Results indicated the detected concentration does not exceed the current commercial screening level (although it would exceed the proposed commercial level if applied). Nevertheless, a significant release in the vicinity of the UST area was not identified during this assessment. These results are summarized in **Table 2**. The laboratory report from soil gas sampling is included in **Appendix B**.

4.0 CONCLUSIONS AND RECOMMENDATIONS

The subject site is a mixed use residential-ranch property that includes three adjoining parcels. One of the parcels reportedly had a gasoline UST system, though no records were identified indicating a UST had ever been used at the Property and the results of a geophysical survey indicated only a small anomaly. Another smaller parcel reportedly had been used for pesticide

storage and application as part of a limited agricultural application. Based on these results a subsurface investigation was recommended. The Property is being considered for purchase and re-use as parking. Our understanding is that no future residential use is anticipated for the Property.

In September 2020, Hillmann installed 3 soil borings and soil gas sampling probes in the possible former UST and septic tank areas at 20865 Canada Road, and obtained near surface soil samples from the pesticide use and storage area at 20795 Canada Road. The results from soil sampling indicated no detectable concentrations of petroleum hydrocarbons. Results from soil gas sampling indicated low levels of chloroform, a chemical with no known or suspected use at the Property. The detected chloroform concentration does not exceed current commercial screening levels. The results from pesticide sampling indicated none of the samples had concentrations of OCP, arsenic, lead or mercury that exceed current residential or commercial screening levels.

Based on these results we recommend no further sampling at the site, although if the Property is continued for residential use, additional testing of soil gas may be warranted to ensure that the unexpected chloroform detection does not pose a significant human health threat.

5.0 LIMITATIONS

This Subsurface Investigation was performed in accordance with generally and currently accepted engineering practices and principles; however, the procedures and methodologies used in this investigation are not intended to meet all specific regulatory guidelines as this work was completed as a self-directed effort. Although the data in this report is indicative of subsurface conditions in areas investigated, no further conclusions regarding the absence or presence of subsurface contamination in other areas of the site should be construed or inferred other than those expressly stated in this report. The conclusions made are based on information obtained from field observations, independent laboratory analytical results, and from current and relevant Federal, State, regional, and local agencies.

TABLE 1A
Summary of Petroleum Hydrocarbons Soil Sampling Results (mg/Kg)

Sample ID	TPHg C4-C12	TPHd C13-C22	TPH-Oil C23-C40
Sampled September 15, 2020			
B1-5	ND<0.20	ND<10	ND<25
B1-10	ND<0.20	ND<10	ND<20
B2-5	ND<0.20	ND<10	ND<20
B2-10	ND<0.20	ND<10	ND<20
Residential RSL	***82***	***82***	***82***
Commercial RSL	***420***	***420***	***420***

Notes: ND - Not Detected. EPA Regional Screening Levels (RSLs) are human health risk based screening levels used by EPA and DTSC in residential and commercial settings. The RSL levels for total petroleum hydrocarbons are divided into six non-descript categories that depend on the relative speciation of aromatic and aliphatic hydrocarbons in the source contaminant. The most conservative screening level for petroleum hydrocarbons used. Please refer to lab report for complete results.

TABLE 1B
Summary of Pesticide Soil Sampling Results (mg/Kg)

Sample ID	Arsenic	Lead	Mercury	4,4 DDE	Chlordane	Other OCP
Sampled September 15, 2020						
S1-0.5	ND<1.0	4.73	ND<0.20	0.0092	0.016	ND
S2-0.5	2.11	5.98	ND<0.20	ND<0.01	ND<0.05	ND
S3-0.5	1.31	4.47	ND<0.20	ND<0.002	ND<0.01	ND
S4-0.5	ND<1.0	5.94	ND<0.20	ND<0.002	ND<0.01	ND
Residential RSL	***0.11***	***80****	***1****	***2***	***0.44****	
Commercial RSL	***0.36***	***320****	***4.5****	***9.3***	***1.5****	
DTSC Bkgrnd	***12***	***--***	***--***	***--***	***--***	***--***

Notes: ND - Not Detected. EPA Regional Screening Levels (RSLs) are human health risk based screening levels used by EPA and DTSC in residential and commercial settings. DTSC Background Concentration is based on statistical study of sites throughout southern California. This concentration may be used as a screening level for anthropogenic and naturally occurring levels of arsenic in soil in southern California. - Values modified by DTSC HERO Note 3. Please refer to lab report for complete results.*

TABLE 2
Summary of Soil Gas Sampling Results (ug/L)

Sample ID	Benzene	Toluene	Ethylbenzene	Xylenes	Chloroform	TCE	PCE	Other VOC
Sampled September 17, 2020								
SG1-10	ND<0.05	ND<0.05	ND<0.05	ND<0.10	ND<0.05	ND<0.05	ND<0.05	ND
SG2-10	ND<0.05	ND<0.05	ND<0.05	ND<0.10	0.21	ND<0.05	ND<0.05	ND
SG3-6	ND<0.05	ND<0.05	ND<0.05	ND<0.10	ND<0.05	ND<0.05	ND<0.05	ND
Commercial RSL AF=0.03	***0.014****	***43.3****	***0.163***	***14.67***	***0018***	***0.100***	***0.067****	**--**
Commercial RSL AF=0.001	***0.42****	***1,300****	***4.9***	***440***	***0.53***	***3.0***	***2.0****	**--**

*Notes: ND - Not Detected. EPA Regional Screening Levels (RSLs) are human health risk based screening levels used by EPA and DTSC to determine Health Risk in residential and commercial settings. *-Values modified for California by DTSC HERO Note 3. Screening levels for soil gas calculated using indoor air values and attenuation factor provided by EPA (0.03) and DTSC (0.001). Please refer to lab report for complete results.*

FIGURES

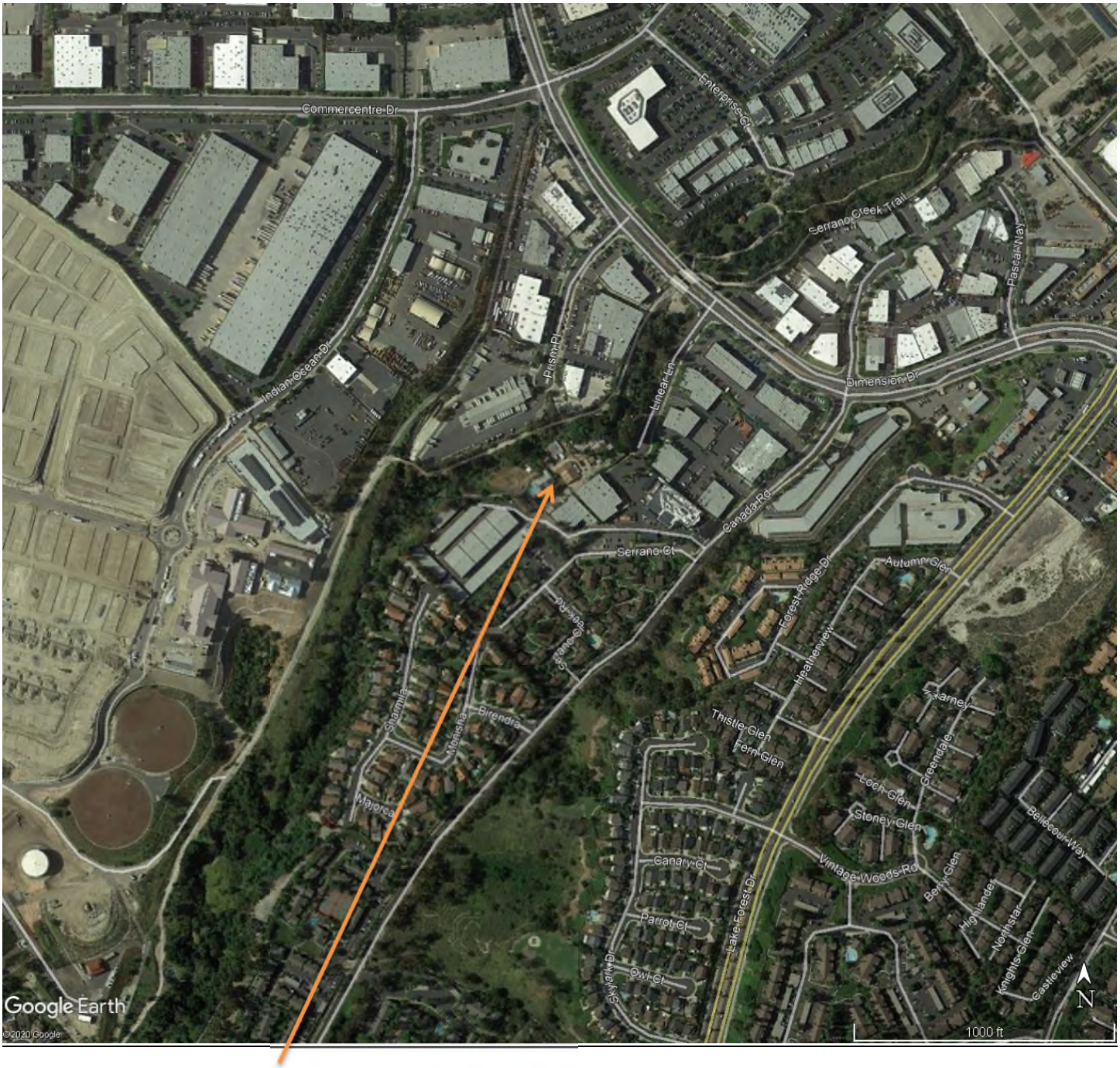


FIGURE 1

SITE VICINITY MAP
20795 and 20865 Canada Road
Lake Forest, California

HILLMANN
CONSULTING

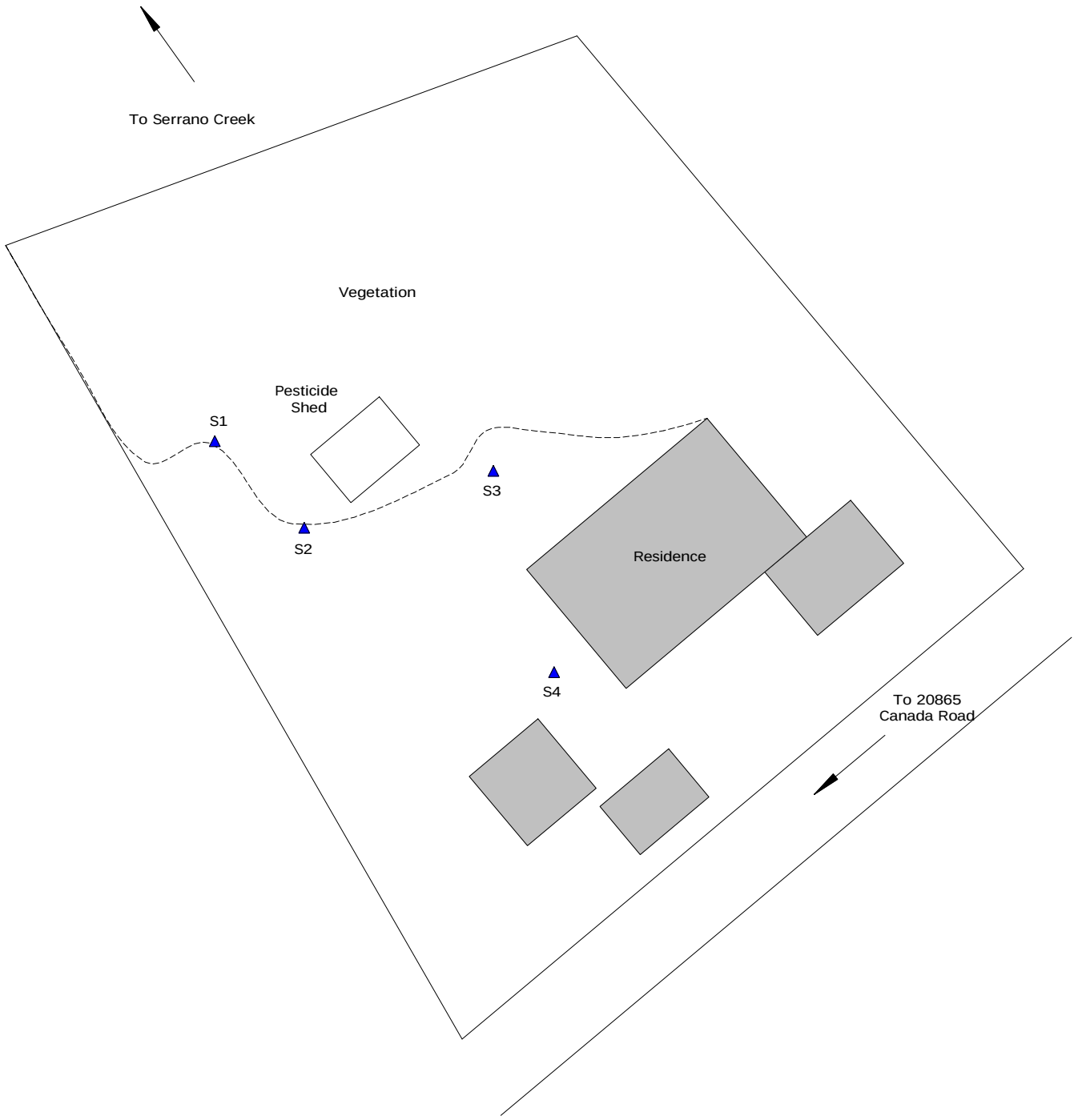
FIGURE 2A
GENERAL SITE PLAN
20865 Canada Road
Lake Forest, California

HILLMANN CONSULTING

N

APPROXIMATE SCALE IN FEET

0 30 60



LEGEND

▲ Soil Samples

FIGURE 2B
GENERAL SITE PLAN
20795 Canada Road
Lake Forest, California

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N

APPROXIMATE SCALE IN FEET

0 35 70

APPENDIX A
Site Photos

SG1

SG2

SG3

APPENDIX B
Laboratory Reports

A & R Laboratories, Inc.

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CASE NARRATIVE

Authorized Signature Name / Title (print)	Ken Zheng, President
Signature / Date	Ken Zheng, President 09/22/2020 11:27:59
Laboratory Job No. (Certificate of Analysis No.)	2009-00124
Project Name / No.	RESIDENTIAL-20795 & 20865 CANADA, LAKE FOREST
Dates Sampled (from/to)	09/15/20 To 09/15/20
Dates Received (from/to)	09/16/20 To 09/16/20
Dates Reported (from/to)	09/21/20 To 9/22/2020
Chains of Custody Received	Yes

Comments:

Subcontracting

Organic Analyses

No analyses sub-contracted

Inorganic Analyses

No analyses sub-contracted

Sample Condition(s)

All samples intact

Positive Results (Organic Compounds)

Sample	Analyte	Result	Qual	Units	RL	Sample	Analyte	Result	Qual	Units	RL
S1-0.5	4,4'-DDE	**0.0092**		mg/Kg	0.0020	S1-0.5	Chlordane	**0.016**		mg/Kg	0.010

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CERTIFICATE OF ANALYSIS

2009-00124

HILLMANN CONSULTING, LLC
DAN LOUKS
1745 W. ORANGEWOOD AVE.
SUITE# 110
ORANGE, CA 92868

Date Reported 09/21/20
Date Received 09/16/20
Invoice No. 89747
Cust # G073
Permit Number
Customer P.O.

Project: RESIDENTIAL-20795 & 20865 CANADA, LAKE FOREST

Analysis	Result	Qual	Units	Method	DF	RL	Date	Tech
Sample: 001 **B1-5**					Date & Time Sampled:		09/15/20 @	11:05
Sample Matrix: **Soil**								
[TPH Gasoline (C4-C12)]								
Closed System P&T TPHg Soil	Complete			EPA 5035	1.0		09/16/20	SR
C4-C12	<0.20		mg/Kg	LUFT GC/MS	1.0	0.20	09/16/20	SR
[Extractable Hydrocarbons]								
Extraction	Complete			EPA 3550B	1.0		09/20/20	JEN
C13-C22	<10		mg/Kg	EPA 8015M	1.0	10	09/21/20	JEN
C23-C40	<25		mg/Kg	EPA 8015M	1.0	25	09/21/20	JEN
[Surrogate]								
o-Terphenyl (OTP)	71		%REC	EPA 8015M		50-150	09/21/20	JEN
Sample: 002 **B1-10**					Date & Time Sampled:		09/15/20 @	11:15
Sample Matrix: **Soil**								
[TPH Gasoline (C4-C12)]								
Closed System P&T TPHg Soil	Complete			EPA 5035	1.0		09/16/20	SR
C4-C12	<0.20		mg/Kg	LUFT GC/MS	1.0	0.20	09/16/20	SR
[Extractable Hydrocarbons]								
Extraction	Complete			EPA 3550B	1.0		09/20/20	JEN
C13-C22	<10		mg/Kg	EPA 8015M	1.0	10	09/21/20	JEN
C23-C40	<20		mg/Kg	EPA 8015M	1.0	20	09/21/20	JEN
[Surrogate]								
o-Terphenyl (OTP)	67		%REC	EPA 8015M		50-150	09/21/20	JEN
Sample: 003 **B2-5**					Date & Time Sampled:		09/15/20 @	11:35
Sample Matrix: **Soil**								
[TPH Gasoline (C4-C12)]								
Closed System P&T TPHg Soil	Complete			EPA 5035	1.0		09/16/20	SR
C4-C12	<0.20		mg/Kg	LUFT GC/MS	1.0	0.20	09/16/20	SR
[Extractable Hydrocarbons]								
Extraction	Complete			EPA 3550B	1.0		09/20/20	JEN
C13-C22	<10		mg/Kg	EPA 8015M	1.0	10	09/21/20	JEN
C23-C40	<20		mg/Kg	EPA 8015M	1.0	20	09/21/20	JEN
[Surrogate]								
o-Terphenyl (OTP)	71		%REC	EPA 8015M		50-150	09/21/20	JEN

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DAN LOUKS
1745 W. ORANGEWOOD AVE.
SUITE# 110
ORANGE, CA 92868

Project: RESIDENTIAL-20795 & 20865 CANADA, LAKE FOREST

Date Reported	09/21/20
Date Received	09/16/20
Invoice No.	89747
Cust #	G073
Permit Number	
Customer P.O.	

Analysis	Result	Qual	Units	Method	DF	RL	Date	Tech
Sample: 004 **B2-10**					Date & Time Sampled:		09/15/20 @ 11:55	
Sample Matrix: **Soil**								
[TPH Gasoline (C4-C12)]								
Closed System P&T TPHg Soil	Complete			EPA 5035	1.0		09/16/20	SR
C4-C12	<0.20		mg/Kg	LUFT GC/MS	1.0	0.20	09/16/20	SR
[Extractable Hydrocarbons]								
Extraction	Complete			EPA 3550B	1.0		09/20/20	JEN
C13-C22	<10		mg/Kg	EPA 8015M	1.0	10	09/21/20	JEN
C23-C40	<20		mg/Kg	EPA 8015M	1.0	20	09/21/20	JEN
[Surrogate]								
o-Terphenyl (OTP)	71		%REC	EPA 8015M		50-150	09/21/20	JEN
Sample: 005 **S1-0.5**					Date & Time Sampled:		09/15/20 @ 13:00	
Sample Matrix: **Soil**								
[Metals]								
Metals Acid Digestion	Complete			EPA 3050B	1.0		09/18/20	TLB
Arsenic	<1.00		mg/Kg	EPA 6010B	1.0	1.00	09/18/20	TLB
Lead	**4.73**		mg/Kg	EPA 6010B	1.0	0.500	09/18/20	TLB
[Mercury]								
Mercury Digestion	Complete			EPA 7471A	1.0		09/16/20	KZ
Mercury	<0.20		mg/Kg	EPA 7471A	1.0	0.20	09/16/20	KZ
[Pesticides]								
Ultrasonic Extraction	Complete			EPA 3550	1.0		09/17/20	SR
Aldrin	<0.0020		mg/Kg	EPA 8081A	1.0	0.0020	09/17/20	SR
alpha-BHC	<0.0020		mg/Kg	EPA 8081A	1.0	0.0020	09/17/20	SR
beta-BHC	<0.0020		mg/Kg	EPA 8081A	1.0	0.0020	09/17/20	SR
delta-BHC	<0.0020		mg/Kg	EPA 8081A	1.0	0.0020	09/17/20	SR
gamma-BHC	<0.0020		mg/Kg	EPA 8081A	1.0	0.0020	09/17/20	SR
Chlordane	**0.016**		mg/Kg	EPA 8081A	1.0	0.010	09/17/20	SR
4,4'-DDD	<0.0020		mg/Kg	EPA 8081A	1.0	0.0020	09/17/20	SR
4,4'-DDE	**0.0092**		mg/Kg	EPA 8081A	1.0	0.0020	09/17/20	SR
4,4'-DDT	<0.0020		mg/Kg	EPA 8081A	1.0	0.0020	09/17/20	SR
Dieldrin	<0.0020		mg/Kg	EPA 8081A	1.0	0.0020	09/17/20	SR

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Date Reported	09/21/20
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Cust #	G073
Permit Number	
Customer P.O.	

Analysis	Result	Qual	Units	Method	DF	RL	Date	Tech
Sample: 005 **S1-0.5**					Date & Time Sampled:		09/15/20 @	13:00
Sample Matrix: **Soil**								
.....continued								
Endosulfan I	<0.00020		mg/Kg	EPA 8081A	1.0	0.0020	09/17/20	SR
Endosulfan II	<0.0020		mg/Kg	EPA 8081A	1.0	0.0020	09/17/20	SR
Endosulfan Sulfate	<0.0020		mg/Kg	EPA 8081A	1.0	0.0020	09/17/20	SR
Endrin	<0.0020		mg/Kg	EPA 8081A	1.0	0.0020	09/17/20	SR
Endrin Aldehyde	<0.0020		mg/Kg	EPA 8081A	1.0	0.0020	09/17/20	SR
Endrin ketone	<0.0020		mg/Kg	EPA 8081A	1.0	0.0020	09/17/20	SR
Heptachlor	<0.0020		mg/Kg	EPA 8081A	1.0	0.0020	09/17/20	SR
Heptachlor Epoxide	<0.0020		mg/Kg	EPA 8081A	1.0	0.0020	09/17/20	SR
Methoxychlor	<0.010		mg/Kg	EPA 8081A	1.0	0.010	09/17/20	SR
Toxaphene	<0.050		mg/Kg	EPA 8081A	1.0	0.050	09/17/20	SR
[Surrogates]								
Tetrachloro-m-xylene	104		%REC	EPA 8081A/8082		50-150	09/17/20	SR
Decachlorobiphenyl	100		%REC	EPA 8081A/8082		50-150	09/17/20	SR
Sample: 006 **S2-0.5**					Date & Time Sampled:		09/15/20 @	13:15
Sample Matrix: **Soil**								
[Metals]								
Metals Acid Digestion	Complete			EPA 3050B	1.0		09/18/20	TLB
Arsenic	**2.11**		mg/Kg	EPA 6010B	1.0	1.00	09/18/20	TLB
Lead	**5.98**		mg/Kg	EPA 6010B	1.0	0.500	09/18/20	TLB
[Mercury]								
Mercury Digestion	Complete			EPA 7471A	1.0		09/16/20	KZ
Mercury	<0.20		mg/Kg	EPA 7471A	1.0	0.20	09/16/20	KZ
[Pesticides]								
Ultrasonic Extraction	Complete			EPA 3550	1.0		09/17/20	SR
Aldrin	<0.010		mg/Kg	EPA 8081A	5.0	0.010	09/17/20	SR
alpha-BHC	<0.010		mg/Kg	EPA 8081A	5.0	0.010	09/17/20	SR
beta-BHC	<0.010		mg/Kg	EPA 8081A	5.0	0.010	09/17/20	SR
delta-BHC	<0.010		mg/Kg	EPA 8081A	5.0	0.010	09/17/20	SR
gamma-BHC	<0.010		mg/Kg	EPA 8081A	5.0	0.010	09/17/20	SR
Chlordane	<0.050		mg/Kg	EPA 8081A	5.0	0.050	09/17/20	SR

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Date Received	09/16/20
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Cust #	G073
Permit Number	
Customer P.O.	

Analysis	Result	Qual	Units	Method	DF	RL	Date	Tech
Sample: 006 **S2-0.5**					Date & Time Sampled:		09/15/20 @	13:15
Sample Matrix: **Soil**								
.....continued								
4,4'-DDD	<0.010		mg/Kg	EPA 8081A	5.0	0.010	09/17/20	SR
4,4'-DDE	<0.010		mg/Kg	EPA 8081A	5.0	0.010	09/17/20	SR
4,4'-DDT	<0.010		mg/Kg	EPA 8081A	5.0	0.010	09/17/20	SR
Dieldrin	<0.010		mg/Kg	EPA 8081A	5.0	0.010	09/17/20	SR
Endosulfan I	<0.010		mg/Kg	EPA 8081A	5.0	0.010	09/17/20	SR
Endosulfan II	<0.010		mg/Kg	EPA 8081A	5.0	0.010	09/17/20	SR
Endosulfan Sulfate	<0.010		mg/Kg	EPA 8081A	5.0	0.010	09/17/20	SR
Endrin	<0.010		mg/Kg	EPA 8081A	5.0	0.010	09/17/20	SR
Endrin Aldehyde	<0.010		mg/Kg	EPA 8081A	5.0	0.010	09/17/20	SR
Endrin ketone	<0.010		mg/Kg	EPA 8081A	5.0	0.010	09/17/20	SR
Heptachlor	<0.010		mg/Kg	EPA 8081A	5.0	0.010	09/17/20	SR
Heptachlor Epoxide	<0.010		mg/Kg	EPA 8081A	5.0	0.010	09/17/20	SR
Methoxychlor	<0.050		mg/Kg	EPA 8081A	5.0	0.050	09/17/20	SR
Toxaphene	<0.25		mg/Kg	EPA 8081A	5.0	0.25	09/17/20	SR
[Surrogates]								
Tetrachloro-m-xylene		D	%REC	EPA 8081A/8082		50-150	09/17/20	SR
Decachlorobiphenyl		D	%REC	EPA 8081A/8082		50-150	09/17/20	SR
Sample: 007 **S3-0.5**					Date & Time Sampled:		09/15/20 @	13:30
Sample Matrix: **Soil**								
[Metals]								
Metals Acid Digestion	Complete			EPA 3050B	1.0		09/18/20	TLB
Arsenic	**1.31**		mg/Kg	EPA 6010B	1.0	1.00	09/18/20	TLB
Lead	**4.47**		mg/Kg	EPA 6010B	1.0	0.500	09/18/20	TLB
[Mercury]								
Mercury Digestion	Complete			EPA 7471A	1.0		09/16/20	KZ
Mercury	<0.20		mg/Kg	EPA 7471A	1.0	0.20	09/16/20	KZ
[Pesticides]								
Ultrasonic Extraction	Complete			EPA 3550	1.0		09/17/20	SR
Aldrin	<0.0020		mg/Kg	EPA 8081A	1.0	0.0020	09/17/20	SR
alpha-BHC	<0.0020		mg/Kg	EPA 8081A	1.0	0.0020	09/17/20	SR

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Date Reported	09/21/20
Date Received	09/16/20
Invoice No.	89747
Cust #	G073
Permit Number	
Customer P.O.	

Analysis	Result	Qual	Units	Method	DF	RL	Date	Tech
Sample: 007 **S3-0.5**					Date & Time Sampled:		09/15/20 @	13:30
Sample Matrix: **Soil**								
.....continued								
beta-BHC	<0.0020		mg/Kg	EPA 8081A	1.0	0.0020	09/17/20	SR
delta-BHC	<0.0020		mg/Kg	EPA 8081A	1.0	0.0020	09/17/20	SR
gamma-BHC	<0.0020		mg/Kg	EPA 8081A	1.0	0.0020	09/17/20	SR
Chlordane	<0.010		mg/Kg	EPA 8081A	1.0	0.010	09/17/20	SR
4,4'-DDD	<0.0020		mg/Kg	EPA 8081A	1.0	0.0020	09/17/20	SR
4,4'-DDE	<0.0020		mg/Kg	EPA 8081A	1.0	0.0020	09/17/20	SR
4,4'-DDT	<0.0020		mg/Kg	EPA 8081A	1.0	0.0020	09/17/20	SR
Dieldrin	<0.0020		mg/Kg	EPA 8081A	1.0	0.0020	09/17/20	SR
Endosulfan I	<0.00020		mg/Kg	EPA 8081A	1.0	0.0020	09/17/20	SR
Endosulfan II	<0.0020		mg/Kg	EPA 8081A	1.0	0.0020	09/17/20	SR
Endosulfan Sulfate	<0.0020		mg/Kg	EPA 8081A	1.0	0.0020	09/17/20	SR
Endrin	<0.0020		mg/Kg	EPA 8081A	1.0	0.0020	09/17/20	SR
Endrin Aldehyde	<0.0020		mg/Kg	EPA 8081A	1.0	0.0020	09/17/20	SR
Endrin ketone	<0.0020		mg/Kg	EPA 8081A	1.0	0.0020	09/17/20	SR
Heptachlor	<0.0020		mg/Kg	EPA 8081A	1.0	0.0020	09/17/20	SR
Heptachlor Epoxide	<0.0020		mg/Kg	EPA 8081A	1.0	0.0020	09/17/20	SR
Methoxychlor	<0.010		mg/Kg	EPA 8081A	1.0	0.010	09/17/20	SR
Toxaphene	<0.050		mg/Kg	EPA 8081A	1.0	0.050	09/17/20	SR
[Surrogates]								
Tetrachloro-m-xylene	98		%REC	EPA 8081A/8082		50-150	09/17/20	SR
Decachlorobiphenyl	93		%REC	EPA 8081A/8082		50-150	09/17/20	SR
Sample: 008 **S4-0.5**					Date & Time Sampled:		09/15/20 @	13:45
Sample Matrix: **Soil**								
[Metals]								
Metals Acid Digestion	Complete			EPA 3050B	1.0		09/18/20	TLB
Arsenic	<1.00		mg/Kg	EPA 6010B	1.0	1.00	09/18/20	TLB
Lead	**5.94**		mg/Kg	EPA 6010B	1.0	0.500	09/18/20	TLB
[Mercury]								
Mercury Digestion	Complete			EPA 7471A	1.0		09/16/20	KZ
Mercury	<0.20		mg/Kg	EPA 7471A	1.0	0.20	09/16/20	KZ

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951-779-0310 FAX 951-779-0344
www.arlaboratories.com office@arlaboratories.com

FDA#	2030513
LA City#	10261
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CERTIFICATE OF ANALYSIS

2009-00124

HILLMANN CONSULTING, LLC
DAN LOUKS
1745 W. ORANGEWOOD AVE.
SUITE# 110
ORANGE, CA 92868

Date Reported	09/21/20
Date Received	09/16/20
Invoice No.	89747
Cust #	G073
Permit Number	
Customer P.O.	

Project: RESIDENTIAL-20795 & 20865 CANADA, LAKE FOREST

Sample: 008 **S4-0.5** Date & Time Sampled: 09/15/20 @ 13:45
Sample Matrix: **Soil**
.....continued

Analysis	Result	Qual	Units	Method	DF	RL	Date	Tech
[Pesticides]								
Ultrasonic Extraction	Complete			EPA 3550	1.0		09/17/20	SR
Aldrin	<0.0020		mg/Kg	EPA 8081A	1.0	0.0020	09/17/20	SR
alpha-BHC	<0.0020		mg/Kg	EPA 8081A	1.0	0.0020	09/17/20	SR
beta-BHC	<0.0020		mg/Kg	EPA 8081A	1.0	0.0020	09/17/20	SR
delta-BHC	<0.0020		mg/Kg	EPA 8081A	1.0	0.0020	09/17/20	SR
gamma-BHC	<0.0020		mg/Kg	EPA 8081A	1.0	0.0020	09/17/20	SR
Chlordane	<0.010		mg/Kg	EPA 8081A	1.0	0.010	09/17/20	SR
4,4'-DDD	<0.0020		mg/Kg	EPA 8081A	1.0	0.0020	09/17/20	SR
4,4'-DDE	<0.0020		mg/Kg	EPA 8081A	1.0	0.0020	09/17/20	SR
4,4'-DDT	<0.0020		mg/Kg	EPA 8081A	1.0	0.0020	09/17/20	SR
Dieldrin	<0.0020		mg/Kg	EPA 8081A	1.0	0.0020	09/17/20	SR
Endosulfan I	<0.00020		mg/Kg	EPA 8081A	1.0	0.0020	09/17/20	SR
Endosulfan II	<0.0020		mg/Kg	EPA 8081A	1.0	0.0020	09/17/20	SR
Endosulfan Sulfate	<0.0020		mg/Kg	EPA 8081A	1.0	0.0020	09/17/20	SR
Endrin	<0.0020		mg/Kg	EPA 8081A	1.0	0.0020	09/17/20	SR
Endrin Aldehyde	<0.0020		mg/Kg	EPA 8081A	1.0	0.0020	09/17/20	SR
Endrin ketone	<0.0020		mg/Kg	EPA 8081A	1.0	0.0020	09/17/20	SR
Heptachlor	<0.0020		mg/Kg	EPA 8081A	1.0	0.0020	09/17/20	SR
Heptachlor Epoxide	<0.0020		mg/Kg	EPA 8081A	1.0	0.0020	09/17/20	SR
Methoxychlor	<0.010		mg/Kg	EPA 8081A	1.0	0.010	09/17/20	SR
Toxaphene	<0.050		mg/Kg	EPA 8081A	1.0	0.050	09/17/20	SR
[Surrogates]								
Tetrachloro-m-xylene	97		%REC	EPA 8081A/8082		50-150	09/17/20	SR
Decachlorobiphenyl	97		%REC	EPA 8081A/8082		50-150	09/17/20	SR

Respectfully Submitted: Ken Zheng

Ken Zheng - Lab Director

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QUALIFIERS

B = Detected in the associated Method Blank at a concentration above the routine RL.
B1 = BOD dilution water is over specifications . The reported result may be biased high.
D = Surrogate recoveries are not calculated due to sample dilution.
E = Estimated value; Value exceeds calibration level of instrument.
H = Analyte was prepared and/or analyzed outside of the analytical method holding time
I = Matrix Interference.
J = Analyte concentration detected between RL and MDL.
Q = One or more quality control criteria did not meet specifications. See Comments for further explanation.
S = Customer provided specification limit exceeded.

ABBREVIATIONS

DF = Dilution Factor
RL = Reporting Limit, Adjusted by DF
MDL = Method Detection Limit, Adjusted by DF
Qual = Qualifier
Tech = Technician

As regulatory limits change frequently, A & R Laboratories advises the recipient of this report to confirm such limits with the appropriate federal, state, or local authorities before acting in reliance on the regulatory limits provided.

For any feedback concerning our services, please contact Jenny Jiang, Project Manager at 951.779.0310. You may also contact Ken Zheng, President at office@arlaboratories.com.

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QUALITY CONTROL DATA REPORT

HILLMANN CONSULTING, LLC
ORANGE, CA 92868

2009-00124

Date Reported	**09/21/2020**
Date Received	**09/16/2020**
Date Sampled	**09/15/2020**
Invoice No.	**89747**
Customer #	**G073**
Customer P.O.	

Project: RESIDENTIAL-20795 & 20865 CANADA, LAKE FOREST

Method # EPA 6010B
QC Reference # 91555 **Date Analyzed:** 9/18/2020 **Technician:** TLB
Samples 005 006 007 008

Results

	LCS %REC	LCS %DUP	LCS %RPD	SPIKE %REC	SPIKE %DUP	SPIKE %RPD
Arsenic	101	101	0.6	87	88	2.1
Lead	99	101	1.8	79	79	0.2

Control Ranges

LCS %REC	LCS %RPD	SPIKE %RPD
75 - 125	0 - 20	0 - 20
75 - 125	0 - 20	0 - 20

Method # EPA 7471A
QC Reference # 91523 **Date Analyzed:** 9/16/2020 **Technician:** KZ
Samples 005 006 007 008

Results

	LCS %REC	LCS %DUP	LCS %RPD	SPIKE %REC	SPIKE %DUP	SPIKE %RPD
Mercury	85	88	3	82	79	3

Control Ranges

LCS %REC	LCS %RPD	SPIKE %RPD
75 - 125	0 - 25	0 - 25

Method # EPA 8015M
QC Reference # 91593 **Date Analyzed:** 9/21/2020 **Technician:** JEN
Samples 001 002 003 004

Results

	LCS %REC	SPIKE %REC	SPIKE %DUP	SPIKE %RPD
C13-C22	93	86	89	3

Control Ranges

LCS %REC	SPIKE %RPD
70 - 130	0 - 25

Method # EPA 8081A
QC Reference # 91576 **Date Analyzed:** 9/17/2020 **Technician:** SR
Samples 005 006 007 008

Results

	LCS %REC	LCS %DUP	LCS %RPD
4,4'-DDT	90	84	6
Aldrin	81	75	6
Dieldrin	106	104	2
Endrin	80	80	0
gamma-BHC	97	97	0
Heptachlor	98	75	23

Control Ranges

LCS %REC	LCS %RPD
50 - 130	0 - 30
50 - 140	0 - 30
70 - 130	0 - 30
70 - 150	0 - 30
50 - 150	0 - 30
50 - 150	0 - 30

Method # EPA 8081A/8082
QC Reference # 91576 **Date Analyzed:** 9/17/2020 **Technician:** SR
Samples 005 006 007 008

No QC recoveries reported.

Method # LUFT GC/MS
QC Reference # 91524 **Date Analyzed:** 9/16/2020 **Technician:** SR

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QUALITY CONTROL DATA REPORT

2009-00124

HILLMANN CONSULTING, LLC

Date Reported 09/21/2020
Date Received 09/16/2020
Date Sampled 09/15/2020

Project: RESIDENTIAL-20795 & 20865 CANADA, LAKE FOREST

Method # LUFT GC/MS
QC Reference # 91524 **Date Analyzed:** 9/16/2020 **Technician:** SR
Samples 001 002 003 004

Results	LCS %REC	LCS %DUP	LCS %RPD	Control Ranges LCS %REC	Control Ranges LCS %RPD
C4-C12	109	108	1	70 - 130	0 - 25

No method blank results were above reporting limit

Respectfully Submitted: Ken Zheng

Ken Zheng - President

For any feedback concerning our services, please contact Jenny Jiang, Project Manager at 951.779.0310. You may also contact Ken Zheng, President at office@arlaboratories.com.

ARL

A & R Laboratories
1650 S. Grove Ave., Ste C, Ontario, CA 91761
Tel: 951-779-0310 / 909-781-6335 Fax: 951-779-0344
E-mail: office@arlaboratories.com

CHAIN OF CUSTODY

A & R Work Order #: 2009-00124

Page 1 of 1

Client Name: HILLMANN CONSULTING
E-mail:
Address: 1745 W. ORANGEWOOD AVE., ANAHEIM, ORANGE
Report Attention: DAN LOSKY
Phone #: (714)206-3916
Fax: #
Sampled By: DAN LOSKY

☒ Chilled ☐ Intact ☐ Seal

Project No./ Name: RESIDENTIAL
Project Site: 20795 & 20865 CANADA, LAKE FOREST

Turn Around Time Requested: ☐ Rush 8 12 24 48 Hours ☒ Normal

Lab # (Lab use)	Client Sample ID	Sample Collection Date	Sample Collection Time	Matrix Type	Sample Preserve	No., type* & size of container	EPA8260B (VOCs & Oxygenates)	EPA8260B(BTEX & Oxygenates)	LUFT / 8015 (Gasoline)	LUFT / 8015 (Diesel)	EPA8081A (Organochlorine Pesticides)	EPA 8082 (PCBs)	EPA 8015M (Carbon Chain C4-C40)	EPA 6010B/7000 (CAM 17 Metals)	Micro: Plate Cnt., Coliform, E-Coli	As, lead, Hg	Remarks
1	B1-5	9/15/20	10:05	SOIL	ICE	GLASS							X				20865
2	B1-10		11:15										X				CANADA
3	B2-5		11:35										X				
4	B2-10		11:55										X				
5	B3-6		12:30														
5	S1-0.5		13:00								X					X	20795
6	S2-0.5		13:15								X					X	CANADA
7	S3-0.5		13:30								X					X	
8	S4-0.5		13:45								X					X	

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
	HILLMANN	9/16/20	12:30		AR	9-16-20	1230
	AR	9/16/20	15:00		AR	9-16-20	1500

Note: Samples are discarded 30 days after results are reported unless other arrangements are made.

Matrix Code: DW=Drinking Water; GW=Ground Water; WW=Waste Water; SD=Solid Waste; SL=Sludge; SS=Soil/Sediment; AR=Air; PP=Pure Product

Preservative Code: IC=Ice; HC=HCl; HN=HNO_3; SH=NaOH; ST=$Na_2S_2O_3$; HS=H_2SO_4

* Sample Container Types: T=Tedlar Air Bag; G=Glass Container; ST= Steel Tube; B= Brass Tube; P=Plastic Bottle; V=VOA Vial; E= EnCore

Sample Acceptance Checklist

CLIENT: Hillmann WORK ORDER NUMBER: 2009-001324

Temperature:(Criteria:0.0°C-6.0°C)

Sample Temp.(w/CF) °C(w/CF) 5.1

☐ Sample(s) outside temprature criteria: PM contacted by :

☐ Sample(s) outside temprature criteria, but received on ice/chilled on same day of sampling.

☐ Sample(s) received at ambient temprature; placed on ice for transport by courier.

Ambient Temprature | Air | ☐ | Filter

CUSTODY SEAL:

Cooler	☐	Present and Intact	☐	Present and Not Intact	X	Not Present
Sample(s)	☐	Present and Intact	☐	Present and Not Intact	X	Not Present

Sample Condition:	Yes	No	N/A
Was a COC received	X		
Were sample IDs present?	X		
Were sampling dates & times present?	X		
Was a relingquished signature present?	X		
Were the tests required clearly indicated?	X		
Were all samples sealed in plastic bags?		X	
Did all bottle labels agree with COC? (ID, dates and times)	X		
Were correct containers used for the tests required?	X		
Was a sufficient amount of samples sent for tests indicated?	X		
Was there headspace in VOA vials?			X
Were the containers labeled with correct preservatives?			X

Explanations/Comments:

Notification:

For discrepancies, how was the Project Manager notified? Verbal

Verbal: PM Initials: _____ Data/Time: _____

Email: Send to: _____ Data/Time: _____

Project Manager's response:

Completed By: J. Jones Date: 9-16-2020

A R Laboratories
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PH: 951-779-0310 Fax: 951-779-0344
Email: office@arlaboratories.com

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CASE NARRATIVE

Authorized Signature Name / Title (print)	Ken Zheng, President
Signature / Date	Ken Zheng Ken ZHeng, President 09/21/2020 10:33:10
Laboratory Job No. (Certificate of Analysis No.)	2009-00134
Project Name / No.	RESIDENTIAL-20865 CANADA RD, LAKE FOREST
Dates Sampled (from/to)	09/17/20 To 09/17/20
Dates Received (from/to)	09/17/20 To 09/17/20
Dates Reported (from/to)	09/18/20 To 9/21/2020
Chains of Custody Received	Yes

Comments:

Subcontracting

Organic Analyses

No analyses sub-contracted

Sample Condition(s)

All samples intact

Positive Results (Organic Compounds)

Sample	Analyte	Result	Qual	Units	RL	Result	Qual	Units	RL
SG2-10	Chloroform	**0.21**		µg/L	0.10				

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CERTIFICATE OF ANALYSIS

2009-00134

GSA ENGINEERING
DAN LOUKS
16950 AVENIDA DE SANTA YNEZ
PACIFIC PALISADES, CA 90272

Date Reported	09/18/20
Date Received	09/17/20
Invoice No.	89726
Cust #	G073
Permit Number	
Customer P.O.	

Project: RESIDENTIAL-20865 CANADA RD, LAKE FOREST

Sample: 001 **SG1-10** Date & Time Sampled: 09/17/20 @ 11:50
Sample Matrix: **Soil Vapor**

Analysis	Result	Qual	Units	Method	DF	MDL	RL	Date	Time	Tech
[TPH Gasoline by GCMS]										
C4-C12	<5		µg/L	LUFT GCMS	1.0	5.0000	10	09/17/20	3:43	SR
[VOCs by GCMS]										
Acetone	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	09/17/20	3:43	SR
t-Amyl Methyl Ether (TAME)	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR
Benzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR
Bromobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR
Bromochloromethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR
Bromodichloromethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR
Bromoform	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR
Bromomethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR
t-Butanol (TBA)	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	09/17/20	3:43	SR
2-Butanone (MEK)	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	09/17/20	3:43	SR
n-Butylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR
sec-Butylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR
tert-Butylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR
Carbon Disulfide	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	09/17/20	3:43	SR
Carbon Tetrachloride	<0.025		µg/L	EPA 8260B	1.0	0.0250	0.050	09/17/20	3:43	SR
Chlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR
Chloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR
Chloroform	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR
Chloromethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR
2-Chlorotoluene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR
4-Chlorotoluene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR
Dibromochloromethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR
1,2-Dibromoethane (EDB)	<0.020		µg/L	EPA 8260B	1.0	0.0200	0.10	09/17/20	3:43	SR
1,2-Dibromo-3-Chloropropane	<0.020		µg/L	EPA 8260B	1.0	0.0200	0.10	09/17/20	3:43	SR
Dibromomethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR
1,2-Dichlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR
1,3-Dichlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR
1,4-Dichlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR
Dichlorodifluoromethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR

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FDA#	2030513
LA City#	10261
ELAP#'s	2789
	2790
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CERTIFICATE OF ANALYSIS

2009-00134

GSA ENGINEERING
DAN LOUKS
16950 AVENIDA DE SANTA YNEZ
PACIFIC PALISADES, CA 90272

Date Reported	09/18/20
Date Received	09/17/20
Invoice No.	89726
Cust #	G073
Permit Number	
Customer P.O.	

Project: RESIDENTIAL-20865 CANADA RD, LAKE FOREST

Sample: 001 **SG1-10** Date & Time Sampled: 09/17/20 @ 11:50
Sample Matrix: **Soil Vapor**
.....continued

Analysis	Result	Qual	Units	Method	DF	MDL	RL	Date	Time	Tech
1,1-Dichloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR
1,2-Dichloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR
1,1-Dichloroethene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR
cis-1,2-Dichloroethene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR
trans-1,2-Dichloroethene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR
1,2-Dichloropropane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR
1,3-Dichloropropane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR
2,2-Dichloropropane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR
1,1-Dichloropropene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR
cis-1,3-Dichloropropene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR
trans-1,3-Dichloropropene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR
Diisopropyl Ether (DiPE)	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR
Ethylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR
Ethyl-t-Butyl Ether (EtBE)	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR
Hexachlorobutadiene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR
2-Hexanone	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	09/17/20	3:43	SR
Isopropylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR
4-Isopropyltoluene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR
Methylene Chloride	<0.05		µg/L	EPA 8260B	1.0	0.0500	0.1	09/17/20	3:43	SR
4-Methyl-2-Pentanone (MIBK)	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	09/17/20	3:43	SR
Methyl-t-butyl Ether (MtBE)	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR
Naphthalene	<0.032		µg/L	EPA 8260B	1.0	0.0320	0.050	09/17/20	3:43	SR
n-Propylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR
Styrene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR
1,1,1,2-Tetrachloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR
1,1,2,2-Tetrachloroethane	<0.05		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR
Tetrachloroethene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR
Toluene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR
1,2,3-Trichlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR
1,2,4-Trichlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR
1,1,1-Trichloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR

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Date Reported	09/18/20
Date Received	09/17/20
Invoice No.	89726
Cust #	G073
Permit Number	
Customer P.O.	

Project: RESIDENTIAL-20865 CANADA RD, LAKE FOREST

Analysis	Result	Qual	Units	Method	DF	MDL	RL	Date	Time	Tech
Sample: 001 **SG1-10** Sample Matrix: **Soil Vapor**						Date & Time Sampled:		09/17/20	@	11:50
.....continued										
1,1,2-Trichloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR
Trichloroethene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR
1,2,3-Trichloropropane	<0.020		µg/L	EPA 8260B	1.0	0.0200	0.10	09/17/20	3:43	SR
Trichlorofluoromethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR
Trichlorotrifluoroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR
1,2,4-Trimethylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR
1,3,5-Trimethylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR
Vinyl Chloride	<0.008		µg/L	EPA 8260B	1.0	0.0080	0.050	09/17/20	3:43	SR
m,p-Xylenes	<0.10		µg/L	EPA 8260B	1.0	0.1000	0.20	09/17/20	3:43	SR
o-Xylene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	3:43	SR
[VOC Vapor Sampling Tracer]										
Isopropanol (IPA)	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	09/17/20	3:43	SR
[VOC Surrogates]										
Dibromofluoromethane	100		%REC	EPA 8260B			70-130	09/17/20	3:43	SR
Toluene-D8	99		%REC	EPA 8260B			70-130	09/17/20	3:43	SR
Bromofluorobenzene	96		%REC	EPA 8260B			70-130	09/17/20	3:43	SR
Sample: 002 **SG2-10** Sample Matrix: **Soil Vapor**						Date & Time Sampled:		09/17/20	@	11:40
[TPH Gasoline by GCMS]										
C4-C12	<5		µg/L	LUFT GCMS	1.0	5.0000	10	09/17/20	4:08	SR
[VOCs by GCMS]										
Acetone	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	09/17/20	4:08	SR
t-Amyl Methyl Ether (TAME)	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR
Benzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR
Bromobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR
Bromochloromethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR
Bromodichloromethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR
Bromoform	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR
Bromomethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR
t-Butanol (TBA)	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	09/17/20	4:08	SR

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PACIFIC PALISADES, CA 90272

Date Reported	09/18/20
Date Received	09/17/20
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Cust #	G073
Permit Number	
Customer P.O.	

Project: RESIDENTIAL-20865 CANADA RD, LAKE FOREST

Sample: 002 **SG2-10** Date & Time Sampled: 09/17/20 @ 11:40
Sample Matrix: **Soil Vapor**
.....continued

Analysis	Result	Qual	Units	Method	DF	MDL	RL	Date	Time	Tech
2-Butanone (MEK)	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	09/17/20	4:08	SR
n-Butylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR
sec-Butylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR
tert-Butylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR
Carbon Disulfide	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	09/17/20	4:08	SR
Carbon Tetrachloride	<0.025		µg/L	EPA 8260B	1.0	0.0250	0.050	09/17/20	4:08	SR
Chlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR
Chloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR
Chloroform	**0.21**		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR
Chloromethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR
2-Chlorotoluene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR
4-Chlorotoluene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR
Dibromochloromethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR
1,2-Dibromoethane (EDB)	<0.020		µg/L	EPA 8260B	1.0	0.0200	0.10	09/17/20	4:08	SR
1,2-Dibromo-3-Chloropropane	<0.020		µg/L	EPA 8260B	1.0	0.0200	0.10	09/17/20	4:08	SR
Dibromomethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR
1,2-Dichlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR
1,3-Dichlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR
1,4-Dichlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR
Dichlorodifluoromethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR
1,1-Dichloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR
1,2-Dichloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR
1,1-Dichloroethene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR
cis-1,2-Dichloroethene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR
trans-1,2-Dichloroethene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR
1,2-Dichloropropane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR
1,3-Dichloropropane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR
2,2-Dichloropropane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR
1,1-Dichloropropene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR
cis-1,3-Dichloropropene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR
trans-1,3-Dichloropropene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR

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CERTIFICATE OF ANALYSIS

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Date Reported	09/18/20
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Cust #	G073
Permit Number	
Customer P.O.	

Project: RESIDENTIAL-20865 CANADA RD, LAKE FOREST

Sample: 002 **SG2-10** Date & Time Sampled: 09/17/20 @ 11:40
Sample Matrix: **Soil Vapor**
.....continued

Analysis	Result	Qual	Units	Method	DF	MDL	RL	Date	Time	Tech
Diisopropyl Ether (DiPE)	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR
Ethylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR
Ethyl-t-Butyl Ether (EtBE)	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR
Hexachlorobutadiene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR
2-Hexanone	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	09/17/20	4:08	SR
Isopropylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR
4-Isopropyltoluene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR
Methylene Chloride	<0.05		µg/L	EPA 8260B	1.0	0.0500	0.1	09/17/20	4:08	SR
4-Methyl-2-Pentanone (MIBK)	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	09/17/20	4:08	SR
Methyl-t-butyl Ether (MtBE)	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR
Naphthalene	<0.032		µg/L	EPA 8260B	1.0	0.0320	0.050	09/17/20	4:08	SR
n-Propylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR
Styrene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR
1,1,1,2-Tetrachloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR
1,1,2,2-Tetrachloroethane	<0.05		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR
Tetrachloroethene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR
Toluene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR
1,2,3-Trichlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR
1,2,4-Trichlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR
1,1,1-Trichloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR
1,1,2-Trichloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR
Trichloroethene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR
1,2,3-Trichloropropane	<0.020		µg/L	EPA 8260B	1.0	0.0200	0.10	09/17/20	4:08	SR
Trichlorofluoromethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR
Trichlorotrifluoroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR
1,2,4-Trimethylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR
1,3,5-Trimethylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR
Vinyl Chloride	<0.008		µg/L	EPA 8260B	1.0	0.0080	0.050	09/17/20	4:08	SR
m,p-Xylenes	<0.10		µg/L	EPA 8260B	1.0	0.1000	0.20	09/17/20	4:08	SR
o-Xylene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:08	SR
[VOC Vapor Sampling Tracer]										

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Project: RESIDENTIAL-20865 CANADA RD, LAKE FOREST

Analysis	Result	Qual	Units	Method	DF	MDL	RL	Date	Time	Tech
Sample: 002 **SG2-10**						Date & Time Sampled:		09/17/20	@	11:40
Sample Matrix: **Soil Vapor**										
.....continued										
Isopropanol (IPA)	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	09/17/20	4:08	SR
[VOC Surrogates]										
Dibromofluoromethane	102		%REC	EPA 8260B			70-130	09/17/20	4:08	SR
Toluene-D8	99		%REC	EPA 8260B			70-130	09/17/20	4:08	SR
Bromofluorobenzene	95		%REC	EPA 8260B			70-130	09/17/20	4:08	SR
Sample: 003 **SG3-6**						Date & Time Sampled:		09/17/20	@	11:30
Sample Matrix: **Soil Vapor**										
[TPH Gasoline by GCMS]										
C4-C12	<5		µg/L	LUFT GCMS	1.0	5.0000	10	09/17/20	4:32	SR
[VOCs by GCMS]										
Acetone	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	09/17/20	4:32	SR
t-Amyl Methyl Ether (TAME)	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR
Benzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR
Bromobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR
Bromochloromethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR
Bromodichloromethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR
Bromoform	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR
Bromomethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR
t-Butanol (TBA)	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	09/17/20	4:32	SR
2-Butanone (MEK)	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	09/17/20	4:32	SR
n-Butylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR
sec-Butylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR
tert-Butylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR
Carbon Disulfide	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	09/17/20	4:32	SR
Carbon Tetrachloride	<0.025		µg/L	EPA 8260B	1.0	0.0250	0.050	09/17/20	4:32	SR
Chlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR
Chloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR
Chloroform	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR
Chloromethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR
2-Chlorotoluene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR

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CERTIFICATE OF ANALYSIS

2009-00134

GSA ENGINEERING
DAN LOUKS
16950 AVENIDA DE SANTA YNEZ
PACIFIC PALISADES, CA 90272

Date Reported	09/18/20
Date Received	09/17/20
Invoice No.	89726
Cust #	G073
Permit Number	
Customer P.O.	

Project: RESIDENTIAL-20865 CANADA RD, LAKE FOREST

Sample: 003 **SG3-6** Date & Time Sampled: 09/17/20 @ 11:30
Sample Matrix: **Soil Vapor**
.....continued

Analysis	Result	Qual	Units	Method	DF	MDL	RL	Date	Time	Tech
4-Chlorotoluene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR
Dibromochloromethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR
1,2-Dibromoethane (EDB)	<0.020		µg/L	EPA 8260B	1.0	0.0200	0.10	09/17/20	4:32	SR
1,2-Dibromo-3-Chloropropane	<0.020		µg/L	EPA 8260B	1.0	0.0200	0.10	09/17/20	4:32	SR
Dibromomethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR
1,2-Dichlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR
1,3-Dichlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR
1,4-Dichlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR
Dichlorodifluoromethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR
1,1-Dichloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR
1,2-Dichloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR
1,1-Dichloroethene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR
cis-1,2-Dichloroethene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR
trans-1,2-Dichloroethene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR
1,2-Dichloropropane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR
1,3-Dichloropropane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR
2,2-Dichloropropane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR
1,1-Dichloropropene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR
cis-1,3-Dichloropropene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR
trans-1,3-Dichloropropene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR
Diisopropyl Ether (DiPE)	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR
Ethylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR
Ethyl-t-Butyl Ether (EtBE)	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR
Hexachlorobutadiene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR
2-Hexanone	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	09/17/20	4:32	SR
Isopropylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR
4-Isopropyltoluene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR
Methylene Chloride	<0.05		µg/L	EPA 8260B	1.0	0.0500	0.1	09/17/20	4:32	SR
4-Methyl-2-Pentanone (MIBK)	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	09/17/20	4:32	SR
Methyl-t-butyl Ether (MtBE)	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR
Naphthalene	<0.032		µg/L	EPA 8260B	1.0	0.0320	0.050	09/17/20	4:32	SR

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CERTIFICATE OF ANALYSIS

2009-00134

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DAN LOUKS
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PACIFIC PALISADES, CA 90272

Date Reported	09/18/20
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Project: RESIDENTIAL-20865 CANADA RD, LAKE FOREST

Sample: 003 **SG3-6** Date & Time Sampled: 09/17/20 @ 11:30
Sample Matrix: **Soil Vapor**
.....continued

Analysis	Result	Qual	Units	Method	DF	MDL	RL	Date	Time	Tech
n-Propylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR
Styrene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR
1,1,1,2-Tetrachloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR
1,1,2,2-Tetrachloroethane	<0.05		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR
Tetrachloroethene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR
Toluene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR
1,2,3-Trichlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR
1,2,4-Trichlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR
1,1,1-Trichloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR
1,1,2-Trichloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR
Trichloroethene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR
1,2,3-Trichloropropane	<0.020		µg/L	EPA 8260B	1.0	0.0200	0.10	09/17/20	4:32	SR
Trichlorofluoromethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR
Trichlorotrifluoroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR
1,2,4-Trimethylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR
1,3,5-Trimethylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR
Vinyl Chloride	<0.008		µg/L	EPA 8260B	1.0	0.0080	0.050	09/17/20	4:32	SR
m,p-Xylenes	<0.10		µg/L	EPA 8260B	1.0	0.1000	0.20	09/17/20	4:32	SR
o-Xylene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	09/17/20	4:32	SR
[VOC Vapor Sampling Tracer]										
Isopropanol (IPA)	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	09/17/20	4:32	SR
[VOC Surrogates]										
Dibromofluoromethane	102		%REC	EPA 8260B			70-130	09/17/20	4:32	SR
Toluene-D8	99		%REC	EPA 8260B			70-130	09/17/20	4:32	SR
Bromofluorobenzene	96		%REC	EPA 8260B			70-130	09/17/20	4:32	SR

Respectfully Submitted: Ken Zheng

Ken Zheng - President

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QUALIFIERS

B = Detected in the associated Method Blank at a concentration above the routine RL.
B1 = BOD dilution water is over specifications . The reported result may be biased high.
D = Surrogate recoveries are not calculated due to sample dilution.
E = Estimated value; Value exceeds calibration level of instrument.
H = Analyte was prepared and/or analyzed outside of the analytical method holding time
I = Matrix Interference.
J = Analyte concentration detected between RL and MDL.
Q = One or more quality control criteria did not meet specifications. See Comments for further explanation.
S = Customer provided specification limit exceeded.

ABBREVIATIONS

DF = Dilution Factor
RL = Reporting Limit, Adjusted by DF
MDL = Method Detection Limit, Adjusted by DF
Qual = Qualifier
Tech = Technician

As regulatory limits change frequently, A & R Laboratories advises the recipient of this report to confirm such limits with the appropriate federal, state, or local authorities before acting in reliance on the regulatory limits provided.

For any feedback concerning our services, please contact Jenny Jiang, Project Manager at 951.779.0310. You may also contact Ken Zheng, President at office@arlaboratories.com.

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QUALITY CONTROL DATA REPORT

2009-00134

GSA ENGINEERING
PACIFIC PALISADES, CA 90272

Date Reported	**09/18/2020**
Date Received	**09/17/2020**
Date Sampled	**09/17/2020**
Invoice No.	**89726**
Customer #	**G073**
Customer P.O.	

Project: RESIDENTIAL-20865 CANADA RD, LAKE FOREST

Method # EPA 8260B
QC Reference # 91540 **Date Analyzed:** 9/17/2020 **Technician:** SR
Samples 001 002 003

Results	LCS %REC	Control Ranges LCS %REC
1,1-Dichloroethene	130	70 - 130
Benzene	120	70 - 130
Chlorobenzene	128	70 - 130
Toluene	120	70 - 130
Trichloroethene	104	70 - 130

Method # LUFT GCMS
QC Reference # 91542 **Date Analyzed:** 9/17/2020 **Technician:** SR
Samples 001 002 003

Results	LCS %REC	Control Ranges LCS %REC
C4-C12	124	70 - 130

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Project: RESIDENTIAL-20865 CANADA RD, LAKE FOREST

Method blank results

Ref	Test Name	Result	Qualif	Units	MDL
91540	Acetone	<0.50		µg/L	0.50
	t-Amyl Methyl Ether (TAME)	<0.050		µg/L	0.050
	Benzene	<0.050		µg/L	0.050
	Bromobenzene	<0.050		µg/L	0.050
	Bromochloromethane	<0.050		µg/L	0.050
	Bromodichloromethane	<0.050		µg/L	0.050
	Bromoform	<0.050		µg/L	0.050
	Bromomethane	<0.050		µg/L	0.050
	t-Butanol (TBA)	<0.50		µg/L	0.50
	2-Butanone (MEK)	<0.50		µg/L	0.50
	n-Butylbenzene	<0.050		µg/L	0.050
	sec-Butylbenzene	<0.050		µg/L	0.050
	tert-Butylbenzene	<0.050		µg/L	0.050
	Carbon Disulfide	<0.50		µg/L	0.50
	Carbon Tetrachloride	<0.025		µg/L	0.025
	Chlorobenzene	<0.050		µg/L	0.050
	Chloroethane	<0.050		µg/L	0.050
	Chloroform	<0.050		µg/L	0.050
	Chloromethane	<0.050		µg/L	0.050
	2-Chlorotoluene	<0.050		µg/L	0.050
	4-Chlorotoluene	<0.050		µg/L	0.050
	Dibromochloromethane	<0.050		µg/L	0.050
	1,2-Dibromoethane (EDB)	<0.020		µg/L	0.020
	1,2-Dibromo-3-Chloropropane	<0.020		µg/L	0.020
	Dibromomethane	<0.050		µg/L	0.050
	1,2-Dichlorobenzene	<0.050		µg/L	0.050
	1,3-Dichlorobenzene	<0.050		µg/L	0.050
	1,4-Dichlorobenzene	<0.050		µg/L	0.050
	Dichlorodifluoromethane	<0.050		µg/L	0.050
	1,1-Dichloroethane	<0.050		µg/L	0.050
	1,2-Dichloroethane	<0.050		µg/L	0.050
	1,1-Dichloroethene	<0.050		µg/L	0.050
	cis-1,2-Dichloroethene	<0.050		µg/L	0.050
	trans-1,2-Dichloroethene	<0.050		µg/L	0.050
	1,2-Dichloropropane	<0.050		µg/L	0.050
	1,3-Dichloropropane	<0.050		µg/L	0.050
	2,2-Dichloropropane	<0.050		µg/L	0.050
	1,1-Dichloropropene	<0.050		µg/L	0.050
	cis-1,3-Dichloropropene	<0.050		µg/L	0.050
	trans-1,3-Dichloropropene	<0.050		µg/L	0.050
	Diisopropyl Ether (DiPE)	<0.050		µg/L	0.050
	Ethylbenzene	<0.050		µg/L	0.050
	Ethyl-t-Butyl Ether (EtBE)	<0.050		µg/L	0.050
	Hexachlorobutadiene	<0.050		µg/L	0.050
	2-Hexanone	<0.50		µg/L	0.50
	Isopropylbenzene	<0.050		µg/L	0.050
	4-Isopropyltoluene	<0.050		µg/L	0.050
	Methylene Chloride	<0.05		µg/L	0.05
	4-Methyl-2-Pentanone (MIBK)	<0.50		µg/L	0.50
	Methyl-t-butyl Ether (MtBE)	<0.050		µg/L	0.050
	Naphthalene	<0.032		µg/L	0.032
	n-Propylbenzene	<0.050		µg/L	0.050
	Styrene	<0.050		µg/L	0.050
	1,1,1,2-Tetrachloroethane	<0.050		µg/L	0.050
	1,1,2,2-Tetrachloroethane	<0.05		µg/L	0.05
	Tetrachloroethene	<0.050		µg/L	0.050
	Toluene	<0.050		µg/L	0.050
	1,2,3-Trichlorobenzene	<0.050		µg/L	0.050
	1,2,4-Trichlorobenzene	<0.050		µg/L	0.050
	1,1,1-Trichloroethane	<0.050		µg/L	0.050
	1,1,2-Trichloroethane	<0.050		µg/L	0.050
	Trichloroethene	<0.050		µg/L	0.050
	1,2,3-Trichloropropane	<0.020		µg/L	0.020
	Trichlorofluoromethane	<0.050		µg/L	0.050
	Trichlorotrifluoroethane	<0.050		µg/L	0.050
	1,2,4-Trimethylbenzene	<0.050		µg/L	0.050
	1,3,5-Trimethylbenzene	<0.050		µg/L	0.050
	Vinyl Chloride	<0.008		µg/L	0.008
	m,p-Xylenes	<0.10		µg/L	0.10
	o-Xylene	<0.050		µg/L	0.050
	Isopropanol (IPA)	<0.50		µg/L	0.50
91542	C4-C12	<5		µg/L	5

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Project: RESIDENTIAL-20865 CANADA RD, LAKE FOREST

Respectfully Submitted: Ken Zheng

Ken Zheng - President

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A & R Laboratories
1650 S. Grove Ave., Ste C, Ontario, CA 91761
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CHAIN OF CUSTODY

A & R Work Order #: 2009-00134

Page 1 of 1

Client Name: HILLMAN CONSULTING
E-mail:
Address: 1745 ORANGEWOOD #110 ORANGE
Report Attention: BRANDON C
Phone #: (714) 206-3916
Fax: #:
Sampled By: DL
Project No./ Name: RESIDENTIAL
Project Site: 20865 CANADA RD LAKE FOREST

☐ Chilled
☒ Intact
☐ Seal

Turn Around Time Requested: ☒ Rush 8 12 24 48 Hours 6 Bar ☐ Normal

Analyses Requested

Lab # (Lab use)	Client Sample ID	Sample Collection Date	Sample Collection Time	Matrix Type	Sample Preserve	No., type* & size of container	EPA8260B (VOCs & Oxygenates)	EPA8260B(BTEX & Oxygenates)	LUFT / 8015 (Gasoline)	LUFT / 8015 (Diesel)	EPA8081A (Organochlorine Pesticides)	EPA 8082 (PCBs)	EPA 8015M (Carbon Chain C4-C40)	EPA 6010B/7000 (CAM 17 Metals)	Micro: Plate Cnt., Coliform, E-Coli	Remarks
1	SG1-10	9-17-20	11:50	VAPOR	—	1	X	/	X							~~X~~ NEED
2	SG2-10	↓	11:40	↓	↓	1	X		X							0.05 ug/L
3	SG3-6	↓	11:30	↓	↓	1	X		X							Detection
																Limit
																for PCE, TCE
																0.01 for Benzene

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
[signature]	Hillman	9/17/20	11:45	[signature]	AR	9-17-20	11:45
LG	AR	9-17-20	13:40	[signature]	AR	9-17-20	13:40

Note: Samples are discarded 30 days after results are reported unless other arrangements are made.

Matrix Code: DW=Drinking Water, GW=Ground Water, WW=Waste Water, SD=Solid Waste, SL=Sludge, SS=Soil/Sediment, AR=Air, PP=Pure Product

Preservative Code: IC=Ice, HC=HCl, HN=HNO_3, SH=NaOH, ST=$Na_2S_2O_3$, HS=H_2SO_4

* Sample Container Types: T=Tedlar Air Bag, G=Glass Container, ST= Steel Tube, B= Brass Tube, P=Plastic Bottle, V=VOA Vial, E= EnCore

APPENDIX C
Drilling Logs

HILLMANN CONSULTING

DRILL/LITHOLOGIC LOG

BORING/WELL NUMBER B1

PROJECT | **OWNER**

LOCATION 20865 Canada Road, Lake Forest, CA | **PROJECT NUMBER**

DATE DRILLED September 15, 2020 | **TOTAL DEPTH OF HOLE** 10 Feet

SURFACE ELEVATION | **DEPTH TO WATER**

SCREEN: DIA. | **LENGTH** | **SLOT SIZE**

CASING: DIA. | **LENGTH** | **TYPE**

DRILLING COMPANY Hillmann | **DRILL METHOD** Hand Auger

DRILLER Dan/Neil | **LOG BY** Dan Louks

DEPTH (FEET)	WELL CONST		PID (PPM)	SAMPLES		SOIL CLASS	DESCRIPTION/SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)
	PIPE	FILL		NUMBER	BLOW	(USCS)	
0-5			<1	B1-5		SM	Silty SAND; gray-brown, very fine grained, loose, slightly moist, no odor.
5-10			<1	B1-10		ML	Sandy SILT; dark brown, very fine sand, trace clay, occasional thin lenses of Clayey SILT, no odor. Install Probe SG1 at 10 feet. Seal with bentonite and neat cement to surface.

DRILL/LITHOLOGIC LOG

BORING/WELL NUMBER B2

PROJECT | **OWNER**

LOCATION 20865 Canada Road, Lake Forest, CA | **PROJECT NUMBER**

DATE DRILLED September 15, 2020 | **TOTAL DEPTH OF HOLE** 10 Feet

SURFACE ELEVATION | **DEPTH TO WATER**

SCREEN: DIA. | **LENGTH** | **SLOT SIZE**

CASING: DIA. | **LENGTH** | **TYPE**

DRILLING COMPANY Hillmann | **DRILL METHOD** Hand Auger

DRILLER Dan/Neil | **LOG BY** Dan Louks

DEPTH (FEET)	WELL CONST		PID (PPM)	SAMPLES		SOIL CLASS	DESCRIPTION/SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)
	PIPE	FILL		NUMBER	BLOW	(USCS)	
0-4						SM	Silty SAND; brown, very fine grained, loose, slightly moist, no odor.
			<1	B2-5		CL	Silty CLAY; brown, medium plasticity, slightly moist, no odor.
4-6						CL	Silty CLAY; brown, medium plasticity, slightly moist, no odor.
7						SW	SAND; light brown, very fine to medium grained, poorly sorted, no odor.
8						CL	Silty CLAY; brown, low plasticity, slightly moist, no odor.
8-10			<1	B2-10		ML	Sandy, Clayey SILT; brown, low plasticity, very fine sand, damp, no odor.
							Install Probe SG2 at 10 feet. Seal with bentonite and neat cement to surface.

HILLMANN CONSULTING

DRILL/LITHOLOGIC LOG

BORING/WELL NUMBER B3

PROJECT | **OWNER**

LOCATION 20865 Canada Road, Lake Forest, CA | **PROJECT NUMBER**

DATE DRILLED September 15, 2020 | **TOTAL DEPTH OF HOLE** 6 Feet

SURFACE ELEVATION | **DEPTH TO WATER**

SCREEN: DIA. | **LENGTH** | **SLOT SIZE**

CASING: DIA. | **LENGTH** | **TYPE**

DRILLING COMPANY Hillmann | **DRILL METHOD** Hand Auger

DRILLER Dan/Neil | **LOG BY** Dan Louks

DEPTH (FEET)	WELL CONST		PID (PPM)	SAMPLES		SOIL CLASS	DESCRIPTION/SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)
	PIPE	FILL		NUMBER	BLOW	(USCS)	
0-2						ML	SILT; gray, medium plasticity, some very fine sand, 10% very fine gravel, no odor.
2-4						ML	Clayey SILT; brown, low plasticity, slightly moist, no odor.
4-6			<1	B3-6		ML	Clayey, Sandy SILT; brown, low plasticity, very fine sand, loose, no odor.
							Install Probe SG3 at 6 feet. Seal with bentonite and neat cement to surface.

APPENDIX D
Soil Gas Monitoring Data

SOIL GAS MONITORING DATA FORM

PROJECT:

LOCATION: 20865-20795 Canada Road, Lake Forest, California

DATE: September 17, 2020

	VAPOR PROBE INFO							
PROBE ID	**SG1**	**SG2**	**SG3**					
PROBE DEPTH (ft)	10	10	6					
	EXTRACTION DATA							
Applied Vacuum (in. WC)	<5	<5	<5					
FLOW (L/min)	0.2	0.2	0.2					
Pore Volumes (borehole - sand pack)	3	3	3					
	MONITORING DATA							
OXYGEN (%)	17.8	18.5	18.7					
CARBON DIOXIDE (%)	0.95	0.93	1.33					
VOC by PID (ppm)	0.0	0.0	0.0					

	VAPOR PROBE INFO							
PROBE ID								
PROBE DEPTH (ft)								
	EXTRACTION DATA							
Applied Vacuum (in. WC)								
FLOW (L/min)								
Pore Volumes (borehole - sand pack)								
	MONITORING DATA							
OXYGEN (%)								
CARBON DIOXIDE (%)								
VOC by PID (ppm)								

REMARKS:

SAMPLED BY: NH

APPENDIX E
Geophysical Survey Report

TECHNICIAN DAILY WORK FORM

C BELOW SUBSURFACE IMAGING
www.cbelow.com

14280 EUCLID AVE. CHINO, CA 91710
Office: (888) 90-BELOW
Fax: (909) 606-6555

Lead Technician Name	Date	C Below Project No.
Daniel Montes	08-31-2020	20-2742

Additional Tech(s)

Project Name	Project Address
Canada Rd. GPR Investigation	20865 Canada Road Lake Forrest, Ca 92630
Client	Contact
Great Scott Tree Service Inc.	Steve Guzowski

Service Type

- [x] Ground Penetrating Radar
- [ ] CCTV
- [ ] Potholing
- [ ] Utility Locating
- [ ] Utility Locating/GPR
- [ ] Other_____

Work Summary - Area Dimensions, Surface Conditions, Subsurface Indications Found, Marking Method, Unlocatable Facilities, Etc.

Attempted to locate possible water tank wthin work area provided by client on site

Utilities: water tank, Unknown

Performed GPR scan to locate unknown positive indications and non conductive utilities throughout designated work area

Provided direction of utilities and possible edges off structures

Marking Methods: (APWA) Uniform Color Code, (CGA) Best Practices

Equipment Used: GPR LMX100, Dowsing Rods

Unable to locate a possible abandoned water tank within the work scope but I did find indications for possibly the residents septic tank measuring 10x12 and possible old water pump foundation near the drive way measuring 2x2

Went over findings and any issues or concerns with onsite contact before departing job

CAUTION

WHEN EXCAVATING WITHIN THE TOLERANCE ZONE (24 INCHES ON EACH SIDE), PERFORM EXCAVATION WITH HAND TOOLS UNTIL THE MARKED FACILITY IS EXPOSED.
FOR CONCRETE AND MASONRY STRUCTURES, DO NOT CUT, CORE OR DRILL WITHIN 3 INCHES OF ANY MARKED INDICATION.

Investigation results provided by C Below, Inc. (CBI), are given in good faith and to the best of our knowledge. However, in the unlikely event that such information proves to be inaccurate, the extent of liability assumed by CBI if any, is limited to the amount billed for labor and materials on the day that the information was provided and alleged to have been inaccurate. The services being provided by CBI do not relieve the Client and/or property owner of the responsibility of having to comply with California Government Code §§4216-4216.9. It is expressly understood by the Client and/or owner that CBI's services are not a substitute for compliance with the California Code §§4216-4216.9. This daily is based on observations made during a walk-through investigation of the property and is not intended to create any sort of warranty and/or certification that the work performed by the contractor and/or subcontractors was completed in compliance with the governing building codes, architectural plans and specifications or contract documents.
Please Note: Certain low-density material such as PVC and plastic conduit may not be located accurately, if at all, using any investigation method. Always use caution when excavating.

TIME IN	TIME OUT	REG. HOURS	O.T. HOURS	TRAVEL TIME
9:30am	11:30am	4		2

Lead Technician Signature

Approved By: _____
Project Contact

C BELOW
SUBSURFACE IMAGING
www.cbelow.com

TECHNICIAN DAILY WORK PHOTOS

14280 EUCLID AVE, CHINO, CA 91710
Office: (888) 90-BELOW
Fax: (909) 606-6555

Date	C Below Project No.
08-31-2020	20-2742

PHOTO 1

PHOTO 2

PHOTO 3

PHOTO 4

PRELIMINARY DRAINAGE REPORT

IN SUPPORT OF

GREAT SCOTT TREE CARE

SOUTH ORANGE COUNTY

20795 LINEAR LANE
LAKE FOREST, CA 92630

APNS: 610-301-07, 610-301-20, 610-301-21

Prepared for:
Great Scott Tree Care

Prepared by:

HUITT ZOLLARS

2603 Main Street, Suite 400

Irvine, CA 92614

Phone: (949) 988-5815

Marc Haslinger, P.E.

mhaslinger@huitt-zollars.com

October 2nd, 2023

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- **NRCS Soil Survey**
- **Natural Hazard Disclosure Report**
- **FEMA Flood Zone Map**
- **OCFCD Drainage Facilities Map**
- **Glenn Lukos Associates Report**

Appendix B: Exhibits

- **Hydrology Map (Existing / Proposed)**
- **Treatment Train Schematic**

Appendix C: Calculations

- **AES Hydrologic Analyses (2-,25-, 100-Year)**
- **AES Flood Routing Analysis (100-Year)**

Appendix D: Geotechncial Documents

- **Geotechnical Report**

SECTION 1 – INTRODUCTION

1.1 BACKGROUND

The Project Site is 2.00 acres and is located within the City of Lake Forest, CA, at the southwest corner of Dimension Drive and Linear Lane. It is bound by existing light industrial development on the north and south. Existing Serrano Creek (Orange County Public Works Facility F19 per the OCFCD Drainage Facilities Map) runs east-west, through the length of the Project Site. In existing conditions, runoff from the Project Site sheet flows directly into Serrano Creek.

The Project site is currently zoned for a combination of A-1 agricultural and M-1 light industrial uses. There is one residential and an old barn.

The Project Site is within FEMA flood zone AE and X per the Natural Hazard Disclosure Report prepared for the property by First American. A LOMR was recently filed ((LOMR 17-09-1011P, effective date 7/16/18) for the segment of Serrano Creek within the property which lowered the elevation of the regulatory floodway by several feet. The Creek portion of the site remains within Zone AE; the upper portion of the site within the proposed improvement area is in Zone X.

Glenn Lukos Associates prepared a Jurisdiction Limits report for the portion of Serrano Creek which runs through the site and found that The limits of CDFW jurisdiction extend to the top of the Serrano Creek bank, or to edge of the canopy of associated riparian vegetation that is rooted at the top of bank or below top of bank and that the limits of Corps jurisdiction is located at the the Ordinary High Water Mark (OHWM), which coincides with the top of bank.

Soil Type D (Per NRCS Soil Survey), Serrano Creek runs through the Site and is susceptible to erosion. Soils are primarily Sandy Loam and Sorrento Loam along the top and upper banks along Serrano Creek and with Riverwash (sandy gravelly alluvium) located along the bottom of the Creek.

See Appendix A for Encumbrance Map, NRCS Soil Survey, Natural Hazard Disclosure Report, FEMA Flood Zone Map, OCFCD Drainage Facilities Map, and Glenn Lukos Associates Report.

1.2 EXISTING AND PROPOSED CONDITIONS

In existing condition, the majority of the Project site generally drains northwest and sheet flows into Serrano Creek. A small portion of the site is on the opposite side of Serrano Creek and sheets flows south, directly into the Creek. Other than off-site flows within Serrano Creek, the site does not receive run-on from adjacent properties. Offsite flow is captured by existing catch basins that direct flow through existing pipes under the site. These pipes discharge into the creek in previously permitted and installed outfalls. The assumption was confirmed by visual observations during a field visit on February 7, 2020. On-site soils are highly compacted and there are no catch basins, area drains, underground storm drain conduits, and no locations of concentrated storm water outlets into Serrano Creek. The Project intends to maintain existing grades and drainage patterns across the site.

The existing residential structure and one storage structure will remain in the proposed condition. Gravel will be laid over a large portion of the site to stabilize the existing native surface and allow for all-weather access and parking for Great Scott Tree Service vehicles. The existing residential

structure will be converted into office space for Great Scott Tree Service, Inc., and a minimum parking lot constructed for office employee parking.

In the improved condition flows will be directed into bio-swales that runs along the perimeter of the project site (closest to Serrano Creek). The bio-swales will be utilized for further cleansing of the storm flows with particular focus on removal of organics through surface contact. The bio-swales will be underlain with an underdrain. The underdrain from each bio-swale will pipe flow and then discharge into a detention basin at the southwest of the project. The detention based was sized to capture peak storm flows and attenuate the Q_{100} by a minimum of 38%. After attenuation the flows will exit the basin through an underdrain that will discharge into the nearby Serrano Creek via an existing CSP pipe. A schematic of the drainage system can be seen in Appendix B.

SECTION 2 – HYDROLOGY

2.1 EXISTING CONDITIONS HYDROLOGY ANALYSIS

The site is divided into six onsite and two offsite distinct drainage areas, with the onsite areas sheet flowing into Serrano Creek and the offsite areas draining to existing storm drains that cross under the site into Serrano Creek. Serrano Creek has headwaters in the Santa Ana Mountains and is a channelized, natural water course as it flows southwest, through the mountains and urbanized areas of the City of Lake Forest. Serrano Creek confluences with La Cañada Channel and San Diego Creek prior to flowing into the estuaries of Upper and Lower Newport Bay, and the Pacific Ocean.

Existing and proposed conditions on the site are anticipated to result in similar Stormwater runoff rates due to minimal proposed grading, improvements, or changes to impervious. Existing site imperviousness is approximately 41%.

The existing site was separated into onsite and offsite flows that currently drain into Serrano Creek. All offsite flows are captured by inlets which are routed under the site and expelled into the creek. Remaining flows onsite primarily sheet flow into the creek. For reference see the Existing Hydrology Map in Appendix B. All existing flows were measured and compared at the most downstream collection point. Results have been compared with the proposed conditions and are summarized in Section 2.3.

2.2 PROPOSED CONDITIONS HYDROLOGY ANALYSIS

The proposed condition of the site is divided into three distinct drainage areas, which can be seen on the Proposed Hydrology Map in Appendix B. In the proposed condition, all offsite flows will still be captured by inlets which then outlet into Serrano Creek. Proposed imperviousness will be decreased to approximately 8%. As part of the proposed improvements, the Project will place approximately 40,800 square feet of gravel over native soil for vehicle parking and access. The onsite flows will now be rerouted to drain from the gravel to proposed vegetated swales located along the westerly edge of the site. The swales will allow for water treatment before entering underground storm drain which then outlets into a proposed detention system located at the southwest of the site. During peak flows this detention system will fill and discharge flow through an outflow pipe into Serrano Creek.

The site has been modeled in AES and simulated using the 2-year, 25-year, and 100-year storm events. The results can be seen in the next section. Due to erosion issues along Serrano Creek,

future developments have been requested to reduce the site runoff into the creek by 38% through detention. The onsite detention basin has been designed to capture peak flows from onsite only, and reduce this flow by the minimum 38% required. Current design has mitigated onsite flows for a 100-year storm event from 7.73 cfs to 4.60 cfs as shown in the flood routing calculations found in Appendix C and summarized below in the Mitigated Flow Summary Table. This results in a peak flow reduction of 40.5%.

2-year event hydrologic calculations provided in the Conceptual WQMP (separate report) show that the project will not result in a Hydrologic Condition of Concern. Refer to Conceptual WQMP (separate report).

Additional detailed drainage analysis will be provided in the final drainage report.

2.3 CONCLUSION

The site was divided into distinct drainage areas for the existing condition and for the proposed condition. The drainage areas were determined for each condition using information gathered from contours, built and proposed infrastructure, and site visit conducted on February 7th, 2020. A 300 foot flow path limit was also imposed in accordance with the Orange County Hydrology Manual. The existing and proposed exhibits can be seen in Appendix B. The site was modeled in AES and simulated using the 2-year, 25-year, and 100-year storm event. Serrano Creek flows were measured and compared at the most downstream collection point. A summary of results can be seen below for on-site unmitigated and mitigated flows.

Unmitigated Flow Summary Table (no detention basin in analysis)

	Q_2 (cfs)	Q_{25} (cfs)	Q_{100} (cfs)	T_{c2} (min)	T_{c25} (min)	T_{c100} (min)
Existing Condition	5.40	12.36	16.02	10.79	10.10	9.81
Proposed Condition	5.31	12.46	16.25	9.82	9.22	9.06
Proposed Condition (without offsite flow)	2.50	5.89	7.73	9.46	8.93	8.80
Note: Existing and Proposed flows include offsite flows.						

Mitigated Flow Summary Table (with detention basin in analysis)

	Q_2 (cfs)	% Reduction	Q_{25} (cfs)	% Reduction	Q_{100} (cfs)	% Reduction
Proposed Condition at Node 405	1.40	44.0%	3.50	40.6%	4.60	40.5%

As seen in the Mitigated Flow Summary Table above, the amount of runoff entering Serrano Creek during the proposed condition does not exceed that of the existing condition. This is due to the underground storage chambers within the project area. Additionally, the difference in time of concentration between the existing and proposed condition can be considered negligible.

APPENDIX A

Previous Studies and Reports

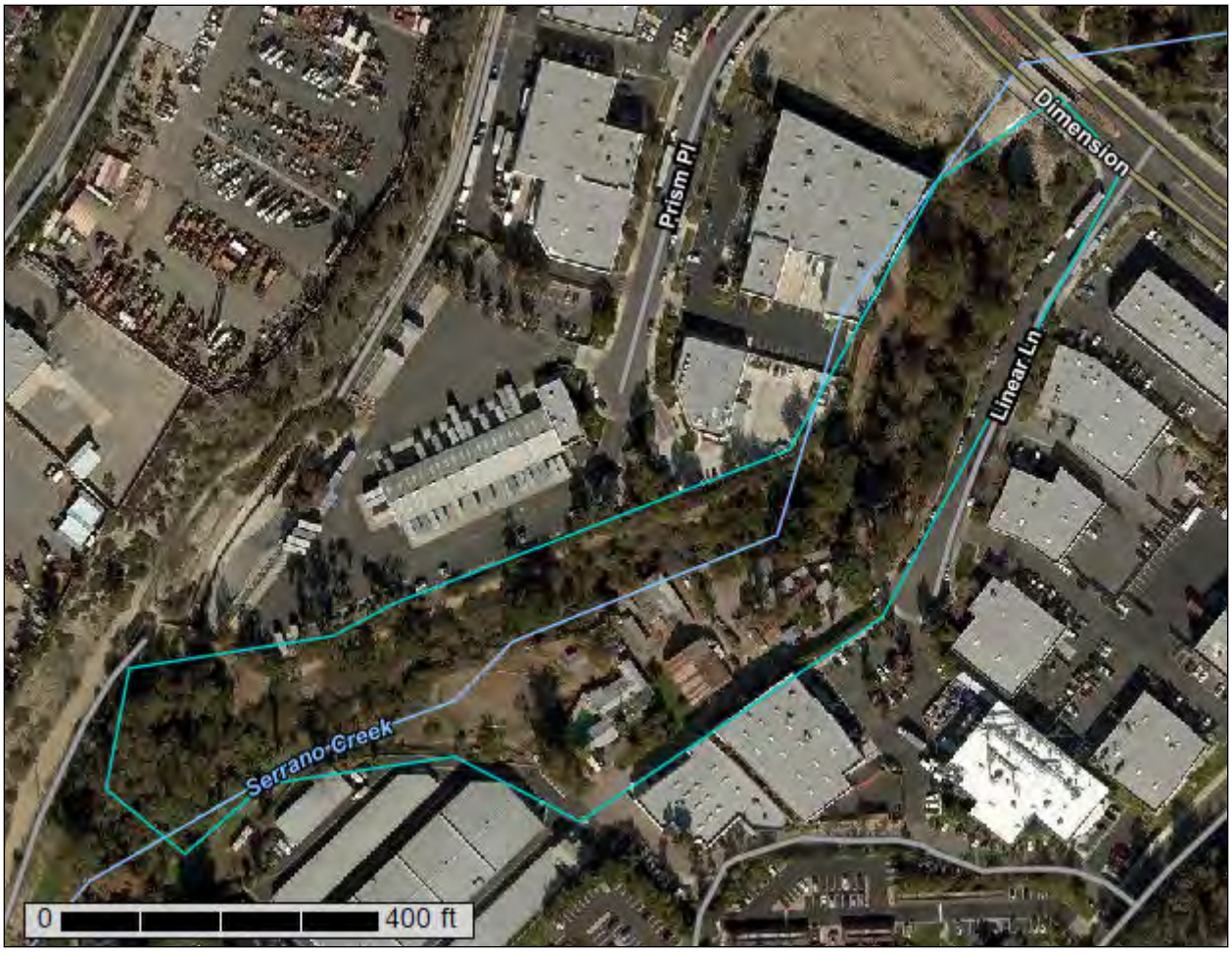
United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Orange County and Part of Riverside County, California



December 6, 2019

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Map Scale: 1:2,460 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 35 70 140 210

Feet
0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Orange County and Part of Riverside County, California
Survey Area Data: Version 13, Sep 16, 2019

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jan 3, 2015—Jan 17, 2015

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND

MAP INFORMATION

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
142	Cieneba sandy loam, 30 to 75 percent slopes, eroded	0.3	3.9%
176	Myford sandy loam, 15 to 30 percent slopes	0.1	1.1%
191	Riverwash	4.6	57.3%
207	Sorrento loam, 2 to 9 percent slopes, warm MAAT, MLRA 19	3.0	37.7%
Totals for Area of Interest		**8.0**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Orange County and Part of Riverside County, California

142—Cieneba sandy loam, 30 to 75 percent slopes, eroded

Map Unit Setting

National map unit symbol: hcml
Elevation: 500 to 4,000 feet
Mean annual precipitation: 12 to 35 inches
Mean annual air temperature: 57 to 64 degrees F
Frost-free period: 200 to 300 days
Farmland classification: Not prime farmland

Map Unit Composition

Cieneba and similar soils: 65 percent
Minor components: 35 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cieneba

Setting

Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave, convex
Across-slope shape: Convex
Parent material: Residuum weathered from granite

Typical profile

H1 - 0 to 7 inches: sandy loam
H2 - 7 to 59 inches: weathered bedrock

Properties and qualities

Slope: 30 to 75 percent
Depth to restrictive feature: 4 to 20 inches to paralithic bedrock
Natural drainage class: Somewhat excessively drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Very low (about 1.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: D
Ecological site: SHALLOW LOAMY (1975) (R019XD060CA)
Hydric soil rating: No

Minor Components

Cieneba, uneroded

Percent of map unit: 10 percent
Hydric soil rating: No

Vista, sandy loam
Percent of map unit: 5 percent
Hydric soil rating: No

San andreas, sandy loam
Percent of map unit: 5 percent
Hydric soil rating: No

Soper, cobbly loam
Percent of map unit: 5 percent
Hydric soil rating: No

Calleguas, clay loam
Percent of map unit: 5 percent
Hydric soil rating: No

Tollhouse
Percent of map unit: 2 percent
Hydric soil rating: No

Rock outcrop
Percent of map unit: 2 percent
Hydric soil rating: No

Blasingame, loam
Percent of map unit: 1 percent
Hydric soil rating: No

176—Myford sandy loam, 15 to 30 percent slopes

Map Unit Setting

National map unit symbol: hcnp
Elevation: 1,500 feet
Mean annual precipitation: 12 to 20 inches
Mean annual air temperature: 63 degrees F
Frost-free period: 270 to 350 days
Farmland classification: Not prime farmland

Map Unit Composition

Myford and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Myford

Setting

Landform: Terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Riser
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from mixed

Typical profile

H1 - 0 to 12 inches: sandy loam
H2 - 12 to 18 inches: sandy clay
H3 - 18 to 28 inches: sandy clay loam
H4 - 28 to 71 inches: sandy clay loam
H5 - 71 to 79 inches: sandy loam

Properties and qualities

Slope: 15 to 30 percent
Depth to restrictive feature: About 12 inches to abrupt textural change
Natural drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 5 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Very low (about 1.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: D
Ecological site: CLAYPAN (1975) (R019XD061CA)
Hydric soil rating: No

Minor Components

Myford, sandy loam, eroded

Percent of map unit: 5 percent
Hydric soil rating: No

Myford, less sloping or steeper

Percent of map unit: 5 percent
Hydric soil rating: No

Cieneba, sandy loam

Percent of map unit: 3 percent
Hydric soil rating: No

Yorba, gravelly sandy loam

Percent of map unit: 2 percent
Hydric soil rating: No

191—Riverwash

Map Unit Composition

Riverwash: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Riverwash

Setting

Landform: Fans
Parent material: Sandy and gravelly alluvium

Typical profile

C1 - 0 to 6 inches: gravelly sand
C2 - 6 to 60 inches: stratified gravelly coarse sand to sandy loam

Properties and qualities

Slope: 0 to 5 percent
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: About 0 to 24 inches
Frequency of flooding: Frequent
Available water storage in profile: Very low (about 2.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8w
Hydric soil rating: Yes

207—Sorrento loam, 2 to 9 percent slopes, warm MAAT, MLRA 19

Map Unit Setting

National map unit symbol: 2tz0c
Elevation: 0 to 1,340 feet
Mean annual precipitation: 12 to 18 inches
Mean annual air temperature: 62 to 66 degrees F
Frost-free period: 320 to 365 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Sorrento and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Sorrento

Setting

Landform: Alluvial fans
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from sedimentary rock

Typical profile

A - 0 to 12 inches: loam
AB - 12 to 37 inches: silty clay loam
Bk - 37 to 62 inches: silty clay loam

2C - 62 to 72 inches: sandy loam

Properties and qualities

Slope: 2 to 9 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 5 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: High (about 11.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: LOAMY (1975) (R019XD029CA)
Hydric soil rating: No

Minor Components

Mocho

Percent of map unit: 7 percent
Landform: Alluvial fans
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Botella

Percent of map unit: 2 percent
Landform: Alluvial fans
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: LOAMY (1975) (R019XD029CA)
Hydric soil rating: No

Pico

Percent of map unit: 2 percent
Landform: Alluvial fans
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Garretson

Percent of map unit: 2 percent
Landform: Alluvial fans

Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Anacapa

Percent of map unit: 2 percent
Landform: Alluvial fans
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

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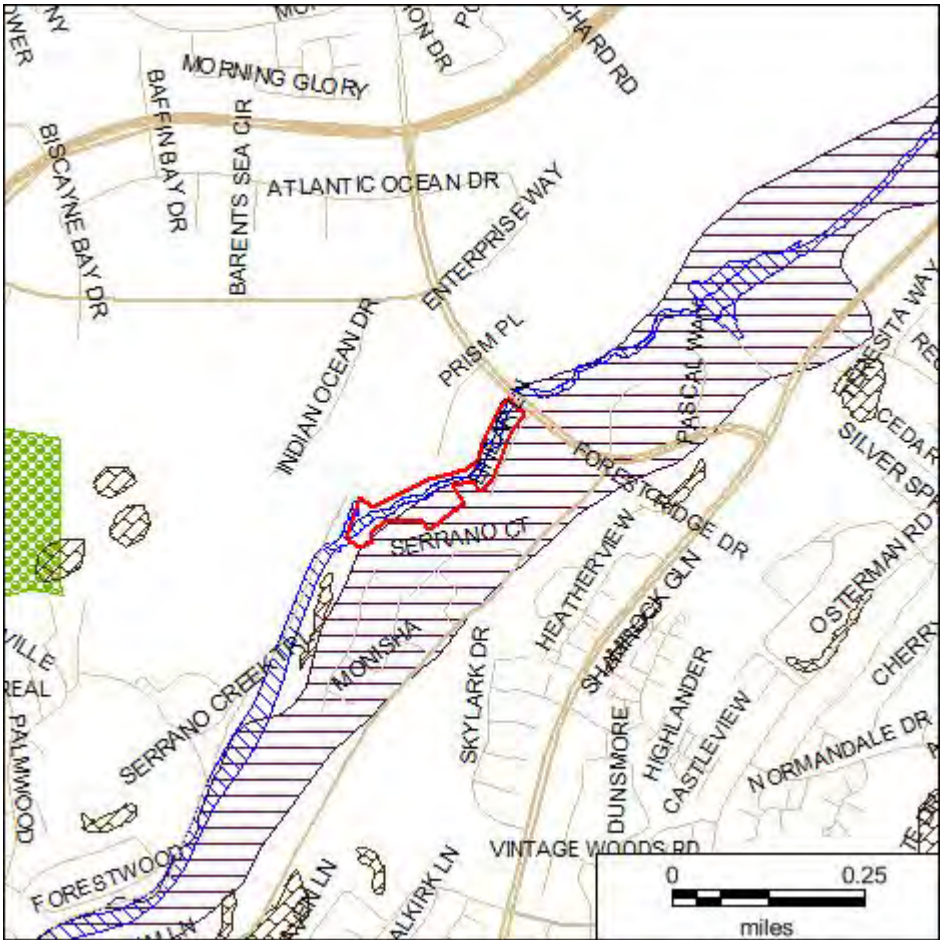
FANHD Commercial Property Disclosure Reports

Map of Statutory Natural Hazards For ORANGE County

Property Address: VACANT AND 20865 CANADA RD
LAKE FOREST, ORANGE COUNTY, CA 92630
("Property")

APN: See Addendum
Report Date: 01/25/2019
Report Number: 2419042



This map is provided for convenience only to show the approximate location of the Property and is not based on a field survey.

- Subject Property
- Special Flood Hazard Area
- Area of Potential Flooding, Dam Failure
- Very High Fire Hazard Severity Zone
- Wildland Area, Substantial Forest Fire Risk
- Earthquake Fault Zone
- Seismic Hazard Zone, Landslide
- Seismic Hazard Zone, Liquefaction

This COMMERCIAL PROPERTY DISCLOSURE REPORT contains

THIS REPORT PROVIDES THE STATUTORY DISCLOSURES MANDATED BY CALIFORNIA LAWS SPECIFIED HEREIN AND DELIVERY OF THIS REPORT AND THE EXECUTED STATUTORY FORM IS SUFFICIENT TO MEET THE SAFE HARBOR FOR THE SELLER AND SELLER'S AGENT. THIS REPORT ALSO CONTAINS OTHER IMPORTANT DISCLOSURES AND INFORMATION. SELLER AND SELLER'S AGENT MAY HAVE ADDITIONAL RESPONSIBLITIES FOR CERTAIN DISCLOSURES WITHIN THEIR ACTUAL KNOWLEDGE.

The Natural Hazard Disclosure Report For ORANGE County

Property Address: VACANT AND 20865 CANADA RD
LAKE FOREST, ORANGE COUNTY, CA 92630
("Property")

APN: See Addendum
Report Date: 01/25/2019
Report Number: 2419042

ADDENDUM FOR ASSESSOR PARCEL NUMBERS

This Addendum pertains solely to Report No. 2419042 dated Friday, January 25, 2019(“Report Date”) for disclosure information with respect to the Property, situated in the County of ORANGE, State of California, as collectively constituted by only those 2 assessor parcel numbers (“APN”) and geographic boundaries thereof listed below as provided to the Company on said Report Date:

610-301-20 610-301-07

Responses contained in this Report pertain only to Property as identified above and to no others pursuant to a Transaction. This Report should not to be used for, and liability shall not be applicable to, any transaction involving any fewer or any other parcels than those identified above. For liability purposes a Report should be ordered for an individual parcel should it be sold separately from other parcels in a separate transaction.

This Addendum is attached hereto and made a part of Report No. 2419042 as of this reference and is subject to the Terms and Conditions contained herein.

First American
Natural Hazard Disclosures™

FANHD Commercial Property Disclosure Reports

The Natural Hazard Disclosure Report For ORANGE County

Property Address: VACANT AND 20865 CANADA RD
LAKE FOREST, ORANGE COUNTY, CA 92630
("Property")

APN: See Addendum
Report Date: 01/25/2019
Report Number: 2419042

Natural Hazard Disclosure ("NHD") Statement and Acknowledgment of Receipt

The transferor and his or her agent(s) or a third-party consultant disclose the following information with the knowledge that even though this is not a warranty, prospective transferees may rely on this information in deciding whether and on what terms to purchase the Property. Transferor hereby authorizes any agent(s) representing any principal(s) in this action to provide a copy of this statement to any person or entity in connection with any actual or anticipated sale of the Property.

The following are representations made by the transferor and his or her agent(s) or a third-party consultant based on their knowledge and maps drawn by the State. This information is a disclosure and is not intended to be part of any contract between the transferee and the transferor. THIS REAL PROPERTY LIES WITHIN THE FOLLOWING HAZARDOUS AREA(S):

A SPECIAL FLOOD HAZARD AREA (Any type Zone "A" or "V") designated by the Federal Emergency Management Agency
Yes X No___ Do not know and information not available from local jurisdiction ___

AN AREA OF POTENTIAL FLOODING shown on a dam failure inundation map pursuant to Section 8589.5 of the Government Code.
Yes___ No X Do not know and information not available from local jurisdiction___

A VERY HIGH FIRE HAZARD SEVERITY ZONE pursuant to Section 51178 or 51179 of the Government Code. The owner of this Property is subject to the maintenance requirements of Section 51182 of the Government Code.
Yes___ No X

A WILDLAND AREA THAT MAY CONTAIN SUBSTANTIAL FOREST FIRE RISK AND HAZARDS pursuant to Section 4125 of the Public Resources Code. The owner of this Property is subject to the maintenance requirements of Section 4291 of the Public Resources Code. Additionally, it is not the state's responsibility to provide fire protection services to any building or structure located within the wildlands unless the Department of Forestry and Fire Protection has entered into a cooperative agreement with a local agency for those purposes pursuant to Section 4142 of the Public Resources Code.
Yes___ No X

AN EARTHQUAKE FAULT ZONE pursuant to Section 2622 of the Public Resources Code.
Yes___ No X

A SEISMIC HAZARD ZONE pursuant to Section 2696 of the Public Resources Code.
Yes (Landslide Zone)___ Yes (Liquefaction Zone) X

No___ Map not yet released by state___

THESE HAZARDS MAY LIMIT YOUR ABILITY TO DEVELOP THE REAL PROPERTY, TO OBTAIN INSURANCE, OR TO RECEIVE ASSISTANCE AFTER A DISASTER. THE MAPS ON WHICH THESE DISCLOSURES ARE BASED ESTIMATE WHERE NATURAL HAZARDS EXIST. THEY ARE NOT DEFINITIVE INDICATORS OF WHETHER OR NOT A PROPERTY WILL BE AFFECTED BY A NATURAL DISASTER. TRANSFEREE(S) AND TRANSFEROR(S) MAY WISH TO OBTAIN PROFESSIONAL ADVICE REGARDING THOSE HAZARDS AND OTHER HAZARDS THAT MAY AFFECT THE PROPERTY.

Signature of Transferor(s)	Date	Signature of Transferor(s)	Date
Signature of Agent	Date	Signature of Agent	Date

☐ Transferor(s) and their agent(s) represent that the information herein is true and correct to the best of their knowledge as of the date signed by the transferor(s) and agent(s).

☒ Transferor(s) and their agent(s) acknowledge that they have exercised good faith in the selection of a third-party report provider as required in Civil Code Section 1103.7, and that the representations made in this Natural Hazard Disclosure Statement are based upon information provided by the independent third-party disclosure provider as a substituted disclosure pursuant to Civil Code Section 1103.4. Neither transferor(s) nor their agent(s) (1) has independently verified the information contained in this statement and Report or (2) is personally aware of any errors or inaccuracies in the information contained on the statement. This statement was prepared by the provider below:

Third-Party Disclosure Provider(s) FIRST AMERICAN PROFESSIONAL REAL ESTATE SERVICES, INC. OPERATING THROUGH ITS FANHD DIVISION.
Date 25 January 2019

Transferee represents that he or she has read and understands this document. Pursuant to Civil Code Section 1103.8, the representations in this Natural Hazard Disclosure Statement do not constitute all of the transferor's or agent's disclosure obligations in this transaction.

Signature of Transferee(s)	Date	Signature of Transferee(s)	Date

TRANSFEREE(S) REPRESENTS ABOVE HE/SHE HAS RECEIVED, READ AND UNDERSTANDS THE COMPLETE FANHD DISCLOSURE REPORT DELIVERED WITH THIS SUMMARY:

A. Commercial Natural Hazard Disclosure Report.
B. Additional Property-specific Statutory Disclosures: Former Military Ordnance Site, Airport Influence Area, Airport Noise, San Francisco Bay Conservation and Development District Jurisdiction (in S.F. Bay counties only).
C. Additional County and City Regulatory Determinations as applicable: Airports, Avalanche, Blow Sand, Coastal Zone, Dam/Levee Failure Inundation, Debris Flow, Erosion, Flood, Fault Zone, Fire, Groundwater, Landslide, Liquefaction, Methane Gas, Mines, Naturally Occurring Asbestos, Redevelopment Area, Right to Farm, Runoff Area, Seiche, Seismic Shaking, Seismic Ground Failure, Slope Stability, Soil Stability, Subsidence, TRPA, Tsunami.
D. General advisories: Methamphetamine Contamination, Mold, Radon, Endangered Species Act, Abandoned Mines, Oil & Gas Wells, Tsunami Maps (coastal only), Non-residential Building Energy Use.
E. Government Guides in Combined Booklet with Report. Refer to Booklet: Commercial Property Owner's Guide to Earthquake Safety. Government Guides are also available on the Company's "Electronic Bookshelf" at http://wwww.disclosures.com/.

The Natural Hazard Disclosure Report For ORANGE County

Property Address: VACANT AND 20865 CANADA RD
LAKE FOREST, ORANGE COUNTY, CA 92630
("Property")

APN: See Addendum
Report Date: 01/25/2019
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First American Natural Hazard Disclosures™

FANHD Commercial Property Disclosure Reports

The Natural Hazard Disclosure Report For ORANGE County

Property Address: VACANT AND 20865 CANADA RD
LAKE FOREST, ORANGE COUNTY, CA 92630
("Property")

APN: See Addendum
Report Date: 01/25/2019
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PROPERTY DISCLOSURE SUMMARY - READ FULL REPORT

Statutory NHD Determinations	IN	NOT IN	Map N/A*	Property is:	NHD Report page:
Flood	X			IN a Special Flood Hazard Area. The Property is IN a FEMA-designated Flood Zone(s) AE, X.	7
Dam		X		NOT IN an area of potential dam inundation.	7
Very High Fire Hazard Severity		X		NOT IN a very high fire hazard severity zone.	8
Wildland Fire Area		X		Not in a wildland-state responsibility area.	8
Fault		X		NOT IN an earthquake fault zone designated pursuant to the Alquist-Priolo Act.	9
Landslide		X		NOT IN an area of earthquake-induced land sliding designated pursuant to the Seismic Hazard Mapping Act.	9
Liquefaction	X			IN an area of potential liquefaction designated pursuant to the Seismic Hazard Mapping Act.	9

County-level NHD Determinations	IN	NOT IN	Map N/A*	Property is:	NHD Report page:
Tsunami		X		NOT IN a mapped tsunami runup area	11
Ground Shaking	X			IN Seismic Shaking Zone B, a mapped relative seismic shaking zone with intermediate shaking potential.	11
Expansive Soils	X			IN a mapped area with low soil expansivity potential	12
Fault		X		NOT WITHIN one-eighth of one mile of a mapped fault trace	11
Liquefaction		X		NOT IN an area of high or moderate liquefaction potential	11
Landslide	X			IN an area of moderately low (Zone 2) or very low potential (Zone 1) for massive bedrock landslides under earthquake conditions.	11
Debris Flow		X		NOT IN a mapped source area of high propensity for either mud-debris flow or rock fall during periods of exceptionally high rainfall or during seismic shaking	11

City-level NHD Determinations	IN	NOT IN	Map N/A*	Property is:	NHD Report page:
Fire Hazard		X		NOT IN a mapped Fire Hazard Area.	13

Additional Statutory Disclosures	IN	NOT IN	Map N/A*	Property is:	NHD Report page:
Former Military Ordnance		X		NOT WITHIN one mile of a formerly used ordnance site.	14
Airport Influence Area		X		NOT IN an airport influence area.	15
Airport Noise Area for 65 Decibel		X		NOT IN a delineated 65 dB CNEL or greater aviation noise zone.	16

General Advisories	Description	NHD Report page:
Methamphetamine Contamination	Provides an advisory that a disclosure may be required pursuant to the "Methamphetamine Contaminated Property Cleanup Act of 2005".	17
Mold	Provides an advisory that all prospective purchasers of residential and commercial property should thoroughly inspect the subject property for mold and sources for additional information on the origins of and the damage caused by mold.	18
Radon	Provides an advisory on the risk associated with Radon gas concentrations.	19
Endangered Species	Provides an advisory on resources to educate the public on locales of endangered or threatened species.	19
Abandoned Mines	Provides an advisory on resources to educate the public on the hazards posed by, and some of the general locales of, abandoned mines.	20

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General Advisories	Description	NHD Report page:
Oil and Gas Wells	Provides an advisory on the potential existence of oil and gas wells and sources for additional general and/or specific information.	20
Tsunami Map Advisory	Provides an advisory about maximum tsunami inundation maps issued for jurisdictional emergency planning.	21

Determined by First American Professional Real Estate Services, Inc.

For more detailed information as to the foregoing determinations, please read this entire Report.

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Natural Hazard Disclosure Report

Part 1. State Defined Natural Hazard Zones

Statutory Natural Hazard Disclosures

Section 1103 of the California Civil Code mandates the disclosure of six (6) natural hazard zones if the Property is located within any such zone. Those six "statutory" hazard zones, disclosed on the **Natural Hazard Disclosure Statement** ("NHDS") on Page one of this Report, are explained below. Note that the NHDS does not provide for informing buyers if a property is only partially within any of the delineated zones or provide additional flood zone information which could be very important to the process. The following summary is intended to give buyers additional information they may need to help them in the decision-making process and to place the information in perspective.

SPECIAL FLOOD HAZARD AREA

DISCUSSION: Property in a Special Flood Hazard Area (any type of Zone "A" or "V" as designated by the Federal Emergency Management Agency ("FEMA") is subject to flooding in a "100-year rainstorm." Federally connected lenders require homeowners to maintain flood insurance for buildings in these zones. A 100-year flood occurs on average once every 100 years, but may not occur in 1,000 years or may occur in successive years. According to FEMA, a home located within a SFHA has a 26% chance of suffering flood damage during the term of a 30-year mortgage. Other types of flooding, such as dam failure, are not considered in developing these zones. Flood insurance for properties in Zones B, C, D, X, X500, and X500_Levee is available but is not required.

Zones A, AO, AE, AH, AR, A1-A30: Area of "100-year" flooding - a 1% or greater chance of annual flooding.
Zone A99: An “adequate progress” determination for flood control system construction projects that, once completed, may significantly limit the area of a community that will be included in the Special Flood Hazard Area (SFHA). Such projects reduce but do not eliminate, the risk of flooding to people and structures in “levee-impacted” areas, and allow mandatory flood insurance to be available at a lower cost.
Zones V, V1-V30: Area of "100-year" flooding in coastal (shore front) areas subject to wave action.
Zone B: Area of moderate flood risk. These are areas between the "100" and "500" year flood-risk levels.
Zones C, D: NOT IN an area of "100-year" flooding. Area of minimal (Zone C) or undetermined (Zone D) flood hazard.
Zones X: An area of minimal flood risk. These are areas outside the "500" year flood-risk level.
Zone X500: An area of moderate flood risk. These are areas between the "100" and "500" year flood-risk levels.
Zone X500_LEVEE: An area of moderate flood risk that is protected from "100-year flood" by levee and that is subject to revision to high risk (Zone A) if levee is decertified by FEMA.
Zone N: Area Not Included, no flood zone designation has been assigned or not participating in the National Flood Insurance Program.

Notice: The Company is not always able to determine if the Property is subject to a FEMA Letter of Map Revision ("LOMR") or other FEMA letters of map change. If Seller is aware that the Property is subject to a LOMR or other letters of map change, the Seller shall disclose the map change and attach a copy of the FEMA letter(s) to the Report. Contact FEMA at http://msc.fema.gov for additional information.

For more information about flood zones, visit:
http://www.floodsmart.gov/floodsmart/pages/flooding_flood_risks/defining_flood_risks.jsp

PUBLIC RECORD: Official Flood Insurance Rate Maps ("FIRM") compiled and issued by the Federal Emergency Management Agency ("FEMA") pursuant to 42 United States Code §4001, et seq.

AREA OF POTENTIAL FLOODING (DAM FAILURE)

DISCUSSION: Local governmental agencies, utilities, and owners of certain dams are required to prepare and submit inundation maps for review and approval by the California Office of Emergency Services ("OES"). A property within an Area of Potential Flooding Caused by Dam Failure is subject to potential flooding in the event of a sudden and total dam failure with a full reservoir. Such a failure could result in property damage and/or personal injury. However, dams rarely fail instantaneously and reservoirs are not always filled to capacity. Please note that not all dams (such as federally controlled dams) located within the state have been included within these dam inundation zones. Also these maps do not identify areas of potential flooding resulting from storms or other causes.

PUBLIC RECORD: Official dam inundation maps or digital data thereof made publicly available by the State of California Office of Emergency Services ("OES") pursuant to California Government Code §8589.5.

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VERY HIGH FIRE HAZARD SEVERITY ZONE (VHFHSZ)

DISCUSSION: VHFHSZs can be defined by the California Department of Forestry and Fire Protection ("Calfire") as well as by local fire authorities within "Local Responsibility Areas" where fire suppression is the responsibility of a local fire department. Properties located within VHFHS Zones may have a higher risk for fire damage and, therefore, may be subject to (i) additional construction requirements such as a "Class A" roof for new construction or replacement of existing roofs; and (ii) additional maintenance responsibilities such as adequate vegetation clearance near the structure, spark screens on chimneys and stovepipes, leaf removal from roofs, and other basic fire-safety practices. Contact the local fire department for a complete list of requirements and exceptions.

PUBLIC RECORD: Maps issued by Calfire pursuant to California Government Code § 51178 recommending VHFHSZs to be adopted by the local jurisdiction within its Local Responsibility Area, or VHFHSZs adopted by the local jurisdiction within the statutory 120-day period defined in California Government Code § 51179.

WILDLAND FIRE AREA (STATE RESPONSIBILITY AREA)

DISCUSSION: The State Board of Forestry classifies all lands within the State of California based on various factors such as ground cover, beneficial use of water from watersheds, probable damage from erosion, and fire risks. Fire prevention and suppression in all areas which are not within a Wildland - State Responsibility Area ("WSRA") is primarily the responsibility of the local or federal agencies, as applicable.

For property located within a WSRA, please note that (1) there may be substantial forest fire risks and hazards; (2) except for property located within a county which has assumed responsibility for prevention and suppression of all fires, it is NOT the state's responsibility to provide fire protection services to any building or structure located within a WSRA unless the Department has entered into a cooperative agreement with a local agency; and (3) the property owner may be is subject to (i) additional construction requirements such as a "Class A" roof for new construction or replacement of existing roofs; and (ii) additional maintenance responsibilities such as adequate vegetation clearance near the structure, spark screens on chimneys and stovepipes, leaf removal from roofs, and other basic fire-safety practices.

The existence of local agreements for fire service is not available in the Public Record and, therefore, is not included in this disclosure. For very isolated properties with no local fire services or only seasonal fire services there may be significant fire risk. If the Property is located within a WSRA, please contact the local fire department for more detailed information.

PUBLIC RECORD: Official maps issued by the California Department of Forestry and Fire Protection ("Calfire") pursuant to California Public Resources Code § 4125.

SRA Fire Prevention Benefit Fee Advisory

In 2011, the California Legislature and Governor enacted a "Fire Prevention Fee" on habitable structures in the State's wildland fire responsibility area. The yearly fee, levied on property owners, paid for various activities to prevent and suppress wildfires in the SRA, and was most recently at the rate of $152.33 per habitable structure on the property.

Effective July 1, 2017, as authorized by Assembly Bill 398 and signed by the Governor, that fire prevention fee is suspended until 2031.

For more information, please refer to "Part 6. State Responsibility Area Fire Prevention Fee" in the FANHD Property Tax Report.

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EARTHQUAKE FAULT ZONE

DISCUSSION: Earthquake Fault Zones are delineated and adopted by California as part of the Alquist-Priolo Earthquake Fault Zone Act of 1972. Property in an Earthquake Fault Zone ("EF Zone") does not necessarily have a fault trace existing on the site. EF Zones are areas or bands delineated on both sides of known active earthquake faults. EF Zones vary in width but average one-quarter (1/4) mile in width with the "typical" zone boundaries set back approximately 660 feet on either side of the fault trace. The potential for "fault rupture" damage (ground cracking along the fault trace) is relatively high only if a structure is located directly on a fault trace. If a structure is not on a fault trace, shaking will be the primary effect of an earthquake. During a major earthquake, shaking will be strong in the vicinity of the fault and may be strong at some distance from the fault depending on soil and bedrock conditions. It is generally accepted that properly constructed wood-frame houses are resistant to shaking damage.

PUBLIC RECORD: Official earthquake fault zone or special study zone maps approved by the State Geologist and issued by the California Department of Conservation, California Geological Survey pursuant to California Public Resources Code §2622.

SEISMIC HAZARD MAPPING ACT ZONE

DISCUSSION: Official Seismic Hazard Zone ("SH Zone") maps delineate Areas of Potential Liquefaction and Areas of Earthquake-Induced Landsliding. A property that lies partially or entirely within a designated SH Zone may be subject to requirements for site-specific geologic studies and mitigation before any new or additional construction may take place.

Earthquake-Induced Landslide Hazard Zones are areas where the potential for earthquake-induced landslides is relatively high. Areas most susceptible to these landslides are steep slopes in poorly cemented or highly fractured rocks, areas underlain by loose, weak soils, and areas on or adjacent to existing landslide deposits. The CGS cautions these maps do not capture all potential earthquake-induced landslide hazards and that earthquake-induced ground failures are not addressed by these maps. Furthermore, no effort has been made to map potential run-out areas of triggered landslides. It is possible that such run-out areas may extend beyond the zone boundaries. An earthquake capable of causing liquefaction or triggering a landslide may not uniformly affect all areas within a SH Zone.

Liquefaction Hazard Zones are areas where there is a potential for, or an historic occurrence of liquefaction. Liquefaction is a soil phenomenon that can occur when loose, water saturated granular sediment within 40 feet of the ground surface, are shaken in a significant earthquake. The soil temporarily becomes liquid-like and structures may settle unevenly. The Public Record is intended to identify areas with a relatively high potential for liquefaction but not to predict the amount or direction of liquefaction-related ground displacement, nor the amount of damage caused by liquefaction. The many factors that control ground failure resulting from liquefaction must be evaluated on a site specific basis.

PUBLIC RECORD: Official seismic hazard maps or digital data thereof approved by the State Geologist and issued by the California Department of Conservation, California Geological Survey pursuant to California Public Resources Code §2696.

STATUTORY NATURAL HAZARD DISCLOSURE REPORTING STANDARD: "IN" shall be reported if any portion of the Property is located within any of the above zones as delineated in the Public Record. "NOT IN" shall be reported if no portion of the Property is located within any of the above zones as delineated in the Public Record. Map Not Available shall be reported in areas not yet evaluated by the governing agency according to the Public Record. Please note that "MAP NOT AVAILABLE" will be applicable to most portions of the state. Official Seismic Hazard Zone ("SH Zone") maps delineate Areas of Potential Liquefaction and Areas of Earthquake-Induced Landsliding.

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Part 2. County and City Defined Natural Hazard Zones

HAZARD MAPS IN THE LOCAL GENERAL PLAN

General Plan regulates property development. There are currently over 530 incorporated cities and counties in California. The state Government Code (Sections 65000 et seq.) requires each of those jurisdictions to adopt a comprehensive, long-term "General Plan" for its physical development. That General Plan regulates land uses within the local jurisdiction in order to protect the public from hazards in the environment and conserve local natural resources. The General Plan is the official city or county policy regarding the location of housing, business, industry, roads, parks, and other land uses.

Municipal hazard zones can affect the cost of ownership. Each county and city adopts its own distinct General Plan according to that jurisdiction's unique vegetation, landscape, terrain, and other geographic and geologic conditions. The "Safety Element" (or Seismic Safety Element) of that General Plan identifies the constraints of earthquake fault, landslide, flood, fire and other natural hazards on local land use, and it delineates hazard zones within which private property improvements may be regulated through the building-permit approval process, which can affect the future cost of ownership. Those locally regulated hazard zones are in addition to the federal and state defined hazard zones associated with statutory disclosures in the preceding section.

City and/or County natural hazard zones explained below. Unless otherwise specified, only those officially adopted Safety Element or Seismic Safety Element maps (or digital data thereof) which are publicly available, are of a scale, resolution, and quality that readily enable parcel-specific hazard determinations, and are consistent in character with those statutory federal or state disclosures will be considered for eligible for use as the basis for county- or city-level disclosures set forth in this Report. Please also note:

- If an officially adopted Safety Element or Seismic Safety Element map relies on data which is redundant of that used for state-level disclosures, this Report will indicate so and advise Report recipients to refer to the state-level hazard discussion section for more information.
- If an officially adopted Safety Element or Seismic Safety Element cites underlying maps created by another agency, those maps may be regarded as incorporated by reference and may be used as the basis for parcel-specific determinations if those maps meet the criteria set forth in this section.
- Because county- and city-level maps are developed independently and do not necessarily define or delineate a given hazard the same way, the boundaries for the "same" hazard may be different.

If one or more maps contained in the Safety Element and/or Seismic Safety Element of an officially adopted General Plan are used as the basis for local disclosure, those maps will appear under the "Public Record(s) Searched" for that county or city.

REPORTING STANDARDS

A good faith effort has been made to disclose all hazard features on pertinent Safety Element and Seismic Safety Element maps with well-defined boundaries; however, those hazards with boundaries that are not delineated will be deemed not suitable for parcel-specific hazard determinations. Some map features, such as lines drawn to represent the location of a fault trace, may be buffered to create a zone to facilitate disclosure. Those map features which can not be readily distinguished from those representing hazards may be included to prevent an omission of a hazard feature. If the width of a hazard zone boundary is in question, "IN" will be reported if that boundary impacts any portion of a property. Further explanations concerning specific map features peculiar to a given county or city will appear under the "Reporting Standards" for that jurisdiction.

PUBLIC RECORDS VS. ON-SITE EVALUATIONS

Mapped hazard zones represent evaluations of generalized hazard information. Any specific site within a mapped zone could be at less or more relative risk than is indicated by the zone designation. A site-specific evaluation conducted by a geotechnical consultant or other qualified professional may provide more detailed and definitive information about the Property and any conditions which may or do affect it.

PROPERTY USE AND PERMITTING

No maps beyond those identified as "Public Record(s)" have been consulted for the purpose of these local disclosures. These disclosures are intended solely to make Report recipient(s) aware of the presence of mapped hazards. For this reason -- and because local authorities may use on these or additional maps or data differently to determine property-specific land use and permitting approvals -- Report recipients are advised to contact the appropriate local agency, usually Community Development, Planning, and/or Building, prior to the transaction to ascertain if these or any other conditions or related regulations may impact the Property use or improvement.

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ORANGE COUNTY GEOLOGIC ZONES DISCUSSION

PUBLIC RECORD(S) SEARCHED: The following Public Records, incorporated by reference into the Safety Element of the General Plan as adopted by the County Board of Supervisors in 2000, is utilized for those county-level disclosures below: "Environmental Geology of Orange County," a map series prepared by California Geological Survey, Open-File Report 79-8 L.A.

FAULT

- **Active faults (Alquist-Priolo Earthquake Fault Zone):** These faults have evidence of displacement during the most recent epoch of geologic time, the Holocene epoch, generally considered to have begun about 11,000 years ago.
- **Potentially active faults:** These faults show activity within the past 2 million years but show no evidence of movement within the past 11,000 years
- **Inactive faults:** Faults which show no evidence of movement during the past two million years and show no potential for movement in the future.

Reporting Standards: If any portion of the Property is situated within one-eighth of one mile (660 feet) of a fault trace as delineated in the Public Record, "WITHIN" shall be reported.

DEBRIS FLOW, MUD FLOW, AND ROCKFALL

Areas of potential mud and/or debris flow may occur during periods of exceptionally high rainfall. Rockfall zones may experience falling rocks during periods of exceptionally high rainfall or seismic shaking.
Reporting Standards: If any portion of the Property is within a Mud Flow Zone as delineated in the Public Record,, "IN" shall be reported. If any portion of the Property is within a Rockfall Zone as delineated in the Public Record, "IN" shall be reported.

LIQUEFACTION POTENTIAL

Liquefaction is a liquid-like condition of the soil which sometimes occurs during earthquake shaking where the ground water level is close to the surface and the subsurface materials are loose and cohesionless (such as sandy soil). These factors have the potential to combine to produce liquefaction in local areas.
Reporting Standards: If any portion of the Property is within a Liquefaction Zone as delineated in the Public Record, "IN" shall be reported.

SEISMIC SHAKING

Several seismic zones have been defined by Orange County to separate areas having varying responses to earthquake shaking. The zones were defined utilizing a variety of geologic, hydrologic and slope gradient information, but by necessity, have been generalized. Any single property within a Seismic Zone could be at less or more relative risk than is indicated by the zone designation. If site-specific information regarding seismic hazards is desired, this company recommends that a geotechnical consultant be retained to study the site.

- **Seismic Shaking Zone A:** Zone A represents areas of least earthquake shaking. The maximum expected damage to modern construction due to shaking is expected to be minor to moderate in this zone.
- **Seismic Shaking Zone B:** Zone B represents areas of intermediate earthquake shaking. The maximum expected damage to modern construction due to shaking is expected to be moderate in this zone.
- **Seismic Shaking Zone C:** These are areas of high geologic hazard only if strong earthquake shaking produces liquefaction.

Reporting Standards: If any portion of the Property is within a Seismic Shaking Zone as delineated in the Public Record, only the more/most severe shall be reported.

TSUNAMI

This area has been designated as a zone of moderate risk for tsunami (seismic sea wave or "tidal wave ") run-up. Properties in a tsunami zone may be inundated with waves which recur on the average of once every 100 years.
Reporting Standards: If any portion of the Property is within a Tsunami Run-up Zone as delineated in the Public Record, "IN" shall be reported.

LANDSLIDE / SLOPE STABILITY ZONES

The relative slope stability zones represent average slope stability conditions. This Report discloses Slope Stability Zone for conditions under seismic (earthquake) conditions, not aseismic (normal) conditions, as detailed in the Public Record.

- **Zone 1: Very low potential** for massive bedrock landslides under normal and seismic/earthquake conditions.
- **Zone 2: Moderately low potential** for massive bedrock landslides under seismic/earthquake conditions.
- **Zone 3: Moderately high potential** under seismic/earthquake conditions with a greater slope failure risk during earthquakes if the slope gradient is greater than 20% and the slope is underlain by relatively weak bedrock or weak soil materials.
- **Zone 4: High potential** for massive bedrock landslides under seismic/earthquake conditions.
- **Zones 5 and 6: Very high potential** for massive bedrock landslides under seismic/earthquake conditions.

- **Zone W:** Coastal areas which have unstable slopes resulting from periodic wave erosion. Please note that the boundaries of this Slope Stability Area W are not defined in a manner suitable for definitive parcel-specific disclosure; therefore, this zone is not disclosed in this Report.

Reporting Standards: "Very High, High, or Moderate" shall be reported if any portion of the Property is within Slope Stability Zone 3, 4, 5, or 6. "Moderately Low or Low" shall be reported in the Property is completely within Slope Stability Zone 1 or 2.

EXPANSIVE SOILS

Expansive soils occur throughout much of Orange County. These areas are subject to the seasonal shrink-swell cycles of soils, as well as slope yielding if locally on a slope. Three possible conditions related to expansive soils exist in the County.

- **Differential Swell** is the uneven tilting or lifting of a structure by the greater expansion of thicker soils on one side of the structure.
- **Concentric Swell** is caused by the migration of water toward the center of a structure, causing expansion of the soils, and lifting of the center of the structure.
- **Slope Yielding** is a slow down slope movement of soils, causing tilting of the foundation of a structure. Experts agree that no residence is completely safe from cracking, slipping or sinking to some degree.

Expansive soil problems can be mitigated, in most cases, through structural and design modifications and, in some cases, through soil treatment techniques. Mapped areas of expansive soils are identified as:

- **Areas of Man Made Land with Extremely Variable Expansivity Potential**
- **Areas of High Expansivity Potential**
- **Areas of Tidal Flats with Highly Variable Expansivity or Shrink Potential**
- **Areas of Moderate Expansivity Potential**
- **Areas of Low Expansivity Potential**

Reporting Standards: If any portion of the Property is within an area of Low, Moderate, or High Expansivity Potential or is within a Tidal Flat as delineated in the Public Record, "IN" shall be reported for the more/most severe condition.

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CITY OF LAKE FOREST GEOLOGIC ZONES DISCUSSION

PUBLIC RECORD(S) SEARCHED: The following Public Record, incorporated into the Safety and Noise Element of the General Plan as adopted by the City Council in 1994, are used for those city-level disclosures below: " Figure SN-3: Area of Fire Hazard " prepared by Cotton/Beland/Associates, Inc.

FIRE

According to the General Plan the City's Planning Area is subject to both wild and urban fires. The eastern portion is contiguous with the Cleveland National Forest. Regional natural vegetation is highly prone to wild fire. A fire in the national forest could spread to developed areas. The urbanized portion of the Planning Area is also subject to structural fires. The City will reduce the potential for dangerous fires by coordinating with the Orange County Fire Department to implement fire hazard education, fire protection, and fuel modification programs. The current Uniform Fire Code will be used to reduce structural fire hazards. In addition, the City will work closely with the local water districts and the Orange County Fire Department to ensure that water pressure is adequate for firefighting purposes.

Reporting Standards: If any portion of the Property is within the Fire Hazard Area delineated in the Public Record, "IN" shall be reported.

END OF LOCAL AREA DISCLOSURES AND DISCUSSIONS SECTION

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Part 3. Additional Property Specific Disclosures

FORMER MILITARY ORDNANCE SITE DISCLOSURE

DISCUSSION: Former Military Ordnance (FUD) sites can include sites with common industrial waste (such as fuels), ordnance or other warfare materiel, unsafe structures to be demolished, or debris for removal. California Civil Code Section 1102 requires disclosure of those sites containing unexploded ordnance. "Military ordnance" is any kind of munitions, explosive device/material or chemical agent used in military weapons. Unexploded ordnance are munitions that did not detonate. NOTE: **MOST** FUD sites do not contain unexploded ordnance. Only those FUD sites that the U.S. Army Corps of Engineers (USACE) has identified to contain Military Ordnance or have mitigation projects planned for them are disclosed in this Report. Additional sites may be added as military installations are released under the Federal Base Realignment and Closure (BRAC) Act. Active military sites are NOT included on the FUD site list.

PUBLIC RECORD: Data contained in Inventory Project Reports, Archives Search Reports, and related materials produced for, and made publicly available in conjunction with, the Defense Environmental Restoration Program for Formerly Used Defense Sites by the U.S. Army Corps of Engineers. Sites for which no map has been made publicly available shall not be disclosed.

REPORTING STANDARD: If one or more facility identified in the Public Record is situated within a one (1) mile radius of the Property, "**WITHIN**" shall be reported. The name of that facility or facilities shall also be reported.

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AIRPORT INFLUENCE AREA DISCLOSURE

DISCUSSION:
Certain airports are not disclosed in this Report. FANHD has made a good faith effort to identify the airports covered under Section 1102.6a. Sources consulted include official land use maps and/or digital data made available by a governing Airport Land Use Commission (ALUC) or other designated government body. Most facilities for which an Airport Influence Area has been designated are included on the "California Airports List" maintained by the California Department of Transportation's Division of Aeronautics. Not disclosed in this Report are public use airports that are not in the "California Airports List", airports that are physically located outside California, heliports and seaplane bases that do not have regularly scheduled commercial service, and private airports or military air facilities unless specifically identified in the "California Airports List". **If the seller has actual knowledge of an airport in the vicinity of the subject property that is not disclosed in this Report, and that is material to the transaction, the seller should disclose this actual knowledge in writing to the buyer.**

Most facilities for which an Airport Influence Area has been designated are included on the "California Airports List" maintained by the California Department of Transportation's Division of Aeronautics. The inclusion of military and private airports varies by County, and heliports and seaplane bases are not included, therefore, airports in these categories may or may not be included in this disclosure.

NOTE: Proximity to an airport does not necessarily mean that the property is exposed to significant aviation noise levels. Alternatively, there may be properties exposed to aviation noise that are greater than two miles from an airport. Factors that affect the level of aviation noise include weather, aircraft type and size, frequency of aircraft operations, airport layout, flight patterns or nighttime operations. Buyer should be aware that aviation noise levels can vary seasonally or change if airport usage changes.

PUBLIC RECORD: Based on officially adopted land use maps and/or digital data made publicly available by the governing ALUC or other designated government body. If the ALUC or other designated government body has not made publicly available a current officially adopted airport influence area map, then California law states that "a written disclosure of an airport within two (2) statute miles shall be deemed to satisfy any city or county requirements for the disclosure of airports in connection with transfers of real property."

REPORTING STANDARD: "**IN**" shall be reported along with the facility name(s) and the "Notice of Airport in Vicinity" if any portion of the Property is situated within either (a) an Airport Influence Area as designated on officially adopted maps or digital data or (b) a two (2) mile radius of a qualifying facility for which an official Airport Influence Area map or digital data has not been made publicly available by the ALUC or other designated governing body. "**NOT IN**" shall be reported if no portion of the Property is within either area.

The Natural Hazard Disclosure Report For ORANGE County

Property Address: VACANT AND 20865 CANADA RD
LAKE FOREST, ORANGE COUNTY, CA 92630
("Property")

APN: See Addendum
Report Date: 01/25/2019
Report Number: 2419042

AIRPORT NOISE DISCLOSURE

DISCUSSION: California Civil Code §1102.17 requires the seller(s) of residential real property who has/have actual knowledge that the property in the transaction is affected by airport use must give written notice of that knowledge, as soon as practicable, before transfer of title.

Under the Federal Aviation Administration's *Airport Noise Compatibility Planning Program Part 150*, certain 65 decibel (dB) Community Noise Equivalent Level (CNEL) contour maps have been produced for some airports. Not all airports have produced noise exposure maps. A property may be near or at some distance from an airport and not be within a delineated noise exposure area, but still experience aviation noise. Unless 65dB CNEL contour maps are published, helipads and military sites are not included in this section of the Report.

The *Airport Noise Compatibility Planning Program* is voluntary and not all airports have elected to participate. Furthermore, not all property in the vicinity of an airport is exposed to 65dB CNEL or greater average aviation noise levels. Conversely a property may be at some distance from an airport and still experience aviation noise. Buyer should be aware that aviation noise levels can vary seasonally or change if airport usage changes after a map is published or after the Report Date. FANHD uses the most seasonally conservative noise exposures provided.

Federal funding may be available to help airports implement noise reduction programs. Such programs vary and may include purchasing properties, rezoning, and insulating homes for sound within 65dB areas delineated on CNEL maps. Airport owners have also cooperated by imposing airport use restrictions that include curfews, modifying flight paths, and aircraft limitations.

PUBLIC RECORD: Certain 65 decibel (dB) Community Noise Equivalent Level (CNEL) contour maps produced under the Federal Aviation Administration's *Airport Noise Compatibility Planning Program Part 150*.

REPORTING STANDARD: "**IN**" shall be reported if any portion of the Property is situated within a 65 decibel Community Noise Equivalent Level contour identified in the Public Record. "**NOT IN**" shall be reported if no portion of the Property is situated within a 65 decibel Community Noise Equivalent Level contour identified in the Public Record.

Property Address: VACANT AND 20865 CANADA RD
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APN: See Addendum
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Part 4. General Advisories

METHAMPHETAMINE CONTAMINATED PROPERTY DISCLOSURE ADVISORY

DISCUSSION: According to the "Methamphetamine Contaminated Property Cleanup Act of 2005" a property owner must disclose in writing to a prospective buyer if local health officials have issued an order prohibiting the use or occupancy of a property contaminated by meth lab activity. The owner must also give a copy of the pending order to the buyer to acknowledge receipt in writing. Failure to comply with these requirements may subject an owner to, among other things, a civil penalty up to $5,000. Aside from disclosure requirements, this new law also sets forth procedures for local authorities to deal with meth-contaminated properties, including the filing of a lien against a property until the owner cleans up the contamination or pays for the cleanup costs.

The Natural Hazard Disclosure Report For ORANGE County

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MOLD ADVISORY

DISCUSSION: The Buyer is hereby advised that naturally occurring molds may exist both inside and outside of any home and may not be visible to casual inspection. Persons exposed to extensive mold levels can become sensitized and develop allergies to the mold or other health problems. Extensive mold growth can damage a structure and its contents. All prospective purchasers of residential and commercial property are advised to thoroughly inspect the Property for mold. Be sure to inspect the Property inside and out for sources of excess moisture, current water leaks and evidence of past water damage.

As part of a buyer's physical inspection of the condition of a property, the buyer should consider engaging an appropriate and qualified professional to inspect and test for the presence of harmful molds and to advise the buyer of any potential risk and options available. This advisory is not a disclosure of whether harmful mold conditions exist at a property or not. No testing or inspections of any kind have been performed by The Company. Any use of this form is acknowledgement and acceptance that The Company does not disclose, warrant or indemnify mold conditions at a property in any way and is not responsible in any way for mold conditions that may exist. Information is available from the California Department of Health Services Indoor Air Quality Section fact sheet entitled, "Mold in My Home: What Do I Do?" The fact sheet is available at https://archive.cdph.ca.gov/programs/IAQ/Pages/IndoorMold.aspx or by calling (510) 620-3620.

The Toxic Mold Protection Act of 2001 requires that information be developed regarding the potential issues surrounding naturally occurring molds within a home. Information was written by environmental authorities for inclusion in the *Residential Environmental Hazards: A Guide for Homeowners, Buyers, Landlords and Tenants* booklet developed by the California Environmental Protection Agency and the Department of Health Services. It is found in Chapter VII of that booklet, and includes references to sources for additional information.

For local assistance, contact your county or city Department of Health, Housing, or Environmental Health.

The Natural Hazard Disclosure Report For ORANGE County

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RADON ADVISORY

DISCUSSION: For its Radon Advisory, FANHD uses the updated assessment of radon exposure published in 1999 by the Lawrence Berkeley National Laboratory (LBNL) and Columbia University, under support from the U.S. Environmental Protection Agency (EPA), the National Science Foundation, and the US Department of Energy (published online at http://www2.lbl.gov/Science-Articles/Archive/radon-risk-website.html). Based on this recent assessment, FANHD radon advisory is as follows:

All of California's 58 counties have a predicted median annual-average living-area concentration of radon below 2.0 pCi/L (picocuries per liter of indoor air) -- which is well below the EPA's guideline level of 4 pCi/L and equivalent to the lowest hazard zone (Zone 3) on the 1993 EPA Map of Radon Zones.

The "median concentration" means that half of the homes in a county are expected to be below this value and half to be above it. All houses contain some radon, and a few houses will contain much more than the median concentration. **The only way to accurately assess long-term exposure to radon in a specific house is through long-term testing (sampling the indoor air for a year or more). The EPA recommends that all homes be tested for radon.** Columbia University's "Radon Project" website offers help to homeowners in assessing the cost vs. benefit of testing a specific house for radon or modifying it for radon reduction (see http://www.stat.columbia.edu/~radon/).

NOTE: FANHD does not use the EPA's 1993 map for advisory purposes because that map shows "short-term" radon exposure averaged by county. It was based on "screening measurements" that were intentionally designed to sample the worst-case conditions for indoor air in US homes--using spot checks (sampling for just a few days), in the poorest air quality (with sealed doors and windows), at the worst time of the year (winter), in the worst part of the house (the basement, if one was available). These short-term, winter, basement measurements are both biased and variable compared to long-term radon concentrations (averaged over a year) in the living area of a house. Long-term concentrations are a more accurate way to judge the long-term health risk from radon. For the above reasons, the EPA expressly disclaims the use of its 1993 map for determining whether any house should be tested for radon, and authorizes no other use of its map for property-specific purposes. For additional information about EPA guidelines and radon testing, see "Chapter VII--Radon", in the California Department of Real Estate's *Residential Environmental Hazards: A Guide for Homeowners, Homebuyers, Landlords and Tenants*.

ENDANGERED SPECIES ACT ADVISORY

DISCUSSION: The Federal Endangered Species Act of 1973 ("ESA"), as amended, requires that plant and animal species identified and classified ("listed") by the Federal government as "threatened" or "endangered" be protected under U.S. law. Areas of habitat considered essential to the conservation of a listed species may be designated as "critical habitat" and may require special management considerations or protection. All threatened and endangered species -- even if critical habitat is not designated for them -- are equally afforded the full range of protections available under the ESA.

In California alone, over 300 species of plants and animals have been designated under the ESA as threatened or endangered, and over 80 species have critical habitats designated for them. Most California counties are host to a dozen or more protected species and, in many cases, 10 or more species have designated critical habitats within a county.

ADVISORY: An awareness of threatened and endangered species and/or critical habitats is not reasonably expected to be within the actual knowledge of a seller.

No federal or state law or regulation requires a seller or seller's agent to disclose threatened or endangered species or critical habitats, or to otherwise investigate their possible existence on real property. Therefore, Buyer is advised that, prior to purchasing a vacant land parcel or other real property, Buyer should consider investigating the existence of threatened or endangered species, or designated critical habitats, on or in the vicinity of the Property which could affect the use of the Property or the success of any proposed (re)development.

FOR MORE INFORMATION: Complete and current information about the threatened and endangered species in California that are Federally listed in each county -- including all critical habitats designated there -- is available on the website of the U.S. Fish & Wildlife Service, the Federal authority which has enforcement responsibility for the ESA.

U.S. Fish & Wildlife Service Endangered Species Database (TESS)
http://ecos.fws.gov/tess_public/

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ABANDONED MINES ADVISORY

DISCUSSION: According to the California Department of Conservation, Office of Mine Reclamation, since the Gold Rush of 1849, tens of thousands of mines have been dug in California. Many were abandoned when they became unproductive or unprofitable. The result is that California's landscape contains many thousands of abandoned mines, which can pose health, safety, or environmental hazards on and around the mine property. Mines can present serious physical safety hazards, such as open shafts or adits (mine tunnel), and they may create the potential to contaminate surface water, groundwater, or air quality. Some abandoned mines are such massive problems as to earn a spot on the Federal Superfund environmental hazard list.

No California law requires the disclosure of abandoned mines in a real estate transaction, unless the existence of an abandoned mine is within the actual knowledge of the Seller and is deemed to be a fact material to the transaction.

The Office of Mine Reclamation (OMR) and the U.S. Geological Survey maintain a database of abandoned mines -- however, it is known to be incomplete and based on maps that are often decades out of date. Many mines are not mapped because they are on private land. The OMR warns that, ***"Many old and abandoned mines are not recorded in electronic databases, and when they are, the information may not be detailed enough to accurately define, differentiate or locate the mine feature, such as a potentially hazardous vertical shaft or horizontal adit or mine waste." (See reference below.)***

Accordingly, this Report does not contain an abandoned mines disclosure from any government database or map or any other source, in order to protect the seller from liability for non-disclosure of unrecorded abandoned mines.

Parties concerned about the possible existence or impact of abandoned mines in the vicinity of the Property are advised to retain a State-licensed geotechnical consultant to study the site and issue a report. Other sources of information include, but are not limited to, the State Office of Mine Reclamation at (916) 323-9198 (website: http://www.conservation.ca.gov/OMR), and the Engineering, Planning or Building Departments in the subject City and County.

FOR MORE INFORMATION: For more information visit the State Office of Mine Reclamation's website at:
http://www.conservation.ca.gov/omr/abandoned_mine_lands/Pages/index.aspx

OIL & GAS WELL ADVISORY

California is currently ranked fourth in the nation among oil producing states. Surface oil production is concentrated mainly in the Los Angeles Basin and Kern County, and in districts elsewhere in the state. In recent decades, real estate development has rapidly encroached into areas where oil production has occurred. Because the state's oil production has been in decline since the 1980's, thousands of oil and gas wells have been shut down or abandoned, and many of those wells are in areas where residential neighborhoods now exist.

According to the California Department of Conservation ("DOC"), to date, about 230,000 oil and gas wells have been drilled in California and around 105,000 are still in use. The majority of remaining wells have been sealed ("capped") under the supervision of the DOC's Division of Oil, Gas and Geothermal Resources. A smaller number have been abandoned and have no known responsible operator -- these are called "orphan" wells. The state has a special fund that pays the cost of safely capping orphan wells, however, that program is limited in its scope and progress.

Buyer should be aware that, while the DOC database is the most comprehensive source available for California oil and gas well information, the DOC makes no warranties that the database is absolutely complete, or that reported well locations are known with absolute accuracy.

For More Information
For a search of the state's databases of oil and gas wells and sites of known environmental contamination on or near the Property, please obtain the FANHD Residential Environmental Report. For general information, visit the California Department of Conservation, Division of Oil, Gas, and Geothermal Resources at http://www.consrv.ca.gov/dog.

The Natural Hazard Disclosure Report For ORANGE County

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TSUNAMI MAP ADVISORY

DISCUSSION: The California Emergency Management Agency (CalEMA), the University of Southern California Tsunami Research Center (USC), and the California Geological Survey (CGS) have prepared maps that depict areas of maximum tsunami inundation for all populated areas at risk to tsunamis in California (20 coastal counties). The maps were publicly released in December 2009 with the stated purpose that the maps are to assist cities and counties in identifying their tsunami hazard and developing their coastal evacuation routes and emergency response plans only.

These maps specifically contain the following disclaimer:

Map Disclaimer: This tsunami inundation map was prepared to assist cities and counties in identifying their tsunami hazard. It is intended for local jurisdictional, coastal evacuation planning uses only. This map, and the information presented herein, ***is not a legal document and does not meet disclosure requirements for real estate transactions nor for any other regulatory purpose.*** The California Emergency Management Agency (CalEMA), the University of Southern California (USC), and the California Geological Survey (CGS) make no representation or warranties regarding the accuracy of this inundation map nor the data from which the map was derived. Neither the State of California nor USC shall be liable under any circumstances for any direct, indirect, special, incidental or consequential damages with respect to any claim by any user or any third party on account of or arising from the use of this map.

A tsunami is a series of ocean waves or surges most commonly caused by an earthquake beneath the sea floor. These maps show the maximum tsunami inundation line for each area expected from tsunamis generated by undersea earthquakes and landslides in the Pacific Ocean. Because tsunamis are rare events in the historical record, the maps provide no information about the probability of any tsunami affecting any area within a specific period of time.

Although these maps may not be used as a legal basis for real estate disclosure or any other regulatory purpose, the CGS has, however, provided diagrams of the maps online which the public can view. To see a maximum tsunami inundation map for a specific coastal community, or for additional information about the construction and/or intended use of the tsunami inundation maps, visit the websites below:

State of California Emergency Management Agency, Earthquake and Tsunami Program:
http://myhazards.calema.ca.gov/

University of Southern California -- Tsunami Research Center:
http://www.usc.edu/dept/tsunamis/2005/index.php

State of California Geological Survey Tsunami Information:
http://www.conservation.ca.gov/cgs/geologic_hazards/Tsunami/index.htm

National Oceanic and Atmospheric Agency Center for Tsunami Research (MOST model):
http://nctr.pmel.noaa.gov/time/background/models.html

END OF NATURAL HAZARD DISCLOSURE REPORT SECTION
See Terms and Conditions at end of this Report.

Property Address: VACANT AND 20865 CANADA RD
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TERMS and CONDITIONS

ACCEPTANCE OR USE OF THIS REPORT CONSTITUTES APPROVAL AND ACCEPTANCE OF THE TERMS, CONDITIONS, AND LIMITATIONS STATED HEREIN.

The Report ("Report") is subject to each of the following Terms and Conditions. Each Recipient (defined below) of the Report agrees that the Report is subject to the following Terms and Conditions, and each Recipient agrees to be bound by such. Use of this Report by any Recipient constitutes acceptance of the Terms and Conditions to the Report. The Terms and Conditions below are incorporated by this reference into the Report. **This Report is not an insurance policy.**

This Report is made for the real property specifically described in the Report (the “Property”) and solely for the transaction for which it was originally purchased ("Transaction"). The Property shall not include any property beyond the boundaries of the real property described in the Report. The Property shall not include any structures (whether located on the Property, or not), easements, or any right, title, interest, estate, or easement in any abutting streets, roads, alleys, lanes, ways, or waterways.

IMPORTANT NOTICE: Transferor(s) and transferee(s) shall read the complete Report in its entirety before the close of escrow. A "Signature Page" or "Summary Pages" document may be included in the electronic delivery of this Report. Those documents do not replace the complete Report or remove the need to read the complete Report, and do not remove the requirement to disclose. The Signature Page and Summary Pages documents are subject to the Terms and Conditions of the complete Report.

A. **No Third Party Reliance on This Report.** Only the transferor(s) and transferee(s), and their agents/brokers, if any, involved in the Transaction (collectively, the "Recipients") may use and rely on this Report and only after they have paid in full for the Report. While disclosures made on the Natural Hazard Disclosure Statement in the Report may indicate certain risks to the Property, the disclosures are only "…between the transferor, the transferor's agents, and the transferee, and shall not be used by any other party, including, but not limited to, insurance companies, lenders, or governmental agencies, for any purpose." Cal. Civil Code section 1103.2, subdivision (g).

B. **Seller and Seller’s Agent’s Responsibility of Full Disclosure.** Recipients are obligated to make disclosures, and always disclose material facts, that are within their actual knowledge.

C. **Scope of Report.** This Report is limited to determining whether the Property is in those specified natural hazard zones and property tax districts, and in proximity to those specified environmental sites (depending on the report product ordered), as defined in the Report. The Report is not a geologic report or a land survey and no site inspection has been made in producing the Report. FANHD makes no determination, expresses no opinion or view, and assumes no responsibility in this Report concerning the right, entitlement, or ability to develop or improve the Property. FANHD has no information concerning whether the Property can be developed or improved. No determination is made and no opinion is expressed, or intended, by this Report concerning structures or soils on or outside of the Property, including, without limitation, habitability of structures or the Property, suitability of the Property for construction or improvement, potential for soil settlement, drainage, soil subsidence, or other soil or site conditions. The Recipient(s) is advised to consult the local Planning Department to determine whether factors beyond the scope of this Report may limit the transferee(s) ability to use or improve the Property.

   The Report is not a title report, and no determination is made and no opinion is expressed, or intended, by this Report as to title to the Property or liens against the Property, recorded or otherwise, or whether the Property is comprised of legal lots in conformance with the California Subdivision Map Act or local ordinances. The Report is not a property inspection report, and no determination is made and no opinion is expressed, or intended, by this Report concerning architectural, structural, mechanical, engineering, or legal matters, or the marketability or value of the Property. FANHD has not conducted any testing or physical or visual examination or inspection of the Property, nor is this Report a substitute for any such testing, physical or visual examination, or inspection.

D. **Tax and Environmental Disclosures (if included in Report).** No determination is made and no opinion is expressed, or intended, by the Report concerning the existence of property tax liabilities, or the existence of hazardous or toxic materials or substances, or any other defects, on, under, or in proximity to the Property, unless specifically described in the Report. FANHD's total liability for any error or omission in its disclosures relating to taxes and/or environmental matters shall be limited to actual proven damages not to exceed the price paid for this Report.

E. **FANHD Database Updates.** Each database used in this Report is updated by the responsible agency at various intervals. Updates for a database are determined by the responsible agency and may be made at any time and without notice. FANHD maintains an update schedule and makes reasonable efforts to use updated information. For these reasons, FANHD reports information as of the date when the database was last updated by FANHD. That date is specified as the "Database Date" for each database.

F. **Statutory and Additional Disclosures, Advisories, and Local Addenda (if included in Report).** No determination is made and no opinion is expressed, or intended, by this Report concerning the need to purchase earthquake or flood insurance for the Property. In preparing the Report, FANHD accurately reported on information contained in Government Records. FANHD reviewed and relied upon those Government Records specifically identified and described in the Report. FANHD has not reviewed or relied upon any Government Records that are not specifically identified in the Report. FANHD also has not reviewed any plat maps, survey maps, surveyor maps, assessor maps, assessor parcel maps, developer maps, or engineering maps, whether or not such maps have been recorded. No determination is made and no opinion is expressed, or intended, by the Report concerning any matters identified in Government Records that were not reviewed by FANHD. Local Addenda, where applicable, are included "AS IS" as an accommodation to the local real estate board that provided the content; FANHD assumes no responsibility for the accuracy of any information included in the Local Addenda.

G. **FEMA Flood Determination Certificate (if accompanying the Report).** No determination is made and no opinion is expressed, or intended, by the Report concerning the requirement for or cost of flood insurance on the Property. Recipient(s) understands that a lender may require flood insurance to secure its loan collateral independent of whether FEMA may require flood insurance under the National Flood Insurance Program on a federally backed mortgage. The FEMA Flood Determination Certificate ("Flood Certificate"), which may accompany the Report, is produced by a third-party expert certified by FEMA to provide Flood Certificates. FANHD assumes no liability for errors in that third-party flood determination.

H. **Changes to Government Record after Report Date.** This Report is issued as of the Report Date identified in the Report. FANHD shall have no obligation to advise any Recipient of any information learned or obtained after the Report Date even if such information would modify or otherwise affect the Report. Subsequent to FANHD acquisition of Government Records, changes may be made to said Government Records and FANHD is not responsible for advising the Recipients of any changes. FANHD will update this Report upon request and at no charge during the transaction process for which this Report was issued, but not to exceed one year from the date of the Report. Likewise, FANHD is not liable for any impact on the Property that any change to the Government Records may have.

First American
Natural Hazard Disclosures™

FANHD Commercial Property Disclosure Reports
Terms and Conditions

Property Address: VACANT AND 20865 CANADA RD
LAKE FOREST, ORANGE COUNTY, CA 92630
("Property")

APN: See Addendum
Report Date: 01/25/2019
Report Number: 2419042

I. **Government Record Sources.**FANHD relies upon the Government Records specifically identified in the Report without conducting an independent investigation of their accuracy. FANHD assumes no responsibility for the accuracy of the Government Records identified in the Report. FANHD makes no warranty or representation of any kind, express or implied, with respect to the Report. FANHD expressly disclaims and excludes any and all other express and implied warranties, including, without limitation, warranties of merchantability or fitness for a particular purpose. The FANHD Report is "AS IS".

J. **Limitation of FANHD's Liability**

1. FANHD is not responsible for:
   - Any inaccuracies or incompleteness of the information in the Public Records.
   - Inaccurate address information provided for the Property.
   - Any other information not contained in the Public Records as of the Report Date.
   - Any information which would be disclosed by a physical inspection of the Property.
   - Any information known by one of the Parties.
   - The health or risk to humans or animals that may be associated with any of the disclosed hazards.
   - The costs of investigating or remediating any of the disclosed hazards.

2. FANHD's total liability and responsibility to all Recipients collectively for any and all liabilities, causes of action, claim or claims, including but not limited to claims for breach of contract or negligence, shall be limited to the price paid for the Report. FANHD expressly disclaims any liability for Recipients indirect, incidental and/or consequential damages, including without limitation lost profits even if such damages are foreseeable. In the event of any error, omission or inaccuracy in the FANHD Report for which FANHD is liable, FANHD shall have no duty to defend or pay any attorneys' fees, costs or expenses incurred by the Recipients, or any of them. The Recipients, and each of them, expressly waive the benefits of California Civil Code Section 2778. FANHD has not conducted an independent investigation of the accuracy of the information provided by the Recipient. FANHD assumes no responsibility for the accuracy of information provided by the Recipient. FANHD shall be subrogated to all rights of any claiming party against anyone including, but not limited to, another party who had actual knowledge of a matter and failed to disclose it to the Recipients in writing prior to the close of escrow.

K. **Reporting of Risk Elements for Condominium Projects, Planned Unit Developments, and Other Properties with Common or Undivided Interests.** Because California's Residential Natural Hazard Disclosure Law requires disclosure if any portion of the Property is located within a specified natural hazard area/zone, the Report must indicate that the subject Property falls within the area/zone if any portion of such a condominium project, planned unit development, or common area is located within a specified hazard area/zone. However, if the property owner has a shared interest in common area or other parcels which extend beyond the subject property's parcel boundary, the Company is not always able to determine if the common area is within a special natural hazard area/zone. Consult with the property's home owners association(s) to determine said risk and responsibility.

L. **Governing Law.** The Report shall be governed by, and construed in accordance with, the laws of the State of California.

M. **Small Claims or Arbitration.** This provision constitutes an agreement to arbitrate disputes on an individual basis. Any party may bring an individual action in small claims court instead of pursuing arbitration. All disputes and claims arising out of or relating to the Report must be resolved by binding arbitration. This Report to arbitrate includes, but is not limited to, all disputes and claims between FANHD, transferor(s) and transferee(s) and claims that arose prior to purchase of the Report. This agreement to arbitrate applies to transferor(s) and transferee(s) successors in interest, assigns, heirs, spouses, and children. As noted above, a party may elect to bring an individual action in small claims court instead of arbitration, so long as the dispute falls within the jurisdictional requirements of small claims court.

Any arbitration must take place on an individual basis, FANHD, transferor(s) and transferee(s) agree that they are waiving any right to a jury trial and to bring or participate in a class, representative, or private attorney general action, and further agree that the arbitrator lacks the power to consider claims for injunctive or declaratory relief, or to grant relief effecting anyone other than the individual claimant.

The arbitration is governed by the Commercial Arbitration Rules and the Supplementary Procedures for Consumer Related Disputes (the "AAA Rules") of the American Arbitration Association ("AAA"), as modified by this Agreement, and will be administered by the AAA. Company will pay all AAA filing, administration and arbitrator fees for any arbitration it initiates and for any arbitration initiated by another party for which the value of the claims is $75,000 or less, unless an arbitrator determines that the claims have been brought in bad faith or for an improper purpose, in which case the payment of AAA fees will be governed by the AAA Rules. **A COPY OF THESE RULES IS AVAILABLE FROM THE AAA'S WEB SITE AT WWW.ADR.ORG OR ON REQUEST FROM THE COMPANY. THE ARBITRATION AWARD MAY INCLUDE ATTORNEY'S FEES IF ALLOWED BY FEDERAL, STATE, OR OTHER APPLICABLE LAW AND MAY BE ENTERED AS A JUDGMENT IN ANY COURT OF PROPER JURISDICTION.**

The arbitration will take place in the same county in which the property covered by the Report is located. The Federal Arbitration Act will govern the interpretation, applicability and enforcement of this arbitration agreement. This arbitration agreement will survive the termination of this Report.

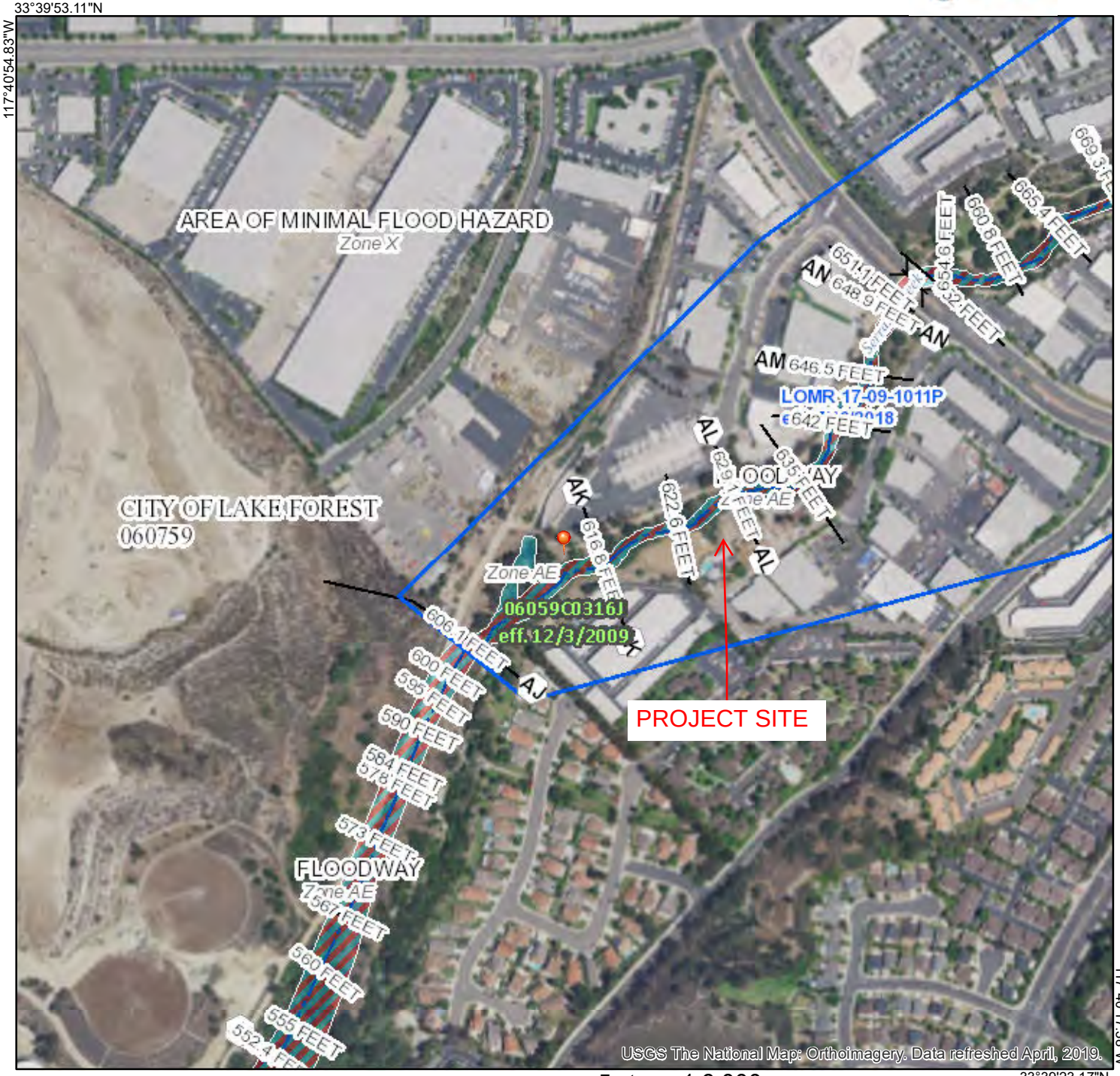
N. **Severability.** If any provision of the Terms and Conditions to this Report is determined to be invalid or unenforceable for any reason, then such provision shall be treated as severed from the remainder of the Terms and Conditions, and shall not affect the validity and enforceability of all of the other provisions of the Terms and Conditions.

O. **Other Agreements.** This Report constitutes the entire, integrated agreement between FANHD and Recipients, and supersedes and replaces all prior statements, representations, negotiations, and agreements.

END OF REPORT

National Flood Hazard Layer FIRMette

FEMA



0 250 500 1,000 1,500 2,000 Feet

1:6,000

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

- **SPECIAL FLOOD HAZARD AREAS**
  - Without Base Flood Elevation (BFE) *Zone A, V, A99*
  - With BFE or Depth *Zone AE, AO, AH, VE, AR*
  - Regulatory Floodway
- **OTHER AREAS OF FLOOD HAZARD**
  - 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
  - Future Conditions 1% Annual Chance Flood Hazard *Zone X*
  - Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
  - Area with Flood Risk due to Levee *Zone D*
- **OTHER AREAS**
  - NO SCREEN Area of Minimal Flood Hazard *Zone X*
  - Effective LOMRs
  - Area of Undetermined Flood Hazard *Zone D*
- **GENERAL STRUCTURES**
  - Channel, Culvert, or Storm Sewer
  - Levee, Dike, or Floodwall
- **OTHER FEATURES**
  - 20.2 Cross Sections with 1% Annual Chance
  - 17.5 Water Surface Elevation
  - Coastal Transect
  - Base Flood Elevation Line (BFE)
  - Limit of Study
  - Jurisdiction Boundary
  - Coastal Transect Baseline
  - Profile Baseline
  - Hydrographic Feature
- **MAP PANELS**
  - Digital Data Available
  - No Digital Data Available
  - Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 12/9/2019 at 11:22:33 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

E 6122407.501
N 2197544.835
E 6143907.682
N 2197544.614
41
49
51
PROJECT SITE
LIMESTONE–WHITING RANCH WILDERNESS PARK
UPPER OSO RESERVOIR
N 2181744.911
E 6122407.313
N 2181744.655
E 6143907.541
58

NOTICE

The drainage information has been prepared for information purposes only. The location, ownership, facility information and limits have been determined from available information provided by public agencies, but may not be exact, accurate, or up-to-date. The user of this information is responsible for verifying exact location, ownership, accuracy, and the regional versus local character of drainage facilities.

Additional information may be obtained from public plans and recorded deeds. Facility designations included with this information are for convenience only and are not controlling or intended to imply ownership by the County or the Orange County Flood Control District (OCFCD). The information is being provided as a courtesy and neither the County of Orange nor OCFCD assume any liabilities for inaccuracy of the information.

To notify OC Public Works Flood Control Section of additions or corrections, please contact Sal Gutierrez at (714) 834-5396 or by email at sal.gutierrez@ocpw.ocgov.com

ORANGE COUNTY FLOOD CONTROL DISTRICT

BASE MAP OF DRAINAGE FACILITIES IN ORANGE COUNTY

REVISION	DATE	SHEET NO.	DWG. NO.
S. GUTIERREZ	MAR 12/2007	50	MAPS-113-3

- Channel Drainage Area Boundary
- Major Sub-Area Drainage Boundary
- Minor Sub-Area Drainage Boundary
- Existing O.C.F.C.D. Facility
- Existing Local Facility
- Existing Retarding Basin or Reservoir
- Natural Watercourse
- City Limits
- G G Greenbelt
- P.S. P.S. Pump Station
- Catch Basin (length in feet)
- Drop Inlet or Other Entry
- OCFCD Basins or Reservoirs

Ownership (If other than City or County): Private = P State = S Federal = F

EXISTING FACILITIES

O.C.F.C.D.	LOCAL	
		Earth Trapezoidal Channel (base width by height in feet)
		Reinforced Concrete Trapezoidal Channel (base width by height in feet)
		Reinforced Concrete Rectangular Channel (base width by height in feet)
		Reinforced Concrete Box (RCB) (number of barrels-span by height in feet)
		Reinforced Concrete Pipe (RCP) (diameter in inches)
		Metal Sheet Channel (MSC) (Base width by pile height in feet./Sheet pile total length)
		Corrugated Metal Pipe (CMP) (diameter in inches)
		Concrete Pipe (diameter in inches)
		Concrete Oval Pipe (width by height in inches)
		Steel Pipe (diameter in inches)
		Reinforced Concrete Arch (base span by height in inches)
		Corrugated Metal Arch (base span by height in inches)

N

0 200 400 600 800
FEET

50

50

MEMORANDUM

GLENN LUKOS ASSOCIATES

Regulatory Services

PROJECT NUMBER: 12960001CANA

TO: Steve Guzowski

FROM: Tony Bomkamp

DATE: August 15, 2017

SUBJECT: Jurisdictional Limits for California Department of Fish and Wildlife and U.S. Army Corps of Engineers for Serrano Creek Southern/Eastern Bank

---

On June 21 and July 10, 2017, GLA conducted site visits to identify the limits of Corps and CDFW jurisdictional boundaries for the edge of Serrano Creek within the Project site, which depending on the specific segment of Serrano Creek represents the southern or eastern bank of the stream. GLA also evaluated the site to determine whether any sensitive species and/or communities are likely to occur onsite. [Exhibit 1 – Regional Map, Exhibit 2 – Vicinity Map]. Exhibits 3, 3a, and 3b depict the limits of Corps and CDFW jurisdiction.

I. METHODOLOGY

Prior to beginning the field delineation, GLA conducted a reconnaissance visit on June 21, 2017 to review the site and determine the most appropriate methodology for mapping the limits of jurisdiction. During the reconnaissance visit, it became apparent that CDFW jurisdiction exceeded Corps jurisdiction and thus, it was determined that mapping of CDFW jurisdiction would be prioritized for purposes of site planning and avoidance to eliminate the need for Section 1602 and Section 404 Authorizations. Specifically, Section 404 jurisdiction is defined by the presence of an Ordinary High Water Mark (OHWM), which is typically located on the lower terraces of streams; whereas CDFW typically takes jurisdiction to the top of bank or outer limit of riparian habitat (whichever is greater). As such, CDFW always exceeds Corps jurisdiction with the only exception being the presence of adjacent wetlands, which do not occur in areas adjacent to Serrano Creek. During the July 10 site visit, GLA mapped the extent of CDFW jurisdiction using either the top of bank or riparian habitat that extends beyond the top of bank (e.g., native trees such as willow and non-native vegetation such as giant reed). Corps jurisdiction was also mapped for the areas between the western project limits and Dimension Drive. As noted, and depicted on Exhibits 3, 3a and 3c, CDFW jurisdiction exceeds Corps jurisdiction in all areas of Serrano Creek. As discussed below, the delineation effort began at the western limits of the site and worked upstream. Descriptions for specific segments of Serrano between the downstream limits and Dimension Drive follow the nomenclature provided on Exhibit 4.

29 Orchard ▪ Lake Forest ▪ California 92630-8300
Telephone: (949) 837-0404 Facsimile: (949) 837-5834

The Soil Conservation Service (SCS)[1] has mapped the following soil types as occurring in the general vicinity of the project site:

Cieneba Sandy Loam, 15 to 30 Percent Slopes

The Cieneba series consists of somewhat excessively drained soils. These soils formed in material weathered from granitic rocks of the Santa Ana Mountains and from the sandstone of the coastal foothills. Slopes are 9 to 75 percent. Typically, the surface layer is light brownish gray and pale brown sandy loam 7 inches thick. The underlying material is weathered granodiorite.

Myford Sandy Loam, 15 to 30 Percent Slopes

The Myford series consists of moderately well drained soils on marine terraces. These soils formed in sandy sediments. Slopes are 0 to 30 percent. In a typical profile, the surface layer is pale brown and pinkish gray, medium acid sandy loam 4 inches thick. The upper 6 inches of the subsoil is brown, medium acid sandy clay; the next 17 inches is brown, neutral, and moderately alkaline sandy clay loam; and the lower 36 inches is light brown, calcerous sandy clay loam and sandy loam. The substratum is very pale brown slightly acid sandy loam to a depth of 79 inches or more.

Riverwash

Riverwash consists of areas of unconsolidated alluvium, generally stratified and varying widely in texture, recently deposited by intermittent streams, and subject to frequent changes through stream overflow. These are sandy, gravelly, cobbly, and boulder deposits that support little or no vegetation. Runoff is generally rapid, and the erosion hazard is high. Deposition and removal of fresh alluvium are common.

Sorrento Loam, 2 to 9 Percent Slopes

The Sorrento series consists of well drained soils on alluvial fans and flood plains. These soils formed in alluvium derived from sedimentary rocks. Slopes are 0 to 9 percent. In a typical profile, the surface layer is grayish brown loam, 12 inches thick. The underlying material is grayish brown, light brownish gray, and pale brown silty clay loam to a depth of 62 inches and light brownish gray sandy loam to a depth of 72 inches or more.

[1] SCS is now known as the National Resource Conservation Service or NRCS.

None of these soil units are identified as hydric in the SCS's publication, Hydric Soils of the United States[2].

II. EXISTING CONDITIONS

A. Area Below the Bridge at Dimension Drive

As depicted on Exhibit 4, the area downstream of Dimension is composed of five segments associated with the Areas I – V on Exhibit 4. Starting at the upstream limits the sequence on Exhibit 4 is as follows: Area IV, Area III, Area II, Area V and Area I.

Area IV

Area IV consists of disturbed ground and is occupied by an equestrian riding ring. The edge of Serrano Creek adjacent to Area IV is highly disturbed and is predominantly vegetated with non-native species including Brazilian pepper (*Schinus terebinthifolius*), castor bean (*Ricinus communis*), blue-gum eucalyptus (*Eucalyptus globulus*), English ivy (*Hedera helix*), giant reed (*Arundo donax*), Mexican fan palm (*Washintonia robusta*), pampas grass (*Cortedaria selloana*), black mustard (*Brassica nigra*), summer mustard (*Hirschfeldia incana*), tree tobacco (*Nicotiana glauca*), and white horehound (*Marrubiam vulgare*), as well as a small amount of native species including black willow (*Salix gooddingii*), coast live oak (*Quercus agrifolia*), and poison oak (*Toxicodendron diversilobum*).

Area III

Area III is entirely disturbed, occupied largely by stables and sheds and disturbed ground. The edge of Serrano Creek in Area III is highly disturbed and is predominantly vegetated with the non-native species observed in Area IV including Brazilian pepper tree, castor bean, blue-gum eucalyptus, English ivy, giant reed, Mexican fan palm, pampas grass, summer mustard, tree tobacco, and white horehound, as well as a small amount of native species including black willow, coast live oak and poison oak.

Area II

Area II consists of disturbed ground and is occupied by nursery plants. The end of Serrano Creek in Area II is highly disturbed and is predominantly vegetated with non-native species

[2] United States Department of Agriculture, Soil Conservation Service. 1991. Hydric Soils of the United States, 3rd Edition, Miscellaneous Publication Number 1491. (In cooperation with the National Technical Committee for Hydric Soils.)

including Brazilian pepper tree, castor bean, blue-gum eucalyptus, English ivy, giant reed, Mexican fan palm, pampas grass, summer mustard, tree tobacco, and white horehound, as well as a small amount of native species including black willow, coast live oak, and poison oak.

Area V

Area V is entirely disturbed, consisting of several larch mulch piles and a stand of eucalyptus. The edge of Serrano Creek in Area V is highly disturbed and is predominantly vegetated with non-native species including Brazilian pepper tree, castor bean, blue-gum eucalyptus, English ivy, giant reed, Mexican fan palm, pampas grass, summer mustard, tree tobacco, and white horehound, as well as a small amount of native species including black willow, coast live oak, and poison oak.

Area I

Area I is vegetated with a predominance of coast live oak trees as well as non-natives species including aloe (*Aloe arborescens*), castor bean, eucalyptus, giant reed, Mexican fan palm, pampas grass, smilo grass (*Stipa miliacea*), and tree tobacco, and native plants including black willow, mugwort (*Artemisia douglasiana*), mulefat (*Baccharis salicifolia*), and bluewitch nightshade (*Solanum umbelliferum*).

B. Area Upstream of Dimension Drive

The area above the Dimension Drive Bridge is vegetated with a predominance of coast live oak with occasional blue elderberry (*Sambucus nigra* ssp. *caerulea*) and California sycamore (*Platanus racemose*). Understory species form a mosaic with non-native species including aloe, bigleaf periwinkle (*Vinca major*), castor bean, eucalyptus, Italian thistle (*Carduus pycnocephalus*), pampas grass, smilo grass, summer mustard, tree of heaven (*Ailanthus altissima*), and tree tobacco, and native species including California sage brush (*Artemisia californica*), jimson weed (*Datura stramonium*), horseweed (*Erigeron canadensis*), mugwort, mulefat, and poison oak. The Serrano Creek Bike and Equestrian Trail parallels Serrano Creek for this entire segment of Serrano Creek, and is set back only a few feet from the southern edge of Serrano Creek and associated coast live oak riparian habitat.

IV. RESULTS

B. CDFW Jurisdiction

The limits of CDFW jurisdiction are depicted on Exhibit 4 and extends to the top of the Serrano Creek bank, or to edge of the canopy of associated riparian vegetation that is rooted at the top of bank or below top of bank. The riparian habitat typically consists of native trees such as willows and western sycamores but also includes on patch of giant reed.

A. Corps Jurisdiction

The limits of Corps jurisdiction are determined by the Ordinary High Water Mark (OHWM) which in all areas of Serrano Creek evaluated is below the top of bank as depicted on Exhibit 4. As such, avoidance of CDFW jurisdiction would ensure that all areas of Corps jurisdiction are also fully avoided.

IV. DISCUSSION OF RESTORATION OPPORTUNITIES

A. Restoration Opportunities Downstream of Dimension Drive

The segment of Serrano Creek between the downstream limits and Dimension Drive exhibit restoration opportunities due to the high percentage of non-native invasive species such as giant reed, pampas grass, English ivy, castor bean, Brazilian pepper, blue-gum eucalyptus, and other non-native species. Also, the banks of the channel have been fortified by additions of concrete rubble. Because of the highly-urbanized setting of this segment of Serrano Creek, it is not a good candidate for restoration, strictly for purposes of selling mitigation credits due to the low value that the resource agencies would assign for such credits. In addition, restoration would require authorizations from the CDFW for modifications to the streambank (even if it was determined to have beneficial effects). It would also require a Nationwide Permit 27 from the Corps, which covers stream restoration.

B. Restoration Opportunities Upstream of Dimension Drive

The segment of Serrano Creek between the Dimension Drive and the upstream limits exhibit fewer restoration opportunities than the downstream segment due to the generally high cover of coast live oaks. The stream channel is less disturbed than the upstream segment; however, it is also much drier and the banks support a predominance of upland vegetation making establishment of riparian species essentially impossible. Similarly, because of the highly-urbanized setting of this segment of Serrano Creek, like the downstream segment, it not a good candidate for restoration with the intent of selling mitigation credits due to the low value that the

resource agencies would assign for such credits. As already noted, restoration would require authorizations from the CDFW for modifications to the streambank (even if it was determined to have beneficial effects). It would also require a Nationwide Permit 27 from the Corps, which covers stream restoration.

V. SPECIAL STATUS SPECIES

During the site visits, GLA conducted a habitat assessment for special status plants and animals as addressed below.

A. Special-Status Plants

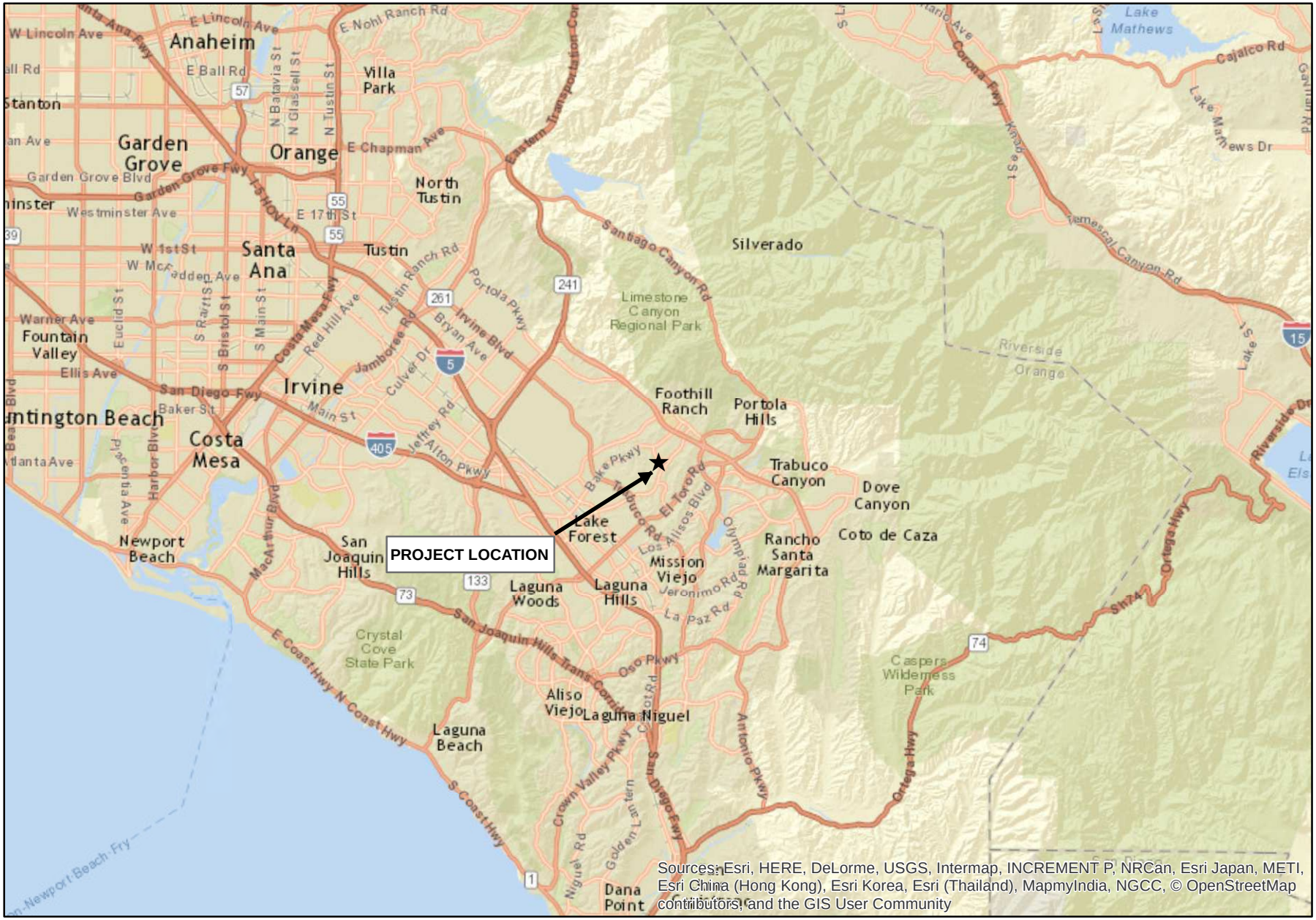
Areas I – V were evaluated for the presence of special-status plants and/or habitat for special-status plants. Because of the high level of disturbance exhibited by these areas, they do not support habitat for special-status plants and as such exhibit no potential for the presence of special-status plants. Similarly, Serrano Creek within the Study Area does not contain suitable habitat for special-status plants. As such, there is no potential for impacts to special-status plants associated with the project.

B. Special -Status Animals

Areas I – V were evaluated for the presence of special-status animals and/or habitat for special-status animals. Because of the high level of disturbance exhibited by these areas, they do not support habitat for special-status animals and as such exhibit no potential for the presence of special-status animals. Serrano Creek within the Study Area does not contain suitable habitat for special-status avifauna with the exception of yellow warbler, a California species of special concern. Yellow warbler was not detected during the site visits; however, even if it would occur, the project would not impact any potential habitat.

Portions of Serrano Creek downstream, of Dimension Drive exhibit flowing and/or standing water and could support the western pond turtle, a California species of special concern. Western pond turtles were not detected during the site visits; however, the site visits did not include focused surveys for this species. Nevertheless, the project would fully avoid impacts to Serrano Creek including areas of potential habitat for the western pond turtle and the project has no potential for impacts to this species.

There are no other special-status species with potential to occur within Areas I – V or that could occupy Serrano Creek that could be impacted by the project.



Source: ESRI World Street Map

N

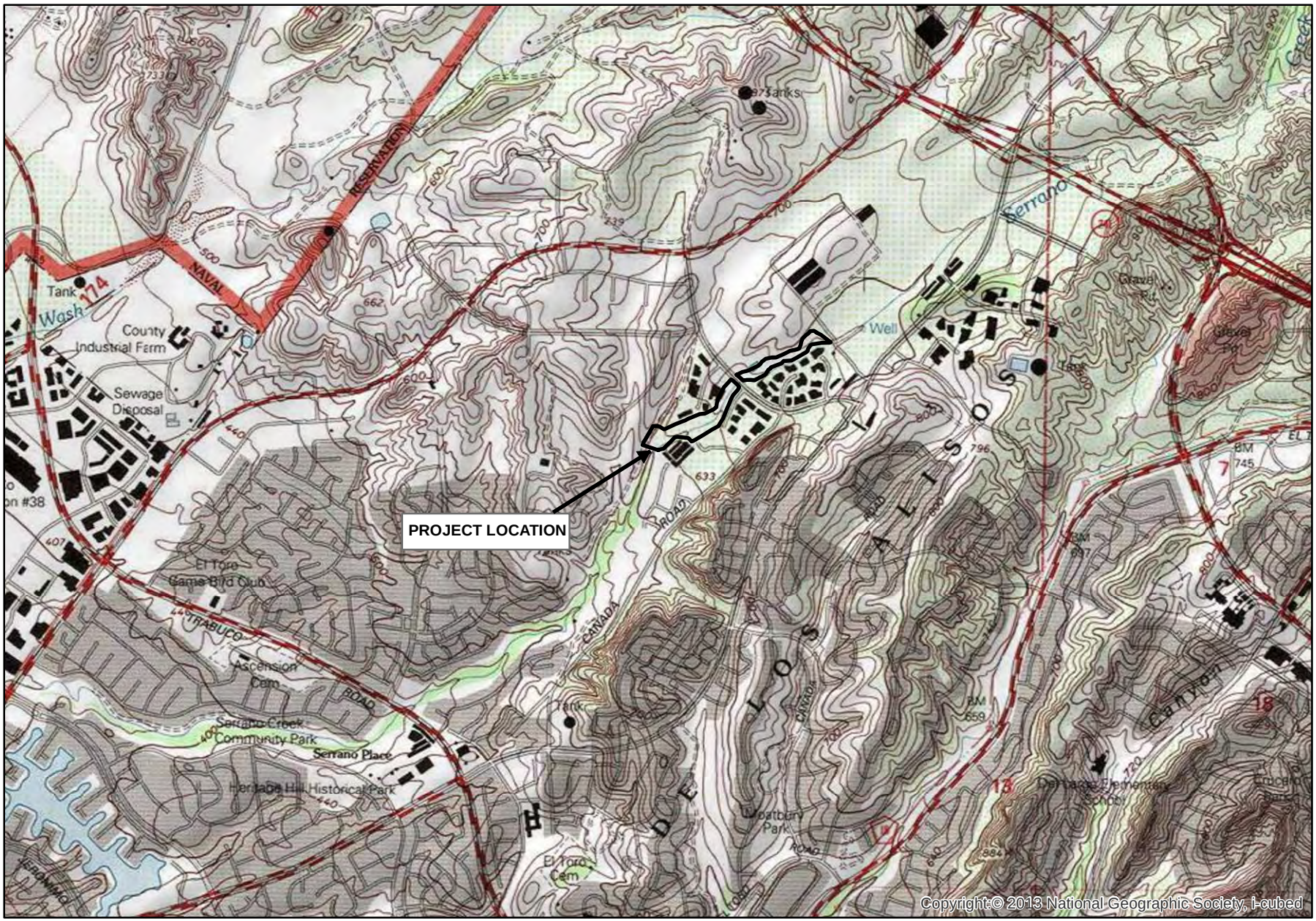
0 2 4 8 Miles

SERRANO CREEK

Regional Map

GLENN LUKOS ASSOCIATES

Exhibit 1



Adapted from USGS El Toro, CA quadrangle

N

0 1,000 2,000 4,000

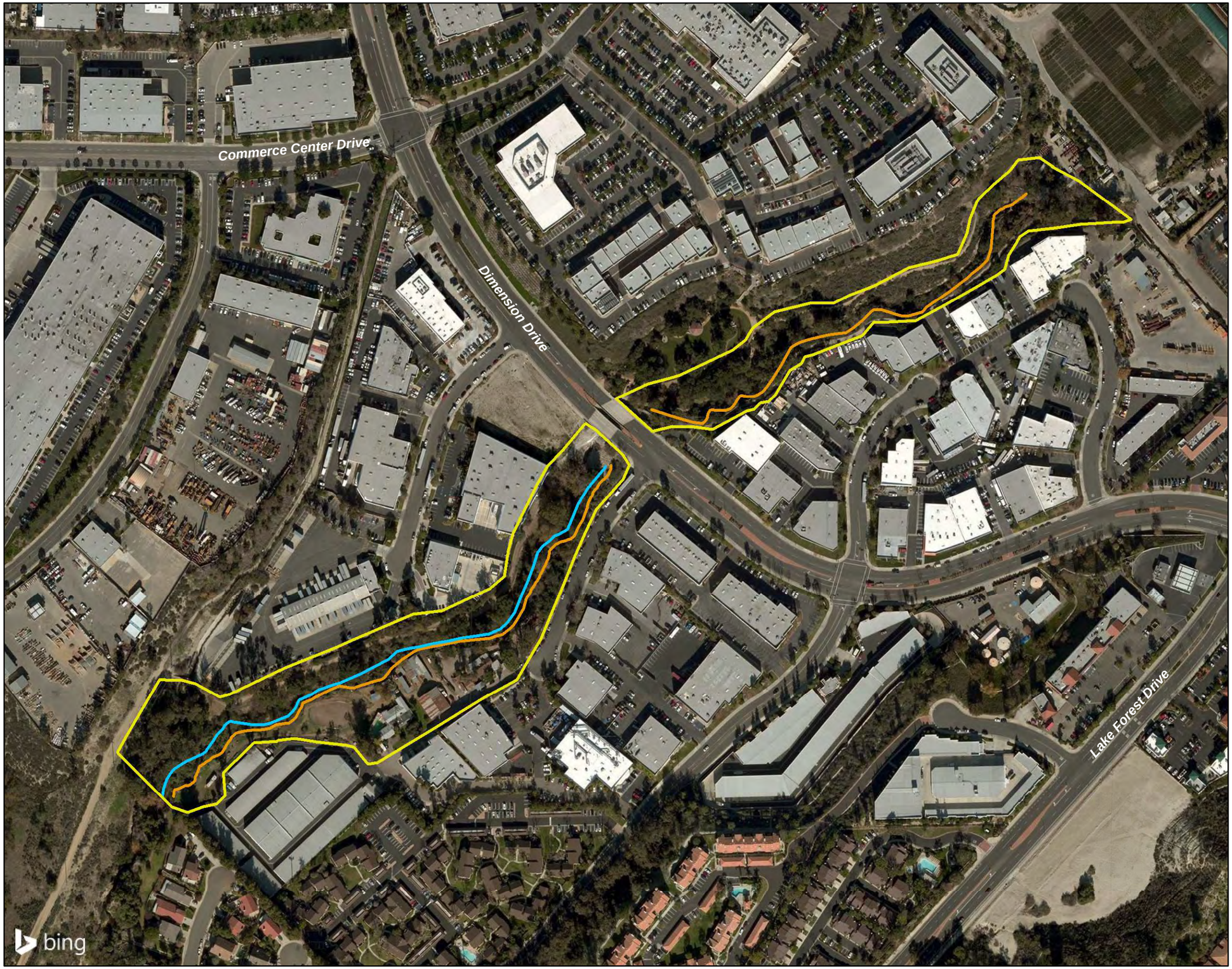
Feet

SERRANO CREEK

Vicinity Map

GLENN LUKOS ASSOCIATES

Exhibit 2



Approximate Study Area

Limits of Corps Jurisdiction

Limits of CDFW Jurisdiction

N

0 100 200 400

Feet

1 inch = 250 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: C. Lukos, GLA
Date Prepared: August 4, 2017

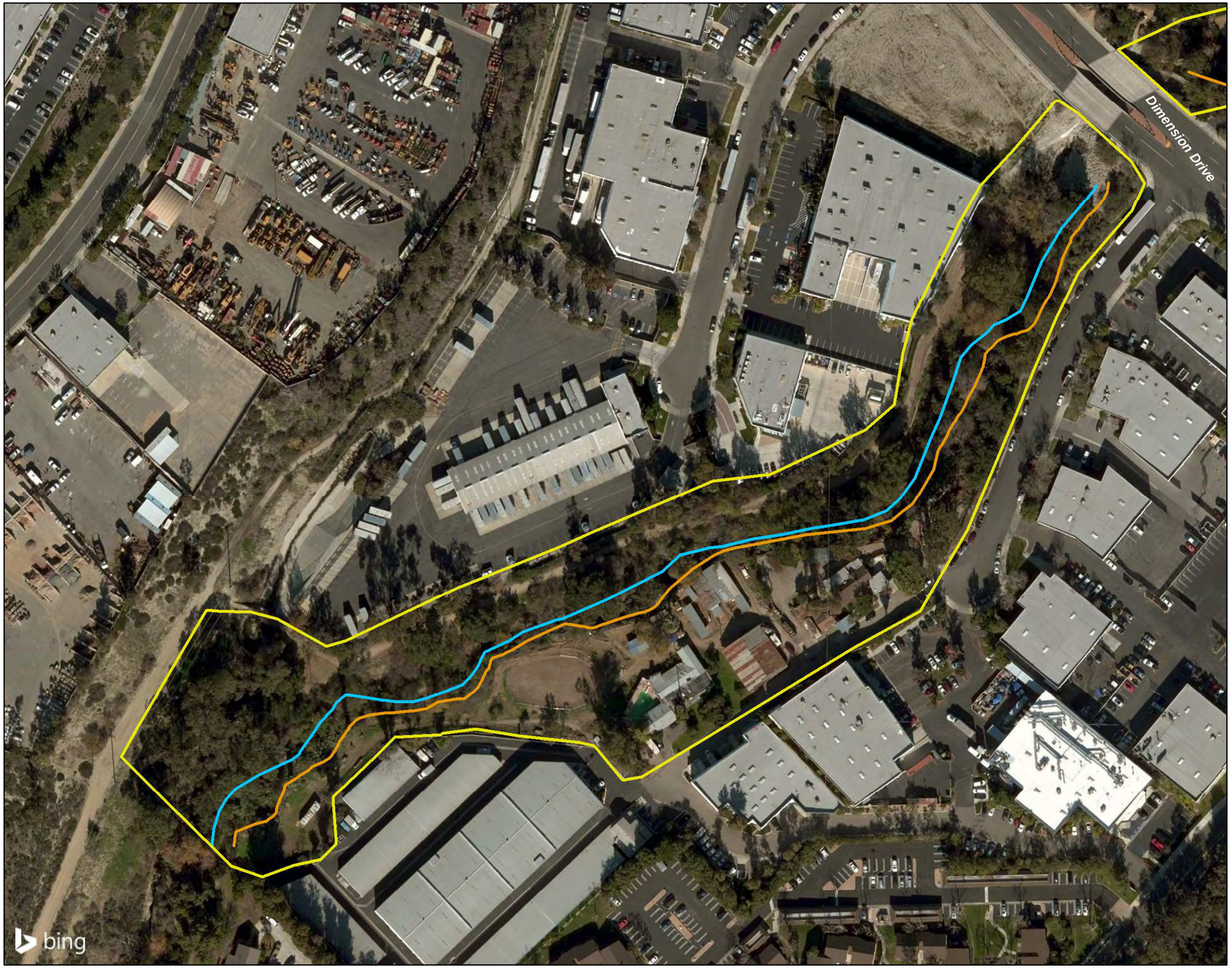
SERRANO CREEK

Limits of Jurisdiction Map

GLENN LUKOS ASSOCIATES

Exhibit 3 Key Map

X:\1100 AFTER THE REST\1296-01CANA\1296-1GIS\1296-1AerialEX3.mxd



Approximate Study Area

Limits of Corps Jurisdiction

Limits of CDFW Jurisdiction

N

0 62.5 125 250

Feet

1 inch = 125 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: C. Lukos, GLA
Date Prepared: August 4, 2017

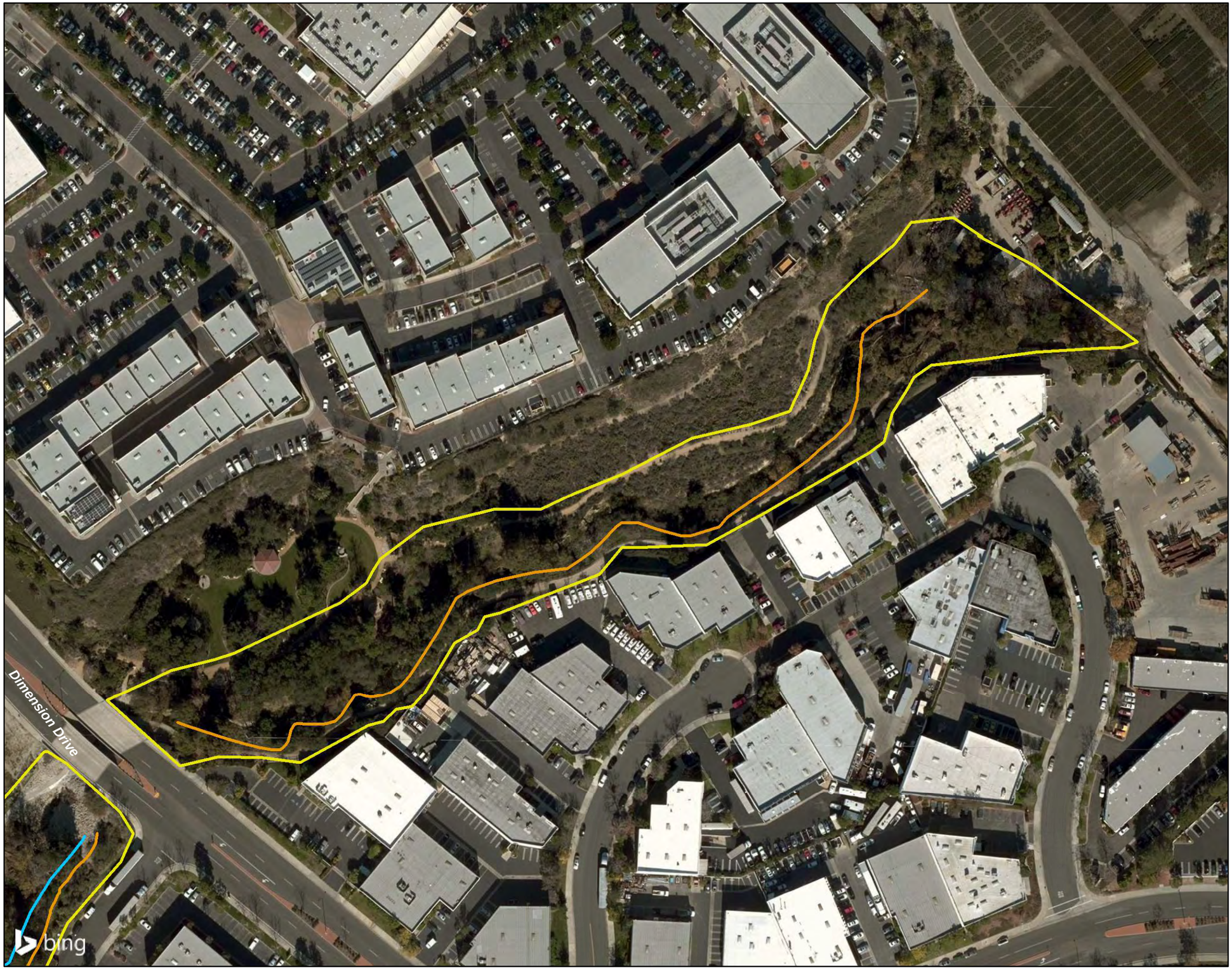
SERRANO CREEK

Limits of Jurisdiction Map

GLENN LUKOS ASSOCIATES

Exhibit 3A

X:\1100 AFTER THE REST\1296-01CANA\1296-1GIS\1296-1AerialEX3.mxd



Approximate Study Area

Limits of Corps Jurisdiction

Limits of CDFW Jurisdiction

N

0 62.5 125 250

Feet

1 inch = 125 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: C. Lukos, GLA
Date Prepared: August 4, 2017

SERRANO CREEK

Limits of Jurisdiction Map

GLENN LUKOS ASSOCIATES

Exhibit 3B

X:\1100 AFTER THE REST\1296-01CANA\1296-1GIS\1296-1AerialEX3.mxd

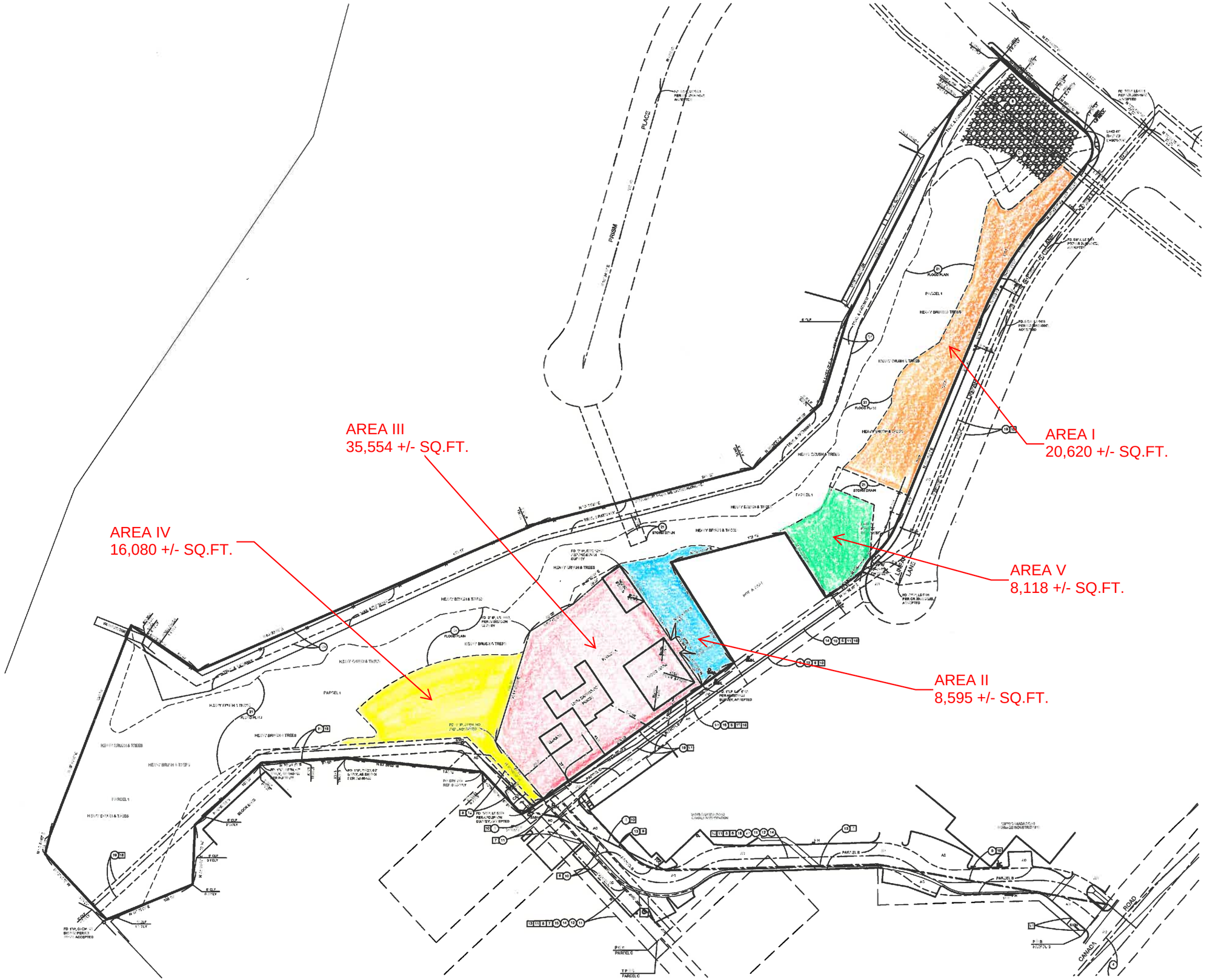

AREA I
20,620 +/- SQ.FT.
AREA II
8,595 +/- SQ.FT.
AREA III
35,554 +/- SQ.FT.
AREA IV
16,080 +/- SQ.FT.
AREA V
8,118 +/- SQ.FT.
PRISM PLACE
PARCEL 1
PARCEL B
PARCEL C
HEAVY BRUSH & TREES
FLOOD PLAIN
STORM DRAIN
LINDEN LANE
CANADA ROAD

Exhibit 4

APPENDIX B

Exhibits

PRELIMINARY GRADING EXHIBIT

HUITT-ZOLLARS
Huitt-Zollars, Inc. Irvine
2603 Main Street, Suite 400
Irvine, California 92614
Phone (949) 988-5815 Fax (949) 988-5820

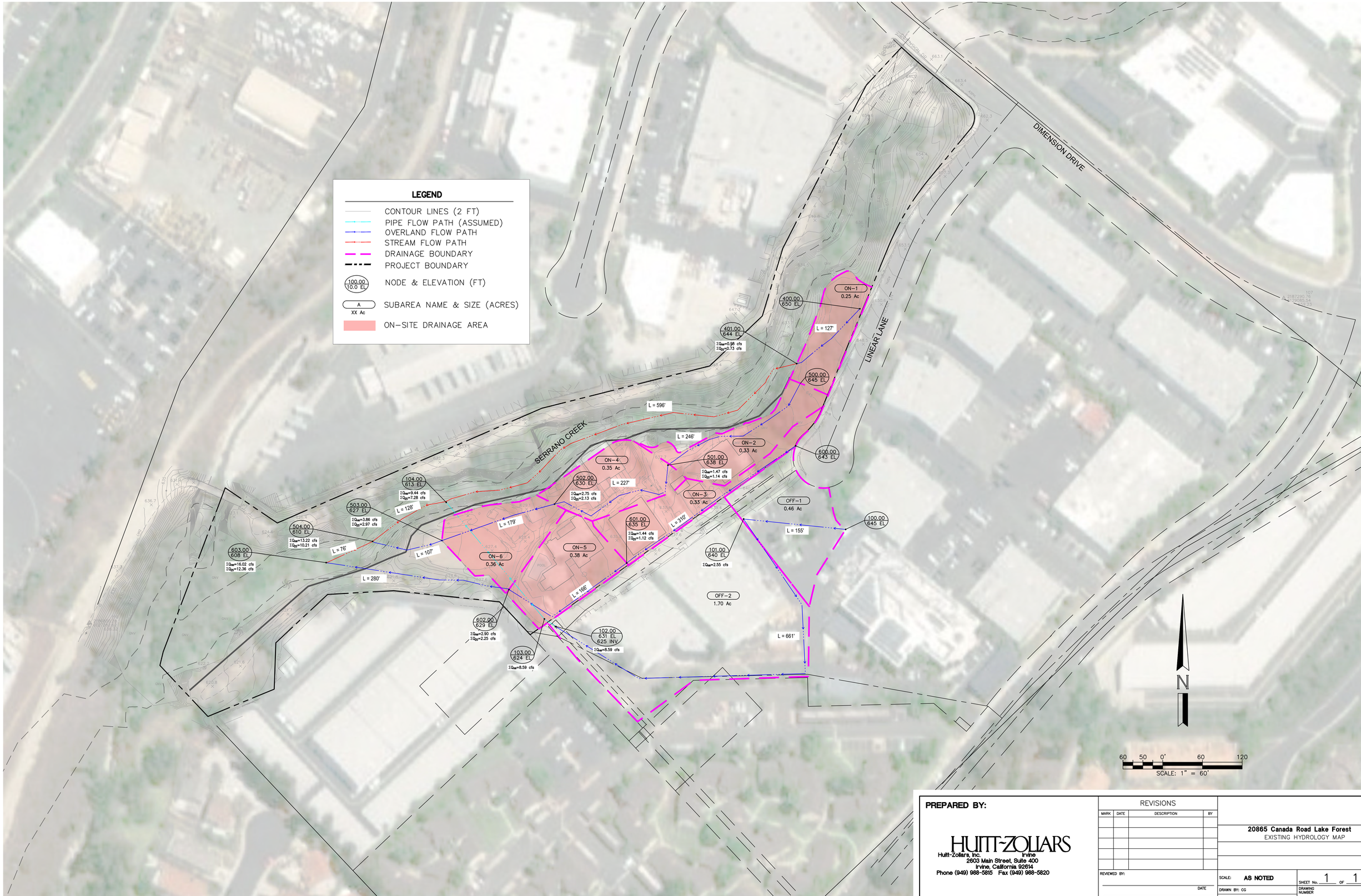
N

SCALE: 1" = 30'

30' 15' 0 30' 60'

GRAPHIC SCALE

08/23/23



PREPARED BY:

HUITT-ZOLLARS

Huitt-Zollars, Inc. Irvine
2603 Main Street, Suite 400
Irvine, California 92614
Phone (949) 988-5815 Fax (949) 988-5820

REVISIONS

MARK	DATE	DESCRIPTION	BY

REVIEWED BY:

DATE

DATE

20865 Canada Road Lake Forest
EXISTING HYDROLOGY MAP

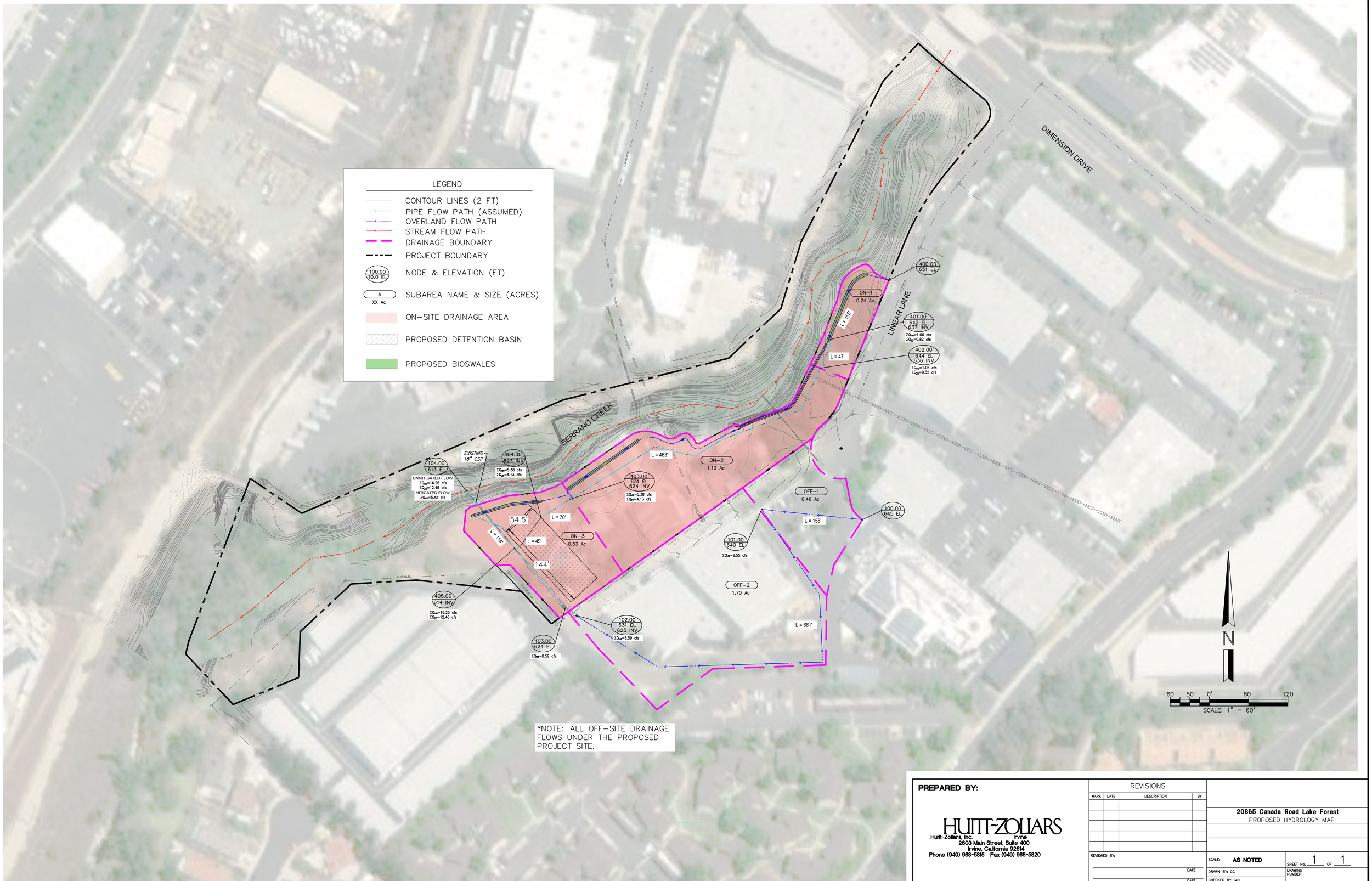
SCALE: **AS NOTED**

DRAWN BY: CG

CHECKED BY: MH

SHEET No. 1 OF 1

DRAWING NUMBER



*NOTE: ALL OFF-SITE DRAINAGE FLOWS UNDER THE PROPOSED PROJECT SITE.

PREPARED BY:

HUITT-ZOLLARS
Irvine

Huitt-Zollars, Inc.
2603 Main Street, Suite 400
Irvine, California 92614
Phone (949) 988-5815 Fax (949) 988-5820

REVISIONS

MARK	DATE	DESCRIPTION	BY

REVIEWED BY:

DATE

DATE

20865 Canada Road Lake Forest

PROPOSED HYDROLOGY MAP

SCALE: **AS NOTED**

DRAWN BY: CG

CHECKED BY: MH

SHEET No. 1 OF 1

DRAWING NUMBER

APPENDIX C

Calculations

HYDROLOGY

```
************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
          (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
        (c) Copyright 1983-2014 Advanced Engineering Software (aes)
            Ver. 21.0  Release Date: 06/01/2014  License ID 1202

                          Analysis prepared by:

                            Huitt-Zollars, Inc.
                         2603 Main Street, Suite 400
                              Irvine, CA. 92614
                                 949-988-5815

 ************************* DESCRIPTION OF STUDY *************************
* GREAT SCOTT RATIONAL METHOD                                           *
* 2 YEAR EXISTING STORM CONDITION                                       *
* CG                                                                    *
 ************************************************************************

  FILE NAME: GS2E.DAT
  TIME/DATE OF STUDY: 10:18 08/22/2023
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =    2.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  12.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *DATA BANK RAINFALL USED*
  *ANTECEDENT MOISTURE CONDITION (AMC) I ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  ================  ======  ===== ====== ===== =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0313 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *PIPE MAY BE SIZED TO HAVE A FLOW CAPACITY LESS THAN
   UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

************************************************************************
  FLOW PROCESS FROM NODE    400.00 TO NODE    401.00 IS CODE =  21
```

```
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   127.00
  ELEVATION DATA: UPSTREAM(FEET) =    650.00  DOWNSTREAM(FEET) =    644.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    9.025
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.613
  SUBAREA Tc AND LOSS RATE DATA(AMC  I ):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        0.25      0.20     1.000    67    9.03
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.000
  SUBAREA RUNOFF(CFS) =      0.32
  TOTAL AREA(ACRES) =      0.25   PEAK FLOW RATE(CFS) =      0.32

****************************************************************************
  FLOW PROCESS FROM NODE    401.00 TO NODE    104.00 IS CODE =  52
----------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    644.00  DOWNSTREAM(FEET) =    613.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   596.00   CHANNEL SLOPE =  0.0520
  NOTE: CHANNEL FLOW OF 1. CFS WAS ASSUMED IN VELOCITY ESTIMATION
  CHANNEL FLOW THRU SUBAREA(CFS) =       0.32
  FLOW VELOCITY(FEET/SEC) =   3.42 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =   2.90   Tc(MIN.) =   11.93
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    104.00 =     723.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    104.00 TO NODE    104.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =   11.93
  RAINFALL INTENSITY(INCH/HR) =   1.37
  AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20
  AREA-AVERAGED Ap =  1.00
  EFFECTIVE STREAM AREA(ACRES) =       0.25
  TOTAL STREAM AREA(ACRES) =       0.25
  PEAK FLOW RATE(CFS) AT CONFLUENCE =       0.32
```

```
****************************************************************************
  FLOW PROCESS FROM NODE    104.00 TO NODE    104.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>USER SPECIFIED HYDROLOGY INFORMATION AT NODE<<<<<
============================================================================
  USER-SPECIFIED VALUES ARE AS FOLLOWS:
  TC(MIN.) =   10.41   RAINFALL INTENSITY(INCH/HR) =  1.49
  EFFECTIVE AREA(ACRES) =     2.16
  TOTAL AREA(ACRES) =     2.20        PEAK FLOW RATE(CFS) =      2.93
  AREA-AVERAGED Fm(INCH/HR) =   0.02  AREA-AVERAGED Fp(INCH/HR) =   0.20
  AREA-AVERAGED Ap =  0.10
  NOTE: EFFECTIVE AREA IS USED AS THE TOTAL CONTRIBUTING AREA FOR ALL
        CONFLUENCE ANALYSES.

****************************************************************************
  FLOW PROCESS FROM NODE    104.00 TO NODE    104.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =   10.41
  RAINFALL INTENSITY(INCH/HR) =   1.49
  AREA-AVERAGED Fm(INCH/HR) =  0.02
  AREA-AVERAGED Fp(INCH/HR) =  0.20
  AREA-AVERAGED Ap =  0.10
  EFFECTIVE STREAM AREA(ACRES) =       2.16
  TOTAL STREAM AREA(ACRES) =       2.20
  PEAK FLOW RATE(CFS) AT CONFLUENCE =       2.93

  ** CONFLUENCE DATA **
   STREAM       Q      Tc   Intensity   Fp(Fm)     Ap     Ae     HEADWATER
   NUMBER     (CFS)  (MIN.) (INCH/HR) (INCH/HR)         (ACRES)    NODE
      1        0.32   11.93    1.374  0.20( 0.20) 1.00       0.2     400.00
      2        2.93   10.41    1.486  0.20( 0.02) 0.10       2.2     104.00

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
   STREAM       Q      Tc   Intensity   Fp(Fm)     Ap     Ae     HEADWATER
   NUMBER     (CFS)  (MIN.) (INCH/HR) (INCH/HR)         (ACRES)    NODE
      1        3.23   10.41    1.486  0.20( 0.04) 0.18       2.4     104.00
      2        3.02   11.93    1.374  0.20( 0.04) 0.19       2.4     400.00

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =       3.23    Tc(MIN.) =    10.41
  EFFECTIVE AREA(ACRES) =       2.38   AREA-AVERAGED Fm(INCH/HR) =  0.04
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.18
```

```
  TOTAL AREA(ACRES) =        2.5
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    104.00 =     723.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    104.00 TO NODE    504.00 IS CODE =  52
----------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    613.00  DOWNSTREAM(FEET) =    610.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   128.00   CHANNEL SLOPE =  0.0234
  CHANNEL FLOW THRU SUBAREA(CFS) =       3.23
  FLOW VELOCITY(FEET/SEC) =   2.92 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =   0.73   Tc(MIN.) =   11.14
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    504.00 =     851.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    504.00 TO NODE    504.00 IS CODE =  10
----------------------------------------------------------------------------
  >>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 1 <<<<<
============================================================================

****************************************************************************
  FLOW PROCESS FROM NODE    500.00 TO NODE    501.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   246.00
  ELEVATION DATA: UPSTREAM(FEET) =    645.00  DOWNSTREAM(FEET) =    638.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    7.170
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.841
  SUBAREA Tc AND LOSS RATE DATA(AMC  I ):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        0.33      0.20     0.500    57    7.17
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.500
  SUBAREA RUNOFF(CFS) =      0.52
  TOTAL AREA(ACRES) =      0.33   PEAK FLOW RATE(CFS) =      0.52

****************************************************************************
  FLOW PROCESS FROM NODE    501.00 TO NODE    502.00 IS CODE =  52
----------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
```

```
  ELEVATION DATA: UPSTREAM(FEET) =    638.00  DOWNSTREAM(FEET) =    630.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   227.00   CHANNEL SLOPE =  0.0352
  NOTE: CHANNEL FLOW OF 1. CFS WAS ASSUMED IN VELOCITY ESTIMATION
  CHANNEL FLOW THRU SUBAREA(CFS) =       0.52
  FLOW VELOCITY(FEET/SEC) =   2.82 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =   1.34   Tc(MIN.) =    8.51
  LONGEST FLOWPATH FROM NODE    500.00 TO NODE    502.00 =     473.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    502.00 TO NODE    502.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN.) =    8.51
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.668
  SUBAREA LOSS RATE DATA(AMC  I ):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        0.35      0.20     0.500    57
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.500
  SUBAREA AREA(ACRES) =    0.35      SUBAREA RUNOFF(CFS) =    0.49
  EFFECTIVE AREA(ACRES) =      0.68   AREA-AVERAGED Fm(INCH/HR) =  0.10
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.50
  TOTAL AREA(ACRES) =        0.7       PEAK FLOW RATE(CFS) =       0.96

****************************************************************************
  FLOW PROCESS FROM NODE    502.00 TO NODE    503.00 IS CODE =  52
----------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    630.00  DOWNSTREAM(FEET) =    627.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   179.00   CHANNEL SLOPE =  0.0168
  NOTE: CHANNEL FLOW OF 1. CFS WAS ASSUMED IN VELOCITY ESTIMATION
  CHANNEL FLOW THRU SUBAREA(CFS) =       0.96
  FLOW VELOCITY(FEET/SEC) =   1.94 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =   1.54   Tc(MIN.) =   10.05
  LONGEST FLOWPATH FROM NODE    500.00 TO NODE    503.00 =     652.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    503.00 TO NODE    503.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN.) =   10.05
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.516
  SUBAREA LOSS RATE DATA(AMC  I ):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
```

```
     LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "1 DWELLING/ACRE"          D        0.36      0.20     0.800    57
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.800
  SUBAREA AREA(ACRES) =    0.36      SUBAREA RUNOFF(CFS) =    0.44
  EFFECTIVE AREA(ACRES) =      1.04   AREA-AVERAGED Fm(INCH/HR) =  0.12
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.60
  TOTAL AREA(ACRES) =        1.0       PEAK FLOW RATE(CFS) =       1.31

****************************************************************************
  FLOW PROCESS FROM NODE    503.00 TO NODE    504.00 IS CODE =  52
----------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    627.00  DOWNSTREAM(FEET) =    610.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   107.00   CHANNEL SLOPE =  0.1589
  NOTE: CHANNEL SLOPE OF .1 WAS ASSUMED IN VELOCITY ESTIMATION
  CHANNEL FLOW THRU SUBAREA(CFS) =       1.31
  FLOW VELOCITY(FEET/SEC) =   4.99 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =   0.36   Tc(MIN.) =   10.41
  LONGEST FLOWPATH FROM NODE    500.00 TO NODE    504.00 =     759.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    504.00 TO NODE    504.00 IS CODE =  11
----------------------------------------------------------------------------
  >>>>>CONFLUENCE MEMORY BANK # 1 WITH THE MAIN-STREAM MEMORY<<<<<
============================================================================

  ** MAIN STREAM CONFLUENCE DATA **
   STREAM       Q      Tc   Intensity   Fp(Fm)     Ap     Ae     HEADWATER
   NUMBER     (CFS)  (MIN.) (INCH/HR) (INCH/HR)         (ACRES)    NODE
      1        1.31   10.41    1.486  0.20( 0.12) 0.60       1.0     500.00
  LONGEST FLOWPATH FROM NODE    500.00 TO NODE    504.00 =     759.00 FEET.

  ** MEMORY BANK #  1 CONFLUENCE DATA **
   STREAM       Q      Tc   Intensity   Fp(Fm)     Ap     Ae     HEADWATER
   NUMBER     (CFS)  (MIN.) (INCH/HR) (INCH/HR)         (ACRES)    NODE
      1        3.23   11.14    1.429  0.20( 0.04) 0.18       2.4     104.00
      2        3.02   12.67    1.328  0.20( 0.04) 0.19       2.4     400.00
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    504.00 =     851.00 FEET.

  ** PEAK FLOW RATE TABLE **
   STREAM       Q      Tc   Intensity   Fp(Fm)     Ap     Ae     HEADWATER
   NUMBER     (CFS)  (MIN.) (INCH/HR) (INCH/HR)         (ACRES)    NODE
      1        4.45   10.41    1.486  0.20( 0.06) 0.32       3.3     500.00
      2        4.49   11.14    1.429  0.20( 0.06) 0.31       3.4     104.00
      3        4.18   12.67    1.328  0.20( 0.06) 0.32       3.5     400.00
    TOTAL AREA(ACRES) =         3.5
```

```
  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =        4.49  Tc(MIN.) =   11.140
  EFFECTIVE AREA(ACRES) =      3.42  AREA-AVERAGED Fm(INCH/HR) =  0.06
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.31
  TOTAL AREA(ACRES) =        3.5
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    504.00 =     851.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    504.00 TO NODE    504.00 IS CODE =  12
----------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
============================================================================

****************************************************************************
  FLOW PROCESS FROM NODE    504.00 TO NODE    603.00 IS CODE =  52
----------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    610.00  DOWNSTREAM(FEET) =    608.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    76.00   CHANNEL SLOPE =  0.0263
  CHANNEL FLOW THRU SUBAREA(CFS) =       4.49
  FLOW VELOCITY(FEET/SEC) =   3.34 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =   0.38   Tc(MIN.) =   11.52
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    603.00 =     927.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    603.00 TO NODE    603.00 IS CODE =  10
----------------------------------------------------------------------------
  >>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 1 <<<<<
============================================================================

****************************************************************************
  FLOW PROCESS FROM NODE    600.00 TO NODE    601.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   310.00
  ELEVATION DATA: UPSTREAM(FEET) =    643.00  DOWNSTREAM(FEET) =    635.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    7.422
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.805
  SUBAREA Tc AND LOSS RATE DATA(AMC  I ):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  CONDOMINIUMS               D        0.33      0.20     0.350    57    7.42
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
```

```
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.350
  SUBAREA RUNOFF(CFS) =      0.52
  TOTAL AREA(ACRES) =      0.33   PEAK FLOW RATE(CFS) =      0.52

****************************************************************************
  FLOW PROCESS FROM NODE    601.00 TO NODE    602.00 IS CODE =  52
----------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    635.00  DOWNSTREAM(FEET) =    629.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   166.00   CHANNEL SLOPE =  0.0361
  NOTE: CHANNEL FLOW OF 1. CFS WAS ASSUMED IN VELOCITY ESTIMATION
  CHANNEL FLOW THRU SUBAREA(CFS) =       0.52
  FLOW VELOCITY(FEET/SEC) =   2.85 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =   0.97   Tc(MIN.) =    8.39
  LONGEST FLOWPATH FROM NODE    600.00 TO NODE    602.00 =     476.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    602.00 TO NODE    602.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN.) =    8.39
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.682
  SUBAREA LOSS RATE DATA(AMC  I ):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        0.38      0.20     0.500    57
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.500
  SUBAREA AREA(ACRES) =    0.38      SUBAREA RUNOFF(CFS) =    0.54
  EFFECTIVE AREA(ACRES) =      0.71   AREA-AVERAGED Fm(INCH/HR) =  0.09
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.43
  TOTAL AREA(ACRES) =        0.7       PEAK FLOW RATE(CFS) =       1.02

****************************************************************************
  FLOW PROCESS FROM NODE    602.00 TO NODE    603.00 IS CODE =  52
----------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    629.00  DOWNSTREAM(FEET) =    608.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   280.00   CHANNEL SLOPE =  0.0750
  CHANNEL FLOW THRU SUBAREA(CFS) =       1.02
  FLOW VELOCITY(FEET/SEC) =   4.12 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =   1.13   Tc(MIN.) =    9.52
  LONGEST FLOWPATH FROM NODE    600.00 TO NODE    603.00 =     756.00 FEET.
```

```
****************************************************************************
  FLOW PROCESS FROM NODE    603.00 TO NODE    603.00 IS CODE =  11
----------------------------------------------------------------------------
  >>>>>CONFLUENCE MEMORY BANK # 1 WITH THE MAIN-STREAM MEMORY<<<<<
============================================================================

  ** MAIN STREAM CONFLUENCE DATA **
   STREAM       Q      Tc   Intensity   Fp(Fm)     Ap     Ae     HEADWATER
   NUMBER     (CFS)  (MIN.) (INCH/HR) (INCH/HR)         (ACRES)    NODE
      1        1.02    9.52    1.564  0.20( 0.09) 0.43       0.7     600.00
  LONGEST FLOWPATH FROM NODE    600.00 TO NODE    603.00 =     756.00 FEET.

  ** MEMORY BANK #  1 CONFLUENCE DATA **
   STREAM       Q      Tc   Intensity   Fp(Fm)     Ap     Ae     HEADWATER
   NUMBER     (CFS)  (MIN.) (INCH/HR) (INCH/HR)         (ACRES)    NODE
      1        4.45   10.79    1.456  0.20( 0.06) 0.32       3.3     500.00
      2        4.49   11.52    1.402  0.20( 0.06) 0.31       3.4     104.00
      3        4.18   13.06    1.305  0.20( 0.06) 0.32       3.5     400.00
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    603.00 =     927.00 FEET.

  ** PEAK FLOW RATE TABLE **
   STREAM       Q      Tc   Intensity   Fp(Fm)     Ap     Ae     HEADWATER
   NUMBER     (CFS)  (MIN.) (INCH/HR) (INCH/HR)         (ACRES)    NODE
      1        5.25    9.52    1.564  0.20( 0.07) 0.34       3.6     600.00
      2        5.40   10.79    1.456  0.20( 0.07) 0.34       4.0     500.00
      3        5.39   11.52    1.402  0.20( 0.07) 0.33       4.1     104.00
      4        5.02   13.06    1.305  0.20( 0.07) 0.34       4.2     400.00
    TOTAL AREA(ACRES) =         4.2

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =        5.40  Tc(MIN.) =   10.787
  EFFECTIVE AREA(ACRES) =      3.97  AREA-AVERAGED Fm(INCH/HR) =  0.07
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.34
  TOTAL AREA(ACRES) =        4.2
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    603.00 =     927.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    603.00 TO NODE    603.00 IS CODE =  12
----------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
============================================================================
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =        4.2  TC(MIN.) =     10.79
  EFFECTIVE AREA(ACRES) =      3.97  AREA-AVERAGED Fm(INCH/HR)=  0.07
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap = 0.337
  PEAK FLOW RATE(CFS)   =       5.40

  ** PEAK FLOW RATE TABLE **
   STREAM       Q      Tc   Intensity   Fp(Fm)     Ap     Ae     HEADWATER
```

NUMBER	(CFS)	(MIN.)	(INCH/HR)	(INCH/HR)	(ACRES)	NODE
1	5.25	9.52	1.564	0.20(0.07) 0.34	3.6	600.00
2	5.40	10.79	1.456	0.20(0.07) 0.34	4.0	500.00
3	5.39	11.52	1.402	0.20(0.07) 0.33	4.1	104.00
4	5.02	13.06	1.305	0.20(0.07) 0.34	4.2	400.00

END OF RATIONAL METHOD ANALYSIS

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
          (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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                          Analysis prepared by:

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 ************************* DESCRIPTION OF STUDY *************************
* GREAT SCOTT RATIONAL METHOD                                           *
* 25 YEAR EXISTING STORM CONDITION                                      *
* CG                                                                    *
 ************************************************************************

  FILE NAME: GS25E.DAT
  TIME/DATE OF STUDY: 10:16 08/22/2023
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   25.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  12.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *DATA BANK RAINFALL USED*
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  ================  ======  ===== ====== ===== =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *PIPE MAY BE SIZED TO HAVE A FLOW CAPACITY LESS THAN
   UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

**************************************************************************
  FLOW PROCESS FROM NODE    400.00 TO NODE    401.00 IS CODE =  21
```

```
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   127.00
  ELEVATION DATA: UPSTREAM(FEET) =    650.00  DOWNSTREAM(FEET) =    644.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    9.025
  *  25 YEAR RAINFALL INTENSITY(INCH/HR) =  3.453
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  NATURAL FAIR COVER
  "OPEN BROWSE"               D        0.25      0.20     1.000    83    9.03
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.000
  SUBAREA RUNOFF(CFS) =      0.73
  TOTAL AREA(ACRES) =      0.25   PEAK FLOW RATE(CFS) =      0.73

****************************************************************************
  FLOW PROCESS FROM NODE    401.00 TO NODE    104.00 IS CODE =  52
----------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    644.00  DOWNSTREAM(FEET) =    613.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   596.00   CHANNEL SLOPE =  0.0520
  NOTE: CHANNEL FLOW OF 1. CFS WAS ASSUMED IN VELOCITY ESTIMATION
  CHANNEL FLOW THRU SUBAREA(CFS) =       0.73
  FLOW VELOCITY(FEET/SEC) =   3.42 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =   2.90   Tc(MIN.) =   11.93
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    104.00 =     723.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    104.00 TO NODE    104.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =   11.93
  RAINFALL INTENSITY(INCH/HR) =   2.95
  AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20
  AREA-AVERAGED Ap =  1.00
  EFFECTIVE STREAM AREA(ACRES) =       0.25
  TOTAL STREAM AREA(ACRES) =       0.25
  PEAK FLOW RATE(CFS) AT CONFLUENCE =       0.73
```

```
****************************************************************************
  FLOW PROCESS FROM NODE    104.00 TO NODE    104.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>USER SPECIFIED HYDROLOGY INFORMATION AT NODE<<<<<
============================================================================
  USER-SPECIFIED VALUES ARE AS FOLLOWS:
  TC(MIN.) =    9.19   RAINFALL INTENSITY(INCH/HR) =  3.42
  EFFECTIVE AREA(ACRES) =     2.16
  TOTAL AREA(ACRES) =     2.20        PEAK FLOW RATE(CFS) =      6.62
  AREA-AVERAGED Fm(INCH/HR) =   0.02  AREA-AVERAGED Fp(INCH/HR) =   0.20
  AREA-AVERAGED Ap =  0.10
  NOTE: EFFECTIVE AREA IS USED AS THE TOTAL CONTRIBUTING AREA FOR ALL
        CONFLUENCE ANALYSES.

****************************************************************************
  FLOW PROCESS FROM NODE    104.00 TO NODE    104.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =    9.19
  RAINFALL INTENSITY(INCH/HR) =   3.42
  AREA-AVERAGED Fm(INCH/HR) =  0.02
  AREA-AVERAGED Fp(INCH/HR) =  0.20
  AREA-AVERAGED Ap =  0.10
  EFFECTIVE STREAM AREA(ACRES) =       2.16
  TOTAL STREAM AREA(ACRES) =       2.20
  PEAK FLOW RATE(CFS) AT CONFLUENCE =       6.62

  ** CONFLUENCE DATA **
   STREAM       Q      Tc   Intensity   Fp(Fm)     Ap     Ae     HEADWATER
   NUMBER     (CFS)  (MIN.) (INCH/HR) (INCH/HR)         (ACRES)    NODE
      1        0.73   11.93    2.949  0.20( 0.20) 1.00       0.2     400.00
      2        6.62    9.19    3.418  0.20( 0.02) 0.10       2.2     104.00

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
   STREAM       Q      Tc   Intensity   Fp(Fm)     Ap     Ae     HEADWATER
   NUMBER     (CFS)  (MIN.) (INCH/HR) (INCH/HR)         (ACRES)    NODE
      1        7.28    9.19    3.418  0.20( 0.03) 0.17       2.4     104.00
      2        6.44   11.93    2.949  0.20( 0.04) 0.19       2.4     400.00

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =       7.28    Tc(MIN.) =     9.19
  EFFECTIVE AREA(ACRES) =       2.35   AREA-AVERAGED Fm(INCH/HR) =  0.03
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.17
```

```
  TOTAL AREA(ACRES) =        2.5
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    104.00 =     723.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    104.00 TO NODE    504.00 IS CODE =  52
----------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    613.00  DOWNSTREAM(FEET) =    610.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   128.00   CHANNEL SLOPE =  0.0234
  CHANNEL FLOW THRU SUBAREA(CFS) =       7.28
  FLOW VELOCITY(FEET/SEC) =   3.53 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =   0.60   Tc(MIN.) =    9.79
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    504.00 =     851.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    504.00 TO NODE    504.00 IS CODE =  10
----------------------------------------------------------------------------
  >>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 1 <<<<<
============================================================================

****************************************************************************
  FLOW PROCESS FROM NODE    500.00 TO NODE    501.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   246.00
  ELEVATION DATA: UPSTREAM(FEET) =    645.00  DOWNSTREAM(FEET) =    638.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    7.170
  *  25 YEAR RAINFALL INTENSITY(INCH/HR) =  3.934
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        0.33      0.20     0.500    75    7.17
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.500
  SUBAREA RUNOFF(CFS) =      1.14
  TOTAL AREA(ACRES) =      0.33   PEAK FLOW RATE(CFS) =      1.14

****************************************************************************
  FLOW PROCESS FROM NODE    501.00 TO NODE    502.00 IS CODE =  52
----------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
```

```
  ELEVATION DATA: UPSTREAM(FEET) =    638.00  DOWNSTREAM(FEET) =    630.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   227.00   CHANNEL SLOPE =  0.0352
  CHANNEL FLOW THRU SUBAREA(CFS) =       1.14
  FLOW VELOCITY(FEET/SEC) =   2.89 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =   1.31   Tc(MIN.) =    8.48
  LONGEST FLOWPATH FROM NODE    500.00 TO NODE    502.00 =     473.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    502.00 TO NODE    502.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN.) =    8.48
  *  25 YEAR RAINFALL INTENSITY(INCH/HR) =  3.577
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        0.35      0.20     0.500    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.500
  SUBAREA AREA(ACRES) =    0.35      SUBAREA RUNOFF(CFS) =    1.10
  EFFECTIVE AREA(ACRES) =      0.68   AREA-AVERAGED Fm(INCH/HR) =  0.10
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.50
  TOTAL AREA(ACRES) =        0.7       PEAK FLOW RATE(CFS) =       2.13

****************************************************************************
  FLOW PROCESS FROM NODE    502.00 TO NODE    503.00 IS CODE =  52
----------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    630.00  DOWNSTREAM(FEET) =    627.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   179.00   CHANNEL SLOPE =  0.0168
  CHANNEL FLOW THRU SUBAREA(CFS) =       2.13
  FLOW VELOCITY(FEET/SEC) =   2.26 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =   1.32   Tc(MIN.) =    9.80
  LONGEST FLOWPATH FROM NODE    500.00 TO NODE    503.00 =     652.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    503.00 TO NODE    503.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN.) =    9.80
  *  25 YEAR RAINFALL INTENSITY(INCH/HR) =  3.295
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
```

```
  "1 DWELLING/ACRE"          D        0.36      0.20     0.800    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.800
  SUBAREA AREA(ACRES) =    0.36      SUBAREA RUNOFF(CFS) =    1.02
  EFFECTIVE AREA(ACRES) =      1.04   AREA-AVERAGED Fm(INCH/HR) =  0.12
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.60
  TOTAL AREA(ACRES) =        1.0       PEAK FLOW RATE(CFS) =       2.97

****************************************************************************
  FLOW PROCESS FROM NODE    503.00 TO NODE    504.00 IS CODE =  52
----------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    627.00  DOWNSTREAM(FEET) =    610.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   107.00   CHANNEL SLOPE =  0.1589
  NOTE: CHANNEL SLOPE OF .1 WAS ASSUMED IN VELOCITY ESTIMATION
  CHANNEL FLOW THRU SUBAREA(CFS) =       2.97
  FLOW VELOCITY(FEET/SEC) =   5.93 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =   0.30   Tc(MIN.) =   10.10
  LONGEST FLOWPATH FROM NODE    500.00 TO NODE    504.00 =     759.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    504.00 TO NODE    504.00 IS CODE =  11
----------------------------------------------------------------------------
  >>>>>CONFLUENCE MEMORY BANK # 1 WITH THE MAIN-STREAM MEMORY<<<<<
============================================================================

  ** MAIN STREAM CONFLUENCE DATA **
   STREAM       Q      Tc   Intensity   Fp(Fm)     Ap     Ae     HEADWATER
   NUMBER     (CFS)  (MIN.) (INCH/HR) (INCH/HR)         (ACRES)    NODE
      1        2.97   10.10    3.240  0.20( 0.12) 0.60       1.0     500.00
  LONGEST FLOWPATH FROM NODE    500.00 TO NODE    504.00 =     759.00 FEET.

  ** MEMORY BANK #  1 CONFLUENCE DATA **
   STREAM       Q      Tc   Intensity   Fp(Fm)     Ap     Ae     HEADWATER
   NUMBER     (CFS)  (MIN.) (INCH/HR) (INCH/HR)         (ACRES)    NODE
      1        7.28    9.79    3.297  0.20( 0.03) 0.17       2.4     104.00
      2        6.44   12.55    2.865  0.20( 0.04) 0.19       2.4     400.00
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    504.00 =     851.00 FEET.

  ** PEAK FLOW RATE TABLE **
   STREAM       Q      Tc   Intensity   Fp(Fm)     Ap     Ae     HEADWATER
   NUMBER     (CFS)  (MIN.) (INCH/HR) (INCH/HR)         (ACRES)    NODE
      1       10.21    9.79    3.297  0.20( 0.06) 0.30       3.4     104.00
      2       10.16   10.10    3.240  0.20( 0.06) 0.31       3.4     500.00
      3        9.05   12.55    2.865  0.20( 0.06) 0.32       3.5     400.00
    TOTAL AREA(ACRES) =         3.5

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
```

```
  PEAK FLOW RATE(CFS) =       10.21  Tc(MIN.) =    9.793
  EFFECTIVE AREA(ACRES) =      3.36  AREA-AVERAGED Fm(INCH/HR) =  0.06
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.31
  TOTAL AREA(ACRES) =        3.5
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    504.00 =     851.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    504.00 TO NODE    504.00 IS CODE =  12
----------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
============================================================================

****************************************************************************
  FLOW PROCESS FROM NODE    504.00 TO NODE    603.00 IS CODE =  52
----------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    610.00  DOWNSTREAM(FEET) =    608.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    76.00   CHANNEL SLOPE =  0.0263
  CHANNEL FLOW THRU SUBAREA(CFS) =      10.21
  FLOW VELOCITY(FEET/SEC) =   4.08 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =   0.31   Tc(MIN.) =   10.10
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    603.00 =     927.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    603.00 TO NODE    603.00 IS CODE =  10
----------------------------------------------------------------------------
  >>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 1 <<<<<
============================================================================

****************************************************************************
  FLOW PROCESS FROM NODE    600.00 TO NODE    601.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   310.00
  ELEVATION DATA: UPSTREAM(FEET) =    643.00  DOWNSTREAM(FEET) =    635.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    7.422
  *  25 YEAR RAINFALL INTENSITY(INCH/HR) =  3.857
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap      SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  CONDOMINIUMS               D        0.33      0.20     0.350    75    7.42
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.350
  SUBAREA RUNOFF(CFS) =      1.12
```

```
  TOTAL AREA(ACRES) =      0.33   PEAK FLOW RATE(CFS) =      1.12

****************************************************************************
  FLOW PROCESS FROM NODE    601.00 TO NODE    602.00 IS CODE =  52
----------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    635.00  DOWNSTREAM(FEET) =    629.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   166.00   CHANNEL SLOPE =  0.0361
  CHANNEL FLOW THRU SUBAREA(CFS) =       1.12
  FLOW VELOCITY(FEET/SEC) =   2.92 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =   0.95   Tc(MIN.) =    8.37
  LONGEST FLOWPATH FROM NODE    600.00 TO NODE    602.00 =     476.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    602.00 TO NODE    602.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN.) =    8.37
  *  25 YEAR RAINFALL INTENSITY(INCH/HR) =  3.604
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        0.38      0.20     0.500    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.500
  SUBAREA AREA(ACRES) =    0.38      SUBAREA RUNOFF(CFS) =    1.20
  EFFECTIVE AREA(ACRES) =      0.71   AREA-AVERAGED Fm(INCH/HR) =  0.09
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.43
  TOTAL AREA(ACRES) =        0.7       PEAK FLOW RATE(CFS) =       2.25

****************************************************************************
  FLOW PROCESS FROM NODE    602.00 TO NODE    603.00 IS CODE =  52
----------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    629.00  DOWNSTREAM(FEET) =    608.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   280.00   CHANNEL SLOPE =  0.0750
  CHANNEL FLOW THRU SUBAREA(CFS) =       2.25
  FLOW VELOCITY(FEET/SEC) =   4.83 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =   0.97   Tc(MIN.) =    9.34
  LONGEST FLOWPATH FROM NODE    600.00 TO NODE    603.00 =     756.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    603.00 TO NODE    603.00 IS CODE =  11
----------------------------------------------------------------------------
```

```
  >>>>>CONFLUENCE MEMORY BANK # 1 WITH THE MAIN-STREAM MEMORY<<<<<
================================================================================

  ** MAIN STREAM CONFLUENCE DATA **
   STREAM       Q      Tc   Intensity   Fp(Fm)     Ap     Ae     HEADWATER
   NUMBER     (CFS)  (MIN.) (INCH/HR) (INCH/HR)         (ACRES)    NODE
      1        2.25    9.34    3.387  0.20( 0.09) 0.43       0.7     600.00
  LONGEST FLOWPATH FROM NODE    600.00 TO NODE    603.00 =     756.00 FEET.

  ** MEMORY BANK #  1 CONFLUENCE DATA **
   STREAM       Q      Tc   Intensity   Fp(Fm)     Ap     Ae     HEADWATER
   NUMBER     (CFS)  (MIN.) (INCH/HR) (INCH/HR)         (ACRES)    NODE
      1       10.21   10.10    3.239  0.20( 0.06) 0.30       3.4     104.00
      2       10.16   10.41    3.184  0.20( 0.06) 0.31       3.4     500.00
      3        9.05   12.87    2.825  0.20( 0.06) 0.32       3.5     400.00
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    603.00 =     927.00 FEET.

  ** PEAK FLOW RATE TABLE **
   STREAM       Q      Tc   Intensity   Fp(Fm)     Ap     Ae     HEADWATER
   NUMBER     (CFS)  (MIN.) (INCH/HR) (INCH/HR)         (ACRES)    NODE
      1       12.13    9.34    3.387  0.20( 0.07) 0.33       3.8     600.00
      2       12.36   10.10    3.239  0.20( 0.06) 0.32       4.1     104.00
      3       12.27   10.41    3.184  0.20( 0.07) 0.33       4.1     500.00
      4       10.92   12.87    2.825  0.20( 0.07) 0.34       4.2     400.00
    TOTAL AREA(ACRES) =         4.2

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =       12.36  Tc(MIN.) =   10.104
  EFFECTIVE AREA(ACRES) =      4.07  AREA-AVERAGED Fm(INCH/HR) =  0.06
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.32
  TOTAL AREA(ACRES) =        4.2
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    603.00 =     927.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    603.00 TO NODE    603.00 IS CODE =  12
----------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
============================================================================
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =        4.2  TC(MIN.) =     10.10
  EFFECTIVE AREA(ACRES) =      4.07  AREA-AVERAGED Fm(INCH/HR)=  0.06
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap = 0.325
  PEAK FLOW RATE(CFS)   =      12.36

  ** PEAK FLOW RATE TABLE **
   STREAM       Q      Tc   Intensity   Fp(Fm)     Ap     Ae     HEADWATER
   NUMBER     (CFS)  (MIN.) (INCH/HR) (INCH/HR)         (ACRES)    NODE
      1       12.13    9.34    3.387  0.20( 0.07) 0.33       3.8     600.00
      2       12.36   10.10    3.239  0.20( 0.06) 0.32       4.1     104.00
```

```
      3       12.27   10.41    3.184  0.20( 0.07) 0.33       4.1     500.00
      4       10.92   12.87    2.825  0.20( 0.07) 0.34       4.2     400.00
================================================================================
================================================================================
  END OF RATIONAL METHOD ANALYSIS
```

```
************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
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 ************************* DESCRIPTION OF STUDY *************************
* GREAT SCOTT RATIONAL METHOD                                           *
* 100 YEAR EXISTING STORM CONDITION                                     *
* CG                                                                    *
 ************************************************************************

  FILE NAME: GS100E.DAT
  TIME/DATE OF STUDY: 10:22 08/22/2023
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  12.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *DATA BANK RAINFALL USED*
  *ANTECEDENT MOISTURE CONDITION (AMC) III ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  ================  ======  ===== ====== ===== =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *PIPE MAY BE SIZED TO HAVE A FLOW CAPACITY LESS THAN
   UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

************************************************************************
  FLOW PROCESS FROM NODE    400.00 TO NODE    401.00 IS CODE =  21
```

```
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   127.00
  ELEVATION DATA: UPSTREAM(FEET) =    650.00  DOWNSTREAM(FEET) =    644.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    9.025
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.411
  SUBAREA Tc AND LOSS RATE DATA(AMC III):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        0.25      0.20     1.000    96    9.03
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.000
  SUBAREA RUNOFF(CFS) =      0.95
  TOTAL AREA(ACRES) =      0.25   PEAK FLOW RATE(CFS) =      0.95

****************************************************************************
  FLOW PROCESS FROM NODE    401.00 TO NODE    104.00 IS CODE =  52
----------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    644.00  DOWNSTREAM(FEET) =    613.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   596.00   CHANNEL SLOPE =  0.0520
  NOTE: CHANNEL FLOW OF 1. CFS WAS ASSUMED IN VELOCITY ESTIMATION
  CHANNEL FLOW THRU SUBAREA(CFS) =       0.95
  FLOW VELOCITY(FEET/SEC) =   3.42 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =   2.90   Tc(MIN.) =   11.93
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    104.00 =     723.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    104.00 TO NODE    104.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =   11.93
  RAINFALL INTENSITY(INCH/HR) =   3.76
  AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20
  AREA-AVERAGED Ap =  1.00
  EFFECTIVE STREAM AREA(ACRES) =       0.25
  TOTAL STREAM AREA(ACRES) =       0.25
  PEAK FLOW RATE(CFS) AT CONFLUENCE =       0.95
```

```
****************************************************************************
  FLOW PROCESS FROM NODE    104.00 TO NODE    104.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>USER SPECIFIED HYDROLOGY INFORMATION AT NODE<<<<<
============================================================================
  USER-SPECIFIED VALUES ARE AS FOLLOWS:
  TC(MIN.) =    8.95   RAINFALL INTENSITY(INCH/HR) =  4.43
  EFFECTIVE AREA(ACRES) =     2.16
  TOTAL AREA(ACRES) =     2.20        PEAK FLOW RATE(CFS) =      8.59
  AREA-AVERAGED Fm(INCH/HR) =   0.02  AREA-AVERAGED Fp(INCH/HR) =   0.20
  AREA-AVERAGED Ap =  0.10
  NOTE: EFFECTIVE AREA IS USED AS THE TOTAL CONTRIBUTING AREA FOR ALL
        CONFLUENCE ANALYSES.

****************************************************************************
  FLOW PROCESS FROM NODE    104.00 TO NODE    104.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =    8.95
  RAINFALL INTENSITY(INCH/HR) =   4.43
  AREA-AVERAGED Fm(INCH/HR) =  0.02
  AREA-AVERAGED Fp(INCH/HR) =  0.20
  AREA-AVERAGED Ap =  0.10
  EFFECTIVE STREAM AREA(ACRES) =       2.16
  TOTAL STREAM AREA(ACRES) =       2.20
  PEAK FLOW RATE(CFS) AT CONFLUENCE =       8.59

  ** CONFLUENCE DATA **
   STREAM       Q      Tc   Intensity   Fp(Fm)     Ap     Ae     HEADWATER
   NUMBER     (CFS)  (MIN.) (INCH/HR) (INCH/HR)         (ACRES)    NODE
      1        0.95   11.93    3.759  0.20( 0.20) 1.00       0.2     400.00
      2        8.59    8.95    4.432  0.20( 0.02) 0.10       2.2     104.00

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
   STREAM       Q      Tc   Intensity   Fp(Fm)     Ap     Ae     HEADWATER
   NUMBER     (CFS)  (MIN.) (INCH/HR) (INCH/HR)         (ACRES)    NODE
      1        9.44    8.95    4.432  0.20( 0.03) 0.17       2.3     104.00
      2        8.23   11.93    3.759  0.20( 0.04) 0.19       2.4     400.00

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =       9.44    Tc(MIN.) =     8.95
  EFFECTIVE AREA(ACRES) =       2.35   AREA-AVERAGED Fm(INCH/HR) =  0.03
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.17
```

```
  TOTAL AREA(ACRES) =        2.5
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    104.00 =     723.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    104.00 TO NODE    504.00 IS CODE =  52
----------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    613.00  DOWNSTREAM(FEET) =    610.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   128.00   CHANNEL SLOPE =  0.0234
  CHANNEL FLOW THRU SUBAREA(CFS) =       9.44
  FLOW VELOCITY(FEET/SEC) =   3.77 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =   0.57   Tc(MIN.) =    9.52
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    504.00 =     851.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    504.00 TO NODE    504.00 IS CODE =  10
----------------------------------------------------------------------------
  >>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 1 <<<<<
============================================================================

****************************************************************************
  FLOW PROCESS FROM NODE    500.00 TO NODE    501.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   246.00
  ELEVATION DATA: UPSTREAM(FEET) =    645.00  DOWNSTREAM(FEET) =    638.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    7.170
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  5.033
  SUBAREA Tc AND LOSS RATE DATA(AMC III):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        0.33      0.20     0.500    91    7.17
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.500
  SUBAREA RUNOFF(CFS) =      1.47
  TOTAL AREA(ACRES) =      0.33   PEAK FLOW RATE(CFS) =      1.47

****************************************************************************
  FLOW PROCESS FROM NODE    501.00 TO NODE    502.00 IS CODE =  52
----------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
```

```
  ELEVATION DATA: UPSTREAM(FEET) =    638.00  DOWNSTREAM(FEET) =    630.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   227.00   CHANNEL SLOPE =  0.0352
  CHANNEL FLOW THRU SUBAREA(CFS) =       1.47
  FLOW VELOCITY(FEET/SEC) =   3.03 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =   1.25   Tc(MIN.) =    8.42
  LONGEST FLOWPATH FROM NODE    500.00 TO NODE    502.00 =     473.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    502.00 TO NODE    502.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN.) =    8.42
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.591
  SUBAREA LOSS RATE DATA(AMC III):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        0.35      0.20     0.500    91
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.500
  SUBAREA AREA(ACRES) =    0.35      SUBAREA RUNOFF(CFS) =    1.41
  EFFECTIVE AREA(ACRES) =      0.68   AREA-AVERAGED Fm(INCH/HR) =  0.10
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.50
  TOTAL AREA(ACRES) =        0.7       PEAK FLOW RATE(CFS) =       2.75

****************************************************************************
  FLOW PROCESS FROM NODE    502.00 TO NODE    503.00 IS CODE =  52
----------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    630.00  DOWNSTREAM(FEET) =    627.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   179.00   CHANNEL SLOPE =  0.0168
  CHANNEL FLOW THRU SUBAREA(CFS) =       2.75
  FLOW VELOCITY(FEET/SEC) =   2.38 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =   1.25   Tc(MIN.) =    9.67
  LONGEST FLOWPATH FROM NODE    500.00 TO NODE    503.00 =     652.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    503.00 TO NODE    503.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN.) =    9.67
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.240
  SUBAREA LOSS RATE DATA(AMC III):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
```

```
  "1 DWELLING/ACRE"          D        0.36      0.20     0.800    91
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.800
  SUBAREA AREA(ACRES) =    0.36      SUBAREA RUNOFF(CFS) =    1.32
  EFFECTIVE AREA(ACRES) =      1.04   AREA-AVERAGED Fm(INCH/HR) =  0.12
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.60
  TOTAL AREA(ACRES) =        1.0       PEAK FLOW RATE(CFS) =       3.86

****************************************************************************
  FLOW PROCESS FROM NODE    503.00 TO NODE    504.00 IS CODE =  52
----------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    627.00  DOWNSTREAM(FEET) =    610.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   107.00   CHANNEL SLOPE =  0.1589
  NOTE: CHANNEL SLOPE OF .1 WAS ASSUMED IN VELOCITY ESTIMATION
  CHANNEL FLOW THRU SUBAREA(CFS) =       3.86
  FLOW VELOCITY(FEET/SEC) =   6.28 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =   0.28   Tc(MIN.) =    9.95
  LONGEST FLOWPATH FROM NODE    500.00 TO NODE    504.00 =     759.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    504.00 TO NODE    504.00 IS CODE =  11
----------------------------------------------------------------------------
  >>>>>CONFLUENCE MEMORY BANK # 1 WITH THE MAIN-STREAM MEMORY<<<<<
============================================================================

  ** MAIN STREAM CONFLUENCE DATA **
   STREAM       Q      Tc   Intensity   Fp(Fm)     Ap     Ae     HEADWATER
   NUMBER     (CFS)  (MIN.) (INCH/HR) (INCH/HR)         (ACRES)    NODE
      1        3.86    9.95    4.171  0.20( 0.12) 0.60       1.0     500.00
  LONGEST FLOWPATH FROM NODE    500.00 TO NODE    504.00 =     759.00 FEET.

  ** MEMORY BANK #  1 CONFLUENCE DATA **
   STREAM       Q      Tc   Intensity   Fp(Fm)     Ap     Ae     HEADWATER
   NUMBER     (CFS)  (MIN.) (INCH/HR) (INCH/HR)         (ACRES)    NODE
      1        9.44    9.52    4.279  0.20( 0.03) 0.17       2.3     104.00
      2        8.23   12.51    3.658  0.20( 0.04) 0.19       2.4     400.00
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    504.00 =     851.00 FEET.

  ** PEAK FLOW RATE TABLE **
   STREAM       Q      Tc   Intensity   Fp(Fm)     Ap     Ae     HEADWATER
   NUMBER     (CFS)  (MIN.) (INCH/HR) (INCH/HR)         (ACRES)    NODE
      1       13.22    9.52    4.279  0.20( 0.06) 0.30       3.3     104.00
      2       13.12    9.95    4.171  0.20( 0.06) 0.31       3.4     500.00
      3       11.60   12.51    3.658  0.20( 0.06) 0.32       3.5     400.00
    TOTAL AREA(ACRES) =         3.5

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
```

```
  PEAK FLOW RATE(CFS) =       13.22  Tc(MIN.) =    9.516
  EFFECTIVE AREA(ACRES) =      3.34  AREA-AVERAGED Fm(INCH/HR) =  0.06
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.31
  TOTAL AREA(ACRES) =        3.5
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    504.00 =     851.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    504.00 TO NODE    504.00 IS CODE =  12
----------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
============================================================================

****************************************************************************
  FLOW PROCESS FROM NODE    504.00 TO NODE    603.00 IS CODE =  52
----------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    610.00  DOWNSTREAM(FEET) =    608.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    76.00   CHANNEL SLOPE =  0.0263
  CHANNEL FLOW THRU SUBAREA(CFS) =      13.22
  FLOW VELOCITY(FEET/SEC) =   4.36 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =   0.29   Tc(MIN.) =    9.81
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    603.00 =     927.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    603.00 TO NODE    603.00 IS CODE =  10
----------------------------------------------------------------------------
  >>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 1 <<<<<
============================================================================

****************************************************************************
  FLOW PROCESS FROM NODE    600.00 TO NODE    601.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   310.00
  ELEVATION DATA: UPSTREAM(FEET) =    643.00  DOWNSTREAM(FEET) =    635.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    7.422
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.934
  SUBAREA Tc AND LOSS RATE DATA(AMC III):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap      SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  CONDOMINIUMS               D        0.33      0.20     0.350    91    7.42
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.350
  SUBAREA RUNOFF(CFS) =      1.44
```

```
  TOTAL AREA(ACRES) =      0.33   PEAK FLOW RATE(CFS) =      1.44

****************************************************************************
  FLOW PROCESS FROM NODE    601.00 TO NODE    602.00 IS CODE =  52
----------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    635.00  DOWNSTREAM(FEET) =    629.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   166.00   CHANNEL SLOPE =  0.0361
  CHANNEL FLOW THRU SUBAREA(CFS) =       1.44
  FLOW VELOCITY(FEET/SEC) =   3.06 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =   0.90   Tc(MIN.) =    8.33
  LONGEST FLOWPATH FROM NODE    600.00 TO NODE    602.00 =     476.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    602.00 TO NODE    602.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN.) =    8.33
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.620
  SUBAREA LOSS RATE DATA(AMC III):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        0.38      0.20     0.500    91
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.500
  SUBAREA AREA(ACRES) =    0.38      SUBAREA RUNOFF(CFS) =    1.55
  EFFECTIVE AREA(ACRES) =      0.71   AREA-AVERAGED Fm(INCH/HR) =  0.09
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.43
  TOTAL AREA(ACRES) =        0.7       PEAK FLOW RATE(CFS) =       2.90

****************************************************************************
  FLOW PROCESS FROM NODE    602.00 TO NODE    603.00 IS CODE =  52
----------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    629.00  DOWNSTREAM(FEET) =    608.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   280.00   CHANNEL SLOPE =  0.0750
  CHANNEL FLOW THRU SUBAREA(CFS) =       2.90
  FLOW VELOCITY(FEET/SEC) =   5.10 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =   0.91   Tc(MIN.) =    9.24
  LONGEST FLOWPATH FROM NODE    600.00 TO NODE    603.00 =     756.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    603.00 TO NODE    603.00 IS CODE =  11
----------------------------------------------------------------------------
```

```
  >>>>>CONFLUENCE MEMORY BANK # 1 WITH THE MAIN-STREAM MEMORY<<<<<
================================================================================

  ** MAIN STREAM CONFLUENCE DATA **
   STREAM       Q      Tc   Intensity   Fp(Fm)     Ap     Ae     HEADWATER
   NUMBER     (CFS)  (MIN.) (INCH/HR) (INCH/HR)         (ACRES)    NODE
      1        2.90    9.24    4.352  0.20( 0.09) 0.43       0.7     600.00
  LONGEST FLOWPATH FROM NODE    600.00 TO NODE    603.00 =     756.00 FEET.

  ** MEMORY BANK #  1 CONFLUENCE DATA **
   STREAM       Q      Tc   Intensity   Fp(Fm)     Ap     Ae     HEADWATER
   NUMBER     (CFS)  (MIN.) (INCH/HR) (INCH/HR)         (ACRES)    NODE
      1       13.22    9.81    4.206  0.20( 0.06) 0.30       3.3     104.00
      2       13.12   10.24    4.102  0.20( 0.06) 0.31       3.4     500.00
      3       11.60   12.82    3.608  0.20( 0.06) 0.32       3.5     400.00
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    603.00 =     927.00 FEET.

  ** PEAK FLOW RATE TABLE **
   STREAM       Q      Tc   Intensity   Fp(Fm)     Ap     Ae     HEADWATER
   NUMBER     (CFS)  (MIN.) (INCH/HR) (INCH/HR)         (ACRES)    NODE
      1       15.79    9.24    4.352  0.20( 0.06) 0.32       3.9     600.00
      2       16.02    9.81    4.206  0.20( 0.06) 0.32       4.1     104.00
      3       15.84   10.24    4.102  0.20( 0.07) 0.33       4.1     500.00
      4       13.99   12.82    3.608  0.20( 0.07) 0.34       4.2     400.00
    TOTAL AREA(ACRES) =         4.2

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =       16.02  Tc(MIN.) =    9.807
  EFFECTIVE AREA(ACRES) =      4.05  AREA-AVERAGED Fm(INCH/HR) =  0.06
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.32
  TOTAL AREA(ACRES) =        4.2
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    603.00 =     927.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    603.00 TO NODE    603.00 IS CODE =  12
----------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
============================================================================
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =        4.2  TC(MIN.) =      9.81
  EFFECTIVE AREA(ACRES) =      4.05  AREA-AVERAGED Fm(INCH/HR)=  0.06
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap = 0.323
  PEAK FLOW RATE(CFS)   =      16.02

  ** PEAK FLOW RATE TABLE **
   STREAM       Q      Tc   Intensity   Fp(Fm)     Ap     Ae     HEADWATER
   NUMBER     (CFS)  (MIN.) (INCH/HR) (INCH/HR)         (ACRES)    NODE
      1       15.79    9.24    4.352  0.20( 0.06) 0.32       3.9     600.00
      2       16.02    9.81    4.206  0.20( 0.06) 0.32       4.1     104.00
```

```
      3       15.84   10.24    4.102  0.20( 0.07) 0.33       4.1     500.00
      4       13.99   12.82    3.608  0.20( 0.07) 0.34       4.2     400.00
================================================================================
================================================================================
  END OF RATIONAL METHOD ANALYSIS
```

```
**************************************************************************
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                          Analysis prepared by:

                              Huitt-Zollars, Inc.
                          2603 Main Street, Suite 400
                               Irvine, CA. 92614
                                  949-988-5815

 ************************* DESCRIPTION OF STUDY *************************
* GREAT SCOTT OFFSITE RATIONAL METHOD                                    *
* 2 YEAR EXISTING CONDITION                                              *
* 8/16/2023 CG                                                           *
 ************************************************************************

  FILE NAME: GSOFF2.DAT
  TIME/DATE OF STUDY: 10:06 08/22/2023
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =    2.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  12.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *DATA BANK RAINFALL USED*
  *ANTECEDENT MOISTURE CONDITION (AMC) I ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  ================  ======  ===== ====== ===== =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *PIPE MAY BE SIZED TO HAVE A FLOW CAPACITY LESS THAN
   UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

**************************************************************************
  FLOW PROCESS FROM NODE    100.00 TO NODE    101.00 IS CODE =  21
```

```
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   182.00
  ELEVATION DATA: UPSTREAM(FEET) =    645.00  DOWNSTREAM(FEET) =    640.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    5.002
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  2.263
  SUBAREA Tc AND LOSS RATE DATA(AMC  I ):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  COMMERCIAL                 D        0.46      0.20     0.100    57    5.00
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.100
  SUBAREA RUNOFF(CFS) =      0.93
  TOTAL AREA(ACRES) =      0.46   PEAK FLOW RATE(CFS) =      0.93

****************************************************************************
  FLOW PROCESS FROM NODE    101.00 TO NODE    102.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  1 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) =  640.00  DOWNSTREAM ELEVATION(FEET) =  631.00
  STREET LENGTH(FEET) =   699.00   CURB HEIGHT(INCHES) =  8.0
  STREET HALFWIDTH(FEET) = 30.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  20.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.018
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.018

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  1
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       2.10
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.32
    HALFSTREET FLOOD WIDTH(FEET) =    8.78
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    2.38
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    0.76
  STREET FLOW TRAVEL TIME(MIN.) =   4.90   Tc(MIN.) =    9.91
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.529
  SUBAREA LOSS RATE DATA(AMC  I ):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                 D        1.70      0.20     0.100    57
```

```
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.100
  SUBAREA AREA(ACRES) =    1.70      SUBAREA RUNOFF(CFS) =    2.31
  EFFECTIVE AREA(ACRES) =      2.16    AREA-AVERAGED Fm(INCH/HR) =  0.02
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.10
  TOTAL AREA(ACRES) =        2.2        PEAK FLOW RATE(CFS) =       2.93

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.35   HALFSTREET FLOOD WIDTH(FEET) =  10.35
  FLOW VELOCITY(FEET/SEC.) =  2.55   DEPTH*VELOCITY(FT*FT/SEC.) =   0.89
  LONGEST FLOWPATH FROM NODE    100.00 TO NODE    102.00 =     881.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    102.00 TO NODE    103.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   625.00  DOWNSTREAM(FEET) =   624.00
  FLOW LENGTH(FEET) =    20.00   MANNING'S N =  0.013
  ESTIMATED PIPE DIAMETER(INCH) INCREASED TO 12.000
  DEPTH OF FLOW IN  12.0 INCH PIPE IS   5.2 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   9.02
  ESTIMATED PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       2.93
  PIPE TRAVEL TIME(MIN.) =   0.04    Tc(MIN.) =    9.94
  LONGEST FLOWPATH FROM NODE    100.00 TO NODE    103.00 =     901.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    103.00 TO NODE    104.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   624.00  DOWNSTREAM(FEET) =   615.00
  FLOW LENGTH(FEET) =   230.23   MANNING'S N =  0.013
  ESTIMATED PIPE DIAMETER(INCH) INCREASED TO 12.000
  DEPTH OF FLOW IN  12.0 INCH PIPE IS   5.6 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   8.23
  ESTIMATED PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       2.93
  PIPE TRAVEL TIME(MIN.) =   0.47    Tc(MIN.) =   10.41
  LONGEST FLOWPATH FROM NODE    100.00 TO NODE    104.00 =    1131.23 FEET.
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =        2.2  TC(MIN.) =     10.41
  EFFECTIVE AREA(ACRES) =      2.16  AREA-AVERAGED Fm(INCH/HR)=  0.02
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap = 0.100
  PEAK FLOW RATE(CFS)   =       2.93
============================================================================
```

==========

END OF RATIONAL METHOD ANALYSIS

```
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                          Analysis prepared by:

                            Huitt-Zollars, Inc.
                         2603 Main Street, Suite 400
                              Irvine, CA. 92614
                                 949-988-5815

 ************************* DESCRIPTION OF STUDY *************************
* GREAT SCOTT OFFSITE RATIONAL METHOD                                    *
* 25 YEAR EXISTING CONDITION                                             *
* 8/16/2023 CG                                                           *
 ************************************************************************

  FILE NAME: GSOFF25.DAT
  TIME/DATE OF STUDY: 10:07 08/22/2023
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   25.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  12.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *DATA BANK RAINFALL USED*
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  ================  ======  ===== ====== ===== =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0313 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *PIPE MAY BE SIZED TO HAVE A FLOW CAPACITY LESS THAN
   UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

**************************************************************************
  FLOW PROCESS FROM NODE    100.00 TO NODE    101.00 IS CODE =  21
```

```
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   182.00
  ELEVATION DATA: UPSTREAM(FEET) =    645.00  DOWNSTREAM(FEET) =    640.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    5.002
  *  25 YEAR RAINFALL INTENSITY(INCH/HR) =  4.823
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
        LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  COMMERCIAL                 D        0.46      0.20     0.100    75    5.00
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.100
  SUBAREA RUNOFF(CFS) =      1.99
  TOTAL AREA(ACRES) =      0.46   PEAK FLOW RATE(CFS) =      1.99

****************************************************************************
  FLOW PROCESS FROM NODE    101.00 TO NODE    102.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  1 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) =  640.00  DOWNSTREAM ELEVATION(FEET) =  631.00
  STREET LENGTH(FEET) =   699.00   CURB HEIGHT(INCHES) =  8.0
  STREET HALFWIDTH(FEET) = 30.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  20.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.018
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.018

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  1
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       4.62
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.39
    HALFSTREET FLOOD WIDTH(FEET) =   12.77
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    2.80
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.09
  STREET FLOW TRAVEL TIME(MIN.) =   4.16   Tc(MIN.) =    9.16
  *  25 YEAR RAINFALL INTENSITY(INCH/HR) =  3.424
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
        LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                 D        1.70      0.20     0.100    75
```

```
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.100
  SUBAREA AREA(ACRES) =    1.70      SUBAREA RUNOFF(CFS) =    5.21
  EFFECTIVE AREA(ACRES) =      2.16    AREA-AVERAGED Fm(INCH/HR) =  0.02
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.10
  TOTAL AREA(ACRES) =        2.2        PEAK FLOW RATE(CFS) =       6.62

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.43   HALFSTREET FLOOD WIDTH(FEET) =  14.88
  FLOW VELOCITY(FEET/SEC.) =  3.05   DEPTH*VELOCITY(FT*FT/SEC.) =   1.31
  LONGEST FLOWPATH FROM NODE    100.00 TO NODE    102.00 =     881.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    102.00 TO NODE    103.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   625.00  DOWNSTREAM(FEET) =   624.00
  FLOW LENGTH(FEET) =    20.00   MANNING'S N =  0.013
  DEPTH OF FLOW IN  12.0 INCH PIPE IS   8.7 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  10.85
  ESTIMATED PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       6.62
  PIPE TRAVEL TIME(MIN.) =   0.03    Tc(MIN.) =    9.19
  LONGEST FLOWPATH FROM NODE    100.00 TO NODE    103.00 =     901.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    103.00 TO NODE    104.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   624.00  DOWNSTREAM(FEET) =   615.00
  FLOW LENGTH(FEET) =   230.23   MANNING'S N =  0.013
  DEPTH OF FLOW IN  12.0 INCH PIPE IS   9.7 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   9.70
  ESTIMATED PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       6.62
  PIPE TRAVEL TIME(MIN.) =   0.40    Tc(MIN.) =    9.59
  LONGEST FLOWPATH FROM NODE    100.00 TO NODE    104.00 =    1131.23 FEET.
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =        2.2  TC(MIN.) =      9.59
  EFFECTIVE AREA(ACRES) =      2.16  AREA-AVERAGED Fm(INCH/HR)=  0.02
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap = 0.100
  PEAK FLOW RATE(CFS)   =       6.62
============================================================================
============================================================================
  END OF RATIONAL METHOD ANALYSIS
```

```
**************************************************************************
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                          Analysis prepared by:

                              Huitt-Zollars, Inc.
                          2603 Main Street, Suite 400
                               Irvine, CA. 92614
                                  949-988-5815

 ************************* DESCRIPTION OF STUDY *************************
* GREAT SCOTT OFFSITE RATIONAL METHOD                                    *
* 100 YEAR EXISTING CONDITION                                            *
* 8/16/2023 CG                                                           *
 ************************************************************************

  FILE NAME: GSOFF.DAT
  TIME/DATE OF STUDY: 10:03 08/22/2023
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  12.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *DATA BANK RAINFALL USED*
  *ANTECEDENT MOISTURE CONDITION (AMC) III ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  ================  ======  ===== ====== ===== =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *PIPE MAY BE SIZED TO HAVE A FLOW CAPACITY LESS THAN
   UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

**************************************************************************
  FLOW PROCESS FROM NODE    100.00 TO NODE    101.00 IS CODE =  21
```

```
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   182.00
  ELEVATION DATA: UPSTREAM(FEET) =    645.00  DOWNSTREAM(FEET) =    640.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    5.002
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  6.186
  SUBAREA Tc AND LOSS RATE DATA(AMC III):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  COMMERCIAL                 D        0.46      0.20     0.100    91    5.00
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.100
  SUBAREA RUNOFF(CFS) =      2.55
  TOTAL AREA(ACRES) =      0.46   PEAK FLOW RATE(CFS) =      2.55

****************************************************************************
  FLOW PROCESS FROM NODE    101.00 TO NODE    102.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  1 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) =  640.00  DOWNSTREAM ELEVATION(FEET) =  631.00
  STREET LENGTH(FEET) =   699.00   CURB HEIGHT(INCHES) =  8.0
  STREET HALFWIDTH(FEET) = 30.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  20.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.018
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.018

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  1
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       5.97
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.42
    HALFSTREET FLOOD WIDTH(FEET) =   14.26
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    2.97
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.24
  STREET FLOW TRAVEL TIME(MIN.) =   3.92   Tc(MIN.) =    8.92
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.440
  SUBAREA LOSS RATE DATA(AMC III):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                 D        1.70      0.20     0.100    91
```

```
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.100
  SUBAREA AREA(ACRES) =    1.70      SUBAREA RUNOFF(CFS) =    6.76
  EFFECTIVE AREA(ACRES) =      2.16    AREA-AVERAGED Fm(INCH/HR) =  0.02
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.10
  TOTAL AREA(ACRES) =        2.2        PEAK FLOW RATE(CFS) =       8.59

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.46   HALFSTREET FLOOD WIDTH(FEET) =  16.60
  FLOW VELOCITY(FEET/SEC.) =  3.24   DEPTH*VELOCITY(FT*FT/SEC.) =   1.49
  LONGEST FLOWPATH FROM NODE    100.00 TO NODE    102.00 =     881.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    102.00 TO NODE    103.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   625.00  DOWNSTREAM(FEET) =   624.00
  FLOW LENGTH(FEET) =    20.00   MANNING'S N =  0.013
  DEPTH OF FLOW IN  15.0 INCH PIPE IS   8.6 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  11.79
  ESTIMATED PIPE DIAMETER(INCH) =  15.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       8.59
  PIPE TRAVEL TIME(MIN.) =   0.03    Tc(MIN.) =    8.95
  LONGEST FLOWPATH FROM NODE    100.00 TO NODE    103.00 =     901.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    103.00 TO NODE    104.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   624.00  DOWNSTREAM(FEET) =   615.00
  FLOW LENGTH(FEET) =   230.23   MANNING'S N =  0.013
  DEPTH OF FLOW IN  15.0 INCH PIPE IS   9.3 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  10.71
  ESTIMATED PIPE DIAMETER(INCH) =  15.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       8.59
  PIPE TRAVEL TIME(MIN.) =   0.36    Tc(MIN.) =    9.31
  LONGEST FLOWPATH FROM NODE    100.00 TO NODE    104.00 =    1131.23 FEET.
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =        2.2  TC(MIN.) =      9.31
  EFFECTIVE AREA(ACRES) =      2.16  AREA-AVERAGED Fm(INCH/HR)=  0.02
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap = 0.100
  PEAK FLOW RATE(CFS)   =       8.59
============================================================================
============================================================================
  END OF RATIONAL METHOD ANALYSIS
```

```
**************************************************************************
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                           Analysis prepared by:

                             Huitt-Zollars, Inc.
                          2603 Main Street, Suite 400
                               Irvine, CA. 92614
                                  949-988-5815

 ************************* DESCRIPTION OF STUDY *************************
* Great Scott- Lake Forest Proposed Hydrology                            *
* RATIONAL METHOD 2-YR STORM EVENT                                       *
* CG                                                                     *
 ************************************************************************

  FILE NAME: GS2P.DAT
  TIME/DATE OF STUDY: 10:18 08/22/2023
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =    2.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  12.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *DATA BANK RAINFALL USED*
  *ANTECEDENT MOISTURE CONDITION (AMC) I ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  ================  ======  ===== ====== ===== =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0313 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

**************************************************************************
  FLOW PROCESS FROM NODE    400.00 TO NODE    401.00 IS CODE =  21
```

```
------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
========================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   155.00
  ELEVATION DATA: UPSTREAM(FEET) =    651.00  DOWNSTREAM(FEET) =    642.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    6.974
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.870
  SUBAREA Tc AND LOSS RATE DATA(AMC  I ):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  NATURAL POOR COVER
  "BARREN"                    D        0.23      0.20     1.000    83    6.97
  URBAN FAIR COVER
  "TURF"                      D        0.01      0.20     1.000    66    9.38
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.000
  SUBAREA RUNOFF(CFS) =      0.36
  TOTAL AREA(ACRES) =      0.24   PEAK FLOW RATE(CFS) =      0.36

************************************************************************
  FLOW PROCESS FROM NODE    401.00 TO NODE    402.00 IS CODE =  31
------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   637.00  DOWNSTREAM(FEET) =   636.00
  FLOW LENGTH(FEET) =    47.00   MANNING'S N =  0.013
  ESTIMATED PIPE DIAMETER(INCH) INCREASED TO 12.000
  DEPTH OF FLOW IN  12.0 INCH PIPE IS   2.2 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   3.66
  ESTIMATED PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       0.36
  PIPE TRAVEL TIME(MIN.) =   0.21    Tc(MIN.) =    7.19
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    402.00 =     202.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE    402.00 TO NODE    403.00 IS CODE =  31
------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   636.00  DOWNSTREAM(FEET) =   624.00
  FLOW LENGTH(FEET) =   463.00   MANNING'S N =  0.013
  ESTIMATED PIPE DIAMETER(INCH) INCREASED TO 12.000
  DEPTH OF FLOW IN  12.0 INCH PIPE IS   2.1 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   3.92
  ESTIMATED PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
```

```
  PIPE-FLOW(CFS) =       0.36
  PIPE TRAVEL TIME(MIN.) =   1.97    Tc(MIN.) =    9.16
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    403.00 =     665.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    403.00 TO NODE    403.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN.) =    9.16
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.599
  SUBAREA LOSS RATE DATA(AMC  I ):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                 D        0.18      0.20     0.100    57
  URBAN FAIR COVER
  "TURF"                     D        0.09      0.20     1.000    66
  NATURAL POOR COVER
  "BARREN"                   D        0.86      0.20     1.000    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.857
  SUBAREA AREA(ACRES) =    1.13      SUBAREA RUNOFF(CFS) =    1.45
  EFFECTIVE AREA(ACRES) =      1.37   AREA-AVERAGED Fm(INCH/HR) =  0.18
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.88
  TOTAL AREA(ACRES) =        1.4       PEAK FLOW RATE(CFS) =       1.75

****************************************************************************
  FLOW PROCESS FROM NODE    403.00 TO NODE    404.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   624.00  DOWNSTREAM(FEET) =   623.00
  FLOW LENGTH(FEET) =    70.00   MANNING'S N =  0.013
  ESTIMATED PIPE DIAMETER(INCH) INCREASED TO 12.000
  DEPTH OF FLOW IN  12.0 INCH PIPE IS   5.5 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   4.96
  ESTIMATED PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       1.75
  PIPE TRAVEL TIME(MIN.) =   0.24    Tc(MIN.) =    9.39
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    404.00 =     735.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    404.00 TO NODE    405.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   623.00  DOWNSTREAM(FEET) =   614.00
  FLOW LENGTH(FEET) =    49.00   MANNING'S N =  0.013
```

```
  ESTIMATED PIPE DIAMETER(INCH) INCREASED TO 12.000
  DEPTH OF FLOW IN  12.0 INCH PIPE IS   2.8 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  12.45
  ESTIMATED PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       1.75
  PIPE TRAVEL TIME(MIN.) =   0.07    Tc(MIN.) =    9.46
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    405.00 =     784.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    405.00 TO NODE    405.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN.) =    9.46
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.570
  SUBAREA LOSS RATE DATA(AMC  I ):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  URBAN FAIR COVER
  "TURF"                      D        0.01      0.20     1.000    66
  NATURAL POOR COVER
  "BARREN"                    D        0.62      0.20     1.000    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.000
  SUBAREA AREA(ACRES) =    0.63      SUBAREA RUNOFF(CFS) =    0.78
  EFFECTIVE AREA(ACRES) =      2.00   AREA-AVERAGED Fm(INCH/HR) =  0.18
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.92
  TOTAL AREA(ACRES) =        2.0       PEAK FLOW RATE(CFS) =       2.50

****************************************************************************
  FLOW PROCESS FROM NODE    405.00 TO NODE    405.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =    9.46
  RAINFALL INTENSITY(INCH/HR) =   1.57
  AREA-AVERAGED Fm(INCH/HR) =  0.18
  AREA-AVERAGED Fp(INCH/HR) =  0.20
  AREA-AVERAGED Ap =  0.92
  EFFECTIVE STREAM AREA(ACRES) =       2.00
  TOTAL STREAM AREA(ACRES) =       2.00
  PEAK FLOW RATE(CFS) AT CONFLUENCE =       2.50

****************************************************************************
  FLOW PROCESS FROM NODE    405.00 TO NODE    405.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>USER SPECIFIED HYDROLOGY INFORMATION AT NODE<<<<<
============================================================================
```

```
  USER-SPECIFIED VALUES ARE AS FOLLOWS:
  TC(MIN.) =   10.41   RAINFALL INTENSITY(INCH/HR) =  1.49
  EFFECTIVE AREA(ACRES) =     2.16
  TOTAL AREA(ACRES) =     2.20        PEAK FLOW RATE(CFS) =      2.93
  AREA-AVERAGED Fm(INCH/HR) =   0.02  AREA-AVERAGED Fp(INCH/HR) =   0.20
  AREA-AVERAGED Ap =  0.10
  NOTE: EFFECTIVE AREA IS USED AS THE TOTAL CONTRIBUTING AREA FOR ALL
        CONFLUENCE ANALYSES.

****************************************************************************
  FLOW PROCESS FROM NODE    405.00 TO NODE    405.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =   10.41
  RAINFALL INTENSITY(INCH/HR) =   1.49
  AREA-AVERAGED Fm(INCH/HR) =  0.02
  AREA-AVERAGED Fp(INCH/HR) =  0.20
  AREA-AVERAGED Ap =  0.10
  EFFECTIVE STREAM AREA(ACRES) =       2.16
  TOTAL STREAM AREA(ACRES) =       2.20
  PEAK FLOW RATE(CFS) AT CONFLUENCE =       2.93

  ** CONFLUENCE DATA **
   STREAM       Q      Tc   Intensity   Fp(Fm)     Ap     Ae     HEADWATER
   NUMBER     (CFS)  (MIN.) (INCH/HR) (INCH/HR)         (ACRES)    NODE
      1        2.50    9.46    1.570  0.20( 0.18) 0.92       2.0     400.00
      2        2.93   10.41    1.486  0.20( 0.02) 0.10       2.2     405.00

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
   STREAM       Q      Tc   Intensity   Fp(Fm)     Ap     Ae     HEADWATER
   NUMBER     (CFS)  (MIN.) (INCH/HR) (INCH/HR)         (ACRES)    NODE
      1        5.31    9.46    1.570  0.20( 0.10) 0.51       4.0     400.00
      2        5.27   10.41    1.486  0.20( 0.10) 0.49       4.2     405.00

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =       5.31    Tc(MIN.) =     9.46
  EFFECTIVE AREA(ACRES) =       3.96   AREA-AVERAGED Fm(INCH/HR) =  0.10
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.51
  TOTAL AREA(ACRES) =        4.2
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    405.00 =     784.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    405.00 TO NODE    104.00 IS CODE =  31
```

```
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   614.00  DOWNSTREAM(FEET) =   613.00
  FLOW LENGTH(FEET) =   114.00   MANNING'S N =  0.013
  DEPTH OF FLOW IN  15.0 INCH PIPE IS  11.4 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   5.31
  ESTIMATED PIPE DIAMETER(INCH) =  15.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       5.31
  PIPE TRAVEL TIME(MIN.) =   0.36    Tc(MIN.) =    9.82
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    104.00 =     898.00 FEET.
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =        4.2  TC(MIN.) =      9.82
  EFFECTIVE AREA(ACRES) =      3.96  AREA-AVERAGED Fm(INCH/HR)=  0.10
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap = 0.513
  PEAK FLOW RATE(CFS)   =       5.31

  ** PEAK FLOW RATE TABLE **
   STREAM       Q      Tc   Intensity   Fp(Fm)     Ap     Ae     HEADWATER
   NUMBER     (CFS)  (MIN.) (INCH/HR) (INCH/HR)         (ACRES)    NODE
      1        5.31    9.82    1.537  0.20( 0.10) 0.51       4.0     400.00
      2        5.27   10.77    1.457  0.20( 0.10) 0.49       4.2     405.00
============================================================================
============================================================================
  END OF RATIONAL METHOD ANALYSIS
```

```
**************************************************************************
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          (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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                          Analysis prepared by:

                            Huitt-Zollars, Inc.
                         2603 Main Street, Suite 400
                              Irvine, CA. 92614
                                 949-988-5815

 ************************* DESCRIPTION OF STUDY *************************
* Great Scott- Lake Forest Proposed Hydrology                            *
* RATIONAL METHOD 25 YEAR STORM EVENT                                    *
* CG                                                                     *
 **************************************************************************

  FILE NAME: GS25P.DAT
  TIME/DATE OF STUDY: 10:17 08/22/2023
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   25.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  12.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *DATA BANK RAINFALL USED*
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  ================  ======  ===== ====== ===== =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0313 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

**************************************************************************
  FLOW PROCESS FROM NODE    400.00 TO NODE    401.00 IS CODE =  21
```

```
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   155.00
  ELEVATION DATA: UPSTREAM(FEET) =    651.00  DOWNSTREAM(FEET) =    642.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    6.974
  *  25 YEAR RAINFALL INTENSITY(INCH/HR) =  3.996
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  NATURAL POOR COVER
  "BARREN"                    D        0.23      0.20     1.000    93    6.97
  URBAN FAIR COVER
  "TURF"                      D        0.01      0.20     1.000    82    9.38
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.000
  SUBAREA RUNOFF(CFS) =      0.82
  TOTAL AREA(ACRES) =      0.24   PEAK FLOW RATE(CFS) =      0.82

****************************************************************************
  FLOW PROCESS FROM NODE    401.00 TO NODE    402.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   637.00  DOWNSTREAM(FEET) =   636.00
  FLOW LENGTH(FEET) =    47.00   MANNING'S N =  0.013
  ESTIMATED PIPE DIAMETER(INCH) INCREASED TO 12.000
  DEPTH OF FLOW IN  12.0 INCH PIPE IS   3.3 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   4.65
  ESTIMATED PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       0.82
  PIPE TRAVEL TIME(MIN.) =   0.17    Tc(MIN.) =    7.14
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    402.00 =     202.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    402.00 TO NODE    403.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   636.00  DOWNSTREAM(FEET) =   624.00
  FLOW LENGTH(FEET) =   463.00   MANNING'S N =  0.013
  ESTIMATED PIPE DIAMETER(INCH) INCREASED TO 12.000
  DEPTH OF FLOW IN  12.0 INCH PIPE IS   3.1 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   5.00
  ESTIMATED PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
```

```
  PIPE-FLOW(CFS) =       0.82
  PIPE TRAVEL TIME(MIN.) =   1.54    Tc(MIN.) =    8.69
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    403.00 =     665.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    403.00 TO NODE    403.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN.) =    8.69
  *  25 YEAR RAINFALL INTENSITY(INCH/HR) =  3.529
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                 D        0.18      0.20     0.100    75
  URBAN FAIR COVER
  "TURF"                     D        0.09      0.20     1.000    82
  NATURAL POOR COVER
  "BARREN"                   D        0.86      0.20     1.000    93
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.857
  SUBAREA AREA(ACRES) =    1.13      SUBAREA RUNOFF(CFS) =    3.41
  EFFECTIVE AREA(ACRES) =      1.37   AREA-AVERAGED Fm(INCH/HR) =  0.18
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.88
  TOTAL AREA(ACRES) =        1.4       PEAK FLOW RATE(CFS) =       4.13

****************************************************************************
  FLOW PROCESS FROM NODE    403.00 TO NODE    404.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   624.00  DOWNSTREAM(FEET) =   623.00
  FLOW LENGTH(FEET) =    70.00   MANNING'S N =  0.013
  DEPTH OF FLOW IN  15.0 INCH PIPE IS   8.1 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   6.15
  ESTIMATED PIPE DIAMETER(INCH) =  15.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       4.13
  PIPE TRAVEL TIME(MIN.) =   0.19    Tc(MIN.) =    8.88
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    404.00 =     735.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    404.00 TO NODE    405.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   623.00  DOWNSTREAM(FEET) =   614.00
  FLOW LENGTH(FEET) =    49.00   MANNING'S N =  0.013
  ESTIMATED PIPE DIAMETER(INCH) INCREASED TO 12.000
```

```
  DEPTH OF FLOW IN  12.0 INCH PIPE IS   4.4 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  15.90
  ESTIMATED PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       4.13
  PIPE TRAVEL TIME(MIN.) =   0.05    Tc(MIN.) =    8.93
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    405.00 =     784.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    405.00 TO NODE    405.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN.) =    8.93
  *  25 YEAR RAINFALL INTENSITY(INCH/HR) =  3.474
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  URBAN FAIR COVER
  "TURF"                     D        0.01      0.20     1.000    82
  NATURAL POOR COVER
  "BARREN"                   D        0.62      0.20     1.000    93
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.000
  SUBAREA AREA(ACRES) =    0.63      SUBAREA RUNOFF(CFS) =    1.86
  EFFECTIVE AREA(ACRES) =      2.00   AREA-AVERAGED Fm(INCH/HR) =  0.18
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.92
  TOTAL AREA(ACRES) =        2.0       PEAK FLOW RATE(CFS) =       5.92

****************************************************************************
  FLOW PROCESS FROM NODE    405.00 TO NODE    405.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =    8.93
  RAINFALL INTENSITY(INCH/HR) =   3.47
  AREA-AVERAGED Fm(INCH/HR) =  0.18
  AREA-AVERAGED Fp(INCH/HR) =  0.20
  AREA-AVERAGED Ap =  0.92
  EFFECTIVE STREAM AREA(ACRES) =       2.00
  TOTAL STREAM AREA(ACRES) =       2.00
  PEAK FLOW RATE(CFS) AT CONFLUENCE =       5.92

****************************************************************************
  FLOW PROCESS FROM NODE    405.00 TO NODE    405.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>USER SPECIFIED HYDROLOGY INFORMATION AT NODE<<<<<
============================================================================
  USER-SPECIFIED VALUES ARE AS FOLLOWS:
```

```
  TC(MIN.) =    9.19   RAINFALL INTENSITY(INCH/HR) =  3.42
  EFFECTIVE AREA(ACRES) =     2.16
  TOTAL AREA(ACRES) =     2.20        PEAK FLOW RATE(CFS) =      6.62
  AREA-AVERAGED Fm(INCH/HR) =   0.02  AREA-AVERAGED Fp(INCH/HR) =   0.20
  AREA-AVERAGED Ap =  0.10
  NOTE: EFFECTIVE AREA IS USED AS THE TOTAL CONTRIBUTING AREA FOR ALL
        CONFLUENCE ANALYSES.

****************************************************************************
  FLOW PROCESS FROM NODE    405.00 TO NODE    405.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =    9.19
  RAINFALL INTENSITY(INCH/HR) =   3.42
  AREA-AVERAGED Fm(INCH/HR) =  0.02
  AREA-AVERAGED Fp(INCH/HR) =  0.20
  AREA-AVERAGED Ap =  0.10
  EFFECTIVE STREAM AREA(ACRES) =       2.16
  TOTAL STREAM AREA(ACRES) =       2.20
  PEAK FLOW RATE(CFS) AT CONFLUENCE =       6.62

  ** CONFLUENCE DATA **
   STREAM       Q      Tc   Intensity   Fp(Fm)     Ap     Ae     HEADWATER
   NUMBER     (CFS)  (MIN.) (INCH/HR) (INCH/HR)         (ACRES)    NODE
      1        5.92    8.93    3.474  0.20( 0.18) 0.92       2.0     400.00
      2        6.62    9.19    3.418  0.20( 0.02) 0.10       2.2     405.00

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
   STREAM       Q      Tc   Intensity   Fp(Fm)     Ap     Ae     HEADWATER
   NUMBER     (CFS)  (MIN.) (INCH/HR) (INCH/HR)         (ACRES)    NODE
      1       12.46    8.93    3.474  0.20( 0.10) 0.50       4.1     400.00
      2       12.44    9.19    3.418  0.20( 0.10) 0.49       4.2     405.00

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =      12.46    Tc(MIN.) =     8.93
  EFFECTIVE AREA(ACRES) =       4.10   AREA-AVERAGED Fm(INCH/HR) =  0.10
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.50
  TOTAL AREA(ACRES) =        4.2
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    405.00 =     784.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    405.00 TO NODE    104.00 IS CODE =  31
----------------------------------------------------------------------------
```

```
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
================================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   614.00  DOWNSTREAM(FEET) =   613.00
  FLOW LENGTH(FEET) =   114.00   MANNING'S N =  0.013
  DEPTH OF FLOW IN  21.0 INCH PIPE IS  15.4 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   6.61
  ESTIMATED PIPE DIAMETER(INCH) =  21.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      12.46
  PIPE TRAVEL TIME(MIN.) =   0.29    Tc(MIN.) =    9.22
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    104.00 =     898.00 FEET.
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =        4.2  TC(MIN.) =      9.22
  EFFECTIVE AREA(ACRES) =      4.10  AREA-AVERAGED Fm(INCH/HR)=  0.10
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap = 0.500
  PEAK FLOW RATE(CFS)   =      12.46

  ** PEAK FLOW RATE TABLE **
   STREAM       Q      Tc   Intensity   Fp(Fm)     Ap     Ae     HEADWATER
   NUMBER     (CFS)  (MIN.) (INCH/HR) (INCH/HR)         (ACRES)    NODE
      1       12.46    9.22    3.413  0.20( 0.10) 0.50       4.1     400.00
      2       12.44    9.48    3.359  0.20( 0.10) 0.49       4.2     405.00
================================================================================
================================================================================
  END OF RATIONAL METHOD ANALYSIS
```

```
**************************************************************************
             RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
            (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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                              Analysis prepared by:

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                                    Irvine, CA. 92614
                                       949-988-5815

 ************************* DESCRIPTION OF STUDY *************************
* Great Scott- Lake Forest Proposed Hydrology                            *
* Rational Method 100-year storm event                                   *
* CG                                                                     *
 ************************************************************************

  FILE NAME: GS100P.DAT
  TIME/DATE OF STUDY: 10:23 08/22/2023
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  12.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *DATA BANK RAINFALL USED*
  *ANTECEDENT MOISTURE CONDITION (AMC) III ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  ================  ======  ===== ====== ===== =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0313 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

**************************************************************************
  FLOW PROCESS FROM NODE    400.00 TO NODE    401.00 IS CODE =  21
```

```
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   155.00
  ELEVATION DATA: UPSTREAM(FEET) =    651.00  DOWNSTREAM(FEET) =    642.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    6.974
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  5.113
  SUBAREA Tc AND LOSS RATE DATA(AMC III):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  NATURAL POOR COVER
  "BARREN"                    D        0.23      0.20     1.000    98    6.97
  URBAN FAIR COVER
  "TURF"                      D        0.01      0.20     1.000    95    9.38
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.000
  SUBAREA RUNOFF(CFS) =      1.06
  TOTAL AREA(ACRES) =      0.24   PEAK FLOW RATE(CFS) =      1.06

****************************************************************************
  FLOW PROCESS FROM NODE    401.00 TO NODE    402.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   637.00  DOWNSTREAM(FEET) =   636.00
  FLOW LENGTH(FEET) =    47.00   MANNING'S N =  0.013
  ESTIMATED PIPE DIAMETER(INCH) INCREASED TO 12.000
  DEPTH OF FLOW IN  12.0 INCH PIPE IS   3.8 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   5.00
  ESTIMATED PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       1.06
  PIPE TRAVEL TIME(MIN.) =   0.16    Tc(MIN.) =    7.13
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    402.00 =     202.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    402.00 TO NODE    403.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   636.00  DOWNSTREAM(FEET) =   624.00
  FLOW LENGTH(FEET) =   463.00   MANNING'S N =  0.013
  ESTIMATED PIPE DIAMETER(INCH) INCREASED TO 12.000
  DEPTH OF FLOW IN  12.0 INCH PIPE IS   3.6 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   5.36
  ESTIMATED PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
```

```
  PIPE-FLOW(CFS) =       1.06
  PIPE TRAVEL TIME(MIN.) =   1.44    Tc(MIN.) =    8.57
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    403.00 =     665.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    403.00 TO NODE    403.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN.) =    8.57
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.544
  SUBAREA LOSS RATE DATA(AMC III):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                 D        0.18      0.20     0.100    91
  URBAN FAIR COVER
  "TURF"                     D        0.09      0.20     1.000    95
  NATURAL POOR COVER
  "BARREN"                   D        0.86      0.20     1.000    98
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.857
  SUBAREA AREA(ACRES) =    1.13      SUBAREA RUNOFF(CFS) =    4.45
  EFFECTIVE AREA(ACRES) =      1.37   AREA-AVERAGED Fm(INCH/HR) =  0.18
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.88
  TOTAL AREA(ACRES) =        1.4       PEAK FLOW RATE(CFS) =       5.38

****************************************************************************
  FLOW PROCESS FROM NODE    403.00 TO NODE    404.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   624.00  DOWNSTREAM(FEET) =   623.00
  FLOW LENGTH(FEET) =    70.00   MANNING'S N =  0.013
  DEPTH OF FLOW IN  15.0 INCH PIPE IS   9.6 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   6.53
  ESTIMATED PIPE DIAMETER(INCH) =  15.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       5.38
  PIPE TRAVEL TIME(MIN.) =   0.18    Tc(MIN.) =    8.75
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    404.00 =     735.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    404.00 TO NODE    405.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   623.00  DOWNSTREAM(FEET) =   614.00
  FLOW LENGTH(FEET) =    49.00   MANNING'S N =  0.013
  ESTIMATED PIPE DIAMETER(INCH) INCREASED TO 12.000
```

```
  DEPTH OF FLOW IN  12.0 INCH PIPE IS   5.1 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  17.08
  ESTIMATED PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       5.38
  PIPE TRAVEL TIME(MIN.) =   0.05    Tc(MIN.) =    8.80
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    405.00 =     784.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    405.00 TO NODE    405.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN.) =    8.80
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.476
  SUBAREA LOSS RATE DATA(AMC III):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  URBAN FAIR COVER
  "TURF"                     D        0.01      0.20     1.000    95
  NATURAL POOR COVER
  "BARREN"                   D        0.62      0.20     1.000    98
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.000
  SUBAREA AREA(ACRES) =    0.63      SUBAREA RUNOFF(CFS) =    2.42
  EFFECTIVE AREA(ACRES) =      2.00   AREA-AVERAGED Fm(INCH/HR) =  0.18
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.92
  TOTAL AREA(ACRES) =        2.0       PEAK FLOW RATE(CFS) =       7.73

****************************************************************************
  FLOW PROCESS FROM NODE    405.00 TO NODE    405.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =    8.80
  RAINFALL INTENSITY(INCH/HR) =   4.48
  AREA-AVERAGED Fm(INCH/HR) =  0.18
  AREA-AVERAGED Fp(INCH/HR) =  0.20
  AREA-AVERAGED Ap =  0.92
  EFFECTIVE STREAM AREA(ACRES) =       2.00
  TOTAL STREAM AREA(ACRES) =       2.00
  PEAK FLOW RATE(CFS) AT CONFLUENCE =       7.73

****************************************************************************
  FLOW PROCESS FROM NODE    405.00 TO NODE    405.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>USER SPECIFIED HYDROLOGY INFORMATION AT NODE<<<<<
============================================================================
  USER-SPECIFIED VALUES ARE AS FOLLOWS:
```

```
  TC(MIN.) =    8.95   RAINFALL INTENSITY(INCH/HR) =  4.43
  EFFECTIVE AREA(ACRES) =     2.16
  TOTAL AREA(ACRES) =     2.20        PEAK FLOW RATE(CFS) =      8.59
  AREA-AVERAGED Fm(INCH/HR) =   0.02  AREA-AVERAGED Fp(INCH/HR) =   0.20
  AREA-AVERAGED Ap =  0.10
  NOTE: EFFECTIVE AREA IS USED AS THE TOTAL CONTRIBUTING AREA FOR ALL
        CONFLUENCE ANALYSES.

****************************************************************************
  FLOW PROCESS FROM NODE    405.00 TO NODE    405.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =    8.95
  RAINFALL INTENSITY(INCH/HR) =   4.43
  AREA-AVERAGED Fm(INCH/HR) =  0.02
  AREA-AVERAGED Fp(INCH/HR) =  0.20
  AREA-AVERAGED Ap =  0.10
  EFFECTIVE STREAM AREA(ACRES) =       2.16
  TOTAL STREAM AREA(ACRES) =       2.20
  PEAK FLOW RATE(CFS) AT CONFLUENCE =       8.59

  ** CONFLUENCE DATA **
   STREAM       Q      Tc   Intensity   Fp(Fm)     Ap     Ae     HEADWATER
   NUMBER     (CFS)  (MIN.) (INCH/HR) (INCH/HR)         (ACRES)    NODE
      1        7.73    8.80    4.476  0.20( 0.18) 0.92       2.0     400.00
      2        8.59    8.95    4.432  0.20( 0.02) 0.10       2.2     405.00

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
   STREAM       Q      Tc   Intensity   Fp(Fm)     Ap     Ae     HEADWATER
   NUMBER     (CFS)  (MIN.) (INCH/HR) (INCH/HR)         (ACRES)    NODE
      1       16.25    8.80    4.476  0.20( 0.10) 0.50       4.1     400.00
      2       16.24    8.95    4.432  0.20( 0.10) 0.49       4.2     405.00

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =      16.25    Tc(MIN.) =     8.80
  EFFECTIVE AREA(ACRES) =       4.12   AREA-AVERAGED Fm(INCH/HR) =  0.10
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.50
  TOTAL AREA(ACRES) =        4.2
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    405.00 =     784.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    405.00 TO NODE    104.00 IS CODE =  31
----------------------------------------------------------------------------
```

```
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
================================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   614.00  DOWNSTREAM(FEET) =   613.00
  FLOW LENGTH(FEET) =   114.00   MANNING'S N =  0.013
  DEPTH OF FLOW IN  24.0 INCH PIPE IS  16.4 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   7.12
  ESTIMATED PIPE DIAMETER(INCH) =  24.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      16.25
  PIPE TRAVEL TIME(MIN.) =   0.27    Tc(MIN.) =    9.06
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    104.00 =     898.00 FEET.
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =        4.2  TC(MIN.) =      9.06
  EFFECTIVE AREA(ACRES) =      4.12  AREA-AVERAGED Fm(INCH/HR)=  0.10
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap = 0.497
  PEAK FLOW RATE(CFS)   =      16.25

  ** PEAK FLOW RATE TABLE **
   STREAM       Q      Tc   Intensity   Fp(Fm)     Ap     Ae     HEADWATER
   NUMBER     (CFS)  (MIN.) (INCH/HR) (INCH/HR)         (ACRES)    NODE
      1       16.25    9.06    4.400  0.20( 0.10) 0.50       4.1     400.00
      2       16.24    9.22    4.358  0.20( 0.10) 0.49       4.2     405.00
================================================================================
================================================================================
  END OF RATIONAL METHOD ANALYSIS
```

UNDERGROUND STORAGE SYSTEM

Detention System										
Stage (ft)	D/d (ft)	Ca	A (sf)	Pipe Volume (cf)	Manifold Volume (cf)	Storage (cf)	Storage (ac-ft)	h (ft)	Outflow (cfs)	Description
1.3	0.24	0.1449	4.38	4296	53	4,348	0.100	0.6	6.521	Orifice Eqn 18"HDPE
1.5	0.27	0.1711	5.18	5072	62	5,134	0.118	0.8	7.614	Orifice Eqn 18"HDPE
2	0.36	0.2546	7.70	7548	92	7,640	0.175	1.3	9.830	Orifice Eqn 18"HDPE
2.5	0.45	0.3428	10.37	10162	124	10,287	0.236	1.8	11.631	Orifice Eqn 18"HDPE
3	0.55	0.4430	13.40	13133	161	13,294	0.305	2.3	13.189	Orifice Eqn 18"HDPE
3.5	0.64	0.5310	16.06	15741	193	15,934	0.366	2.8	14.581	Orifice Eqn 18"HDPE
4	0.73	0.6140	18.57	18202	223	18,425	0.423	3.3	15.851	Orifice Eqn 18"HDPE
4.5	0.82	0.6890	20.84	20425	250	20,676	0.475	3.8	17.026	Orifice Eqn 18"HDPE
5	0.91	0.7500	22.69	22234	272	22,506	0.517	4.3	18.126	Orifice Eqn 18"HDPE
5.5	1.00	NA	23.76	23283	285	23,568	0.541	4.8	19.163	Orifice Eqn 18"HDPE

Detention Pipe Length = 140 ft

Number of Detention Pipe = 7

Manifold Length between Pipe = 12 ft

A = Flow area based on King's Table 1-1 = $Ca*d^2$

Pipe Volume = A * Pipe Length * Number of Pipe

Manifold Volume = A * Manifold Length in between Pipes

Storage = Pipe Volume + Manifold Volume

Pipe full flow area is equal to circle area.

King's Table 1-1 is attached.

$$Q_{Orifice} = A * V = \frac{\pi * d_o^2}{4} * c_d\sqrt{2 * g * h}$$

d_o = Orifice pipe diameter = 1.5 ft

Cd = 0.62

g = 32.2 ft/sec^2

h = Height from stage depth to middle of orifice

PROPOSED HYDROGRAPHS

```
*************************************************************************
          NON-HOMOGENEOUS WATERSHED AREA-AVERAGED LOSS RATE (Fm)
                    AND LOW LOSS FRACTION ESTIMATIONS
=========================================================================
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                           Analysis prepared by:

                             Huitt-Zollars, Inc.
                          2603 Main Street, Suite 400
                               Irvine, CA. 92614
                                  949-988-5815

*************************************************************************
-------------------------------------------------------------------------

 Problem Descriptions:
  GREAT SCOTT 2 YR EX. PARAMETERS
  FLOOD ROUTING PARAMETERS
  CG
=========================================================================
*** NON-HOMOGENEOUS WATERSHED AREA-AVERAGED LOSS RATE (Fm)
    AND LOW LOSS FRACTION ESTIMATIONS FOR AMC I:

    TOTAL 24-HOUR DURATION RAINFALL DEPTH =     2.05 (inches)

    SOIL-COVER     AREA      PERCENT OF    SCS CURVE    LOSS RATE
       TYPE      (Acres)   PERVIOUS AREA     NUMBER    Fp(in./hr.)    YIELD
         1          0.25      100.00       83.(AMC II)     0.200       0.092
         2          1.06       50.00       90.(AMC II)     0.200       0.570
         3          0.36       80.00       85.(AMC II)     0.200       0.279
         4          0.33       35.00       92.(AMC II)     0.200       0.695

    TOTAL AREA (Acres) =      2.00

                                  _
    AREA-AVERAGED LOSS RATE, Fm (in./hr.) =  0.118

                                  _
    AREA-AVERAGED LOW LOSS FRACTION, Y = 0.522
=========================================================================
```

```
**************************************************************************
          NON-HOMOGENEOUS WATERSHED AREA-AVERAGED LOSS RATE (Fm)
                    AND LOW LOSS FRACTION ESTIMATIONS
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                           Analysis prepared by:

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                               Irvine, CA. 92614
                                  949-988-5815

**************************************************************************
--------------------------------------------------------------------------

 Problem Descriptions:
  GREAT SCOTT
  2 YEAR FLOOD ROUTING PARAMETERS
  CG
==========================================================================
*** NON-HOMOGENEOUS WATERSHED AREA-AVERAGED LOSS RATE (Fm)
    AND LOW LOSS FRACTION ESTIMATIONS FOR AMC I:

    TOTAL 24-HOUR DURATION RAINFALL DEPTH =     2.05 (inches)

    SOIL-COVER     AREA      PERCENT OF    SCS CURVE    LOSS RATE
       TYPE      (Acres)   PERVIOUS AREA     NUMBER    Fp(in./hr.)    YIELD
         1          0.18       10.00       98.(AMC II)     0.200       0.875
         2          1.71      100.00       93.(AMC II)     0.200       0.356
         3          0.11      100.00       82.(AMC II)     0.200       0.082

    TOTAL AREA (Acres) =      2.00

    AREA-AVERAGED LOSS RATE, Fm (in./hr.) =  0.184

    AREA-AVERAGED LOW LOSS FRACTION, Y = 0.612
==========================================================================
```

```
**************************************************************************
          NON-HOMOGENEOUS WATERSHED AREA-AVERAGED LOSS RATE (Fm)
                    AND LOW LOSS FRACTION ESTIMATIONS
==========================================================================
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                               Irvine, CA. 92614
                                  949-988-5815

**************************************************************************
--------------------------------------------------------------------------

 Problem Descriptions:
  GREAT SCOTT 25 YEAR FLOOD ROUTING
  SOIL LOSS RATE AND PARAMETERS
  CG
==========================================================================
*** NON-HOMOGENEOUS WATERSHED AREA-AVERAGED LOSS RATE (Fm)
    AND LOW LOSS FRACTION ESTIMATIONS FOR AMC II:

    TOTAL 24-HOUR DURATION RAINFALL DEPTH =     4.49 (inches)

    SOIL-COVER     AREA      PERCENT OF    SCS CURVE    LOSS RATE
       TYPE      (Acres)   PERVIOUS AREA     NUMBER    Fp(in./hr.)    YIELD
         1          0.18       10.00            98.       0.200       0.947
         2          1.71      100.00            93.       0.200       0.824
         3          0.11      100.00            82.       0.200       0.585

    TOTAL AREA (Acres) =      2.00

                                 _
    AREA-AVERAGED LOSS RATE, Fm (in./hr.) =  0.184

                                  _
    AREA-AVERAGED LOW LOSS FRACTION, Y = 0.178
==========================================================================
```

```
*************************************************************************
          NON-HOMOGENEOUS WATERSHED AREA-AVERAGED LOSS RATE (Fm)
                    AND LOW LOSS FRACTION ESTIMATIONS
=========================================================================
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                               Irvine, CA. 92614
                                  949-988-5815

*************************************************************************
-------------------------------------------------------------------------

 Problem Descriptions:
  GREAT SCOTT
  FLOOD ROUTING OFFSITE 100 YEAR
  CG
=========================================================================
*** NON-HOMOGENEOUS WATERSHED AREA-AVERAGED LOSS RATE (Fm)
    AND LOW LOSS FRACTION ESTIMATIONS FOR AMC III:

    TOTAL 24-HOUR DURATION RAINFALL DEPTH =     5.63 (inches)

    SOIL-COVER     AREA      PERCENT OF    SCS CURVE    LOSS RATE
       TYPE      (Acres)   PERVIOUS AREA     NUMBER    Fp(in./hr.)    YIELD
         1          2.16       10.00       98.(AMC II)     0.200       0.958

    TOTAL AREA (Acres) =      2.16

    AREA-AVERAGED LOSS RATE, Fm (in./hr.) =  0.020

    AREA-AVERAGED LOW LOSS FRACTION, Y = 0.042
=========================================================================
```

```
******************************************************************************
          NON-HOMOGENEOUS WATERSHED AREA-AVERAGED LOSS RATE (Fm)
                    AND LOW LOSS FRACTION ESTIMATIONS
==============================================================================
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                               Irvine, CA. 92614
                                  949-988-5815

******************************************************************************
------------------------------------------------------------------------------

 Problem Descriptions:
  GREAT SCOTT - SOIL LOSS RATE
  100 YEAR PROP
  CG
==============================================================================
*** NON-HOMOGENEOUS WATERSHED AREA-AVERAGED LOSS RATE (Fm)
    AND LOW LOSS FRACTION ESTIMATIONS FOR AMC III:

    TOTAL 24-HOUR DURATION RAINFALL DEPTH =     5.63 (inches)

    SOIL-COVER     AREA      PERCENT OF    SCS CURVE    LOSS RATE
       TYPE      (Acres)   PERVIOUS AREA     NUMBER    Fp(in./hr.)    YIELD
         1          0.18       10.00       98.(AMC II)     0.200       0.958
         2          1.71      100.00       93.(AMC II)     0.200       0.958
         3          0.11      100.00       82.(AMC II)     0.200       0.896

    TOTAL AREA (Acres) =      2.00

    AREA-AVERAGED LOSS RATE, Fm (in./hr.) =  0.184

    AREA-AVERAGED LOW LOSS FRACTION, Y = 0.046
==============================================================================
```

```
**************************************************************************

             F L O O D    R O U T I N G    A N A L Y S I S
             USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
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                           Analysis prepared by:

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                          2603 Main Street, Suite 400
                               Irvine, CA. 92614
                                  949-988-5815

 ************************* DESCRIPTION OF STUDY *************************
* GREAT SCOTT                                                           *
* 2 YEAR STORM PROP - 7 66" PIPES                                       *
* CGULLIXSON REV HHTUN                                                  *
 ************************************************************************

  FILE NAME: LFFR2.DAT
  TIME/DATE OF STUDY: 13:14 08/24/2023

   The Small Area Unit Hydrograph Procedures in Section J
   of the Hydrology Manual provides estimates of runoff
   hydrograph and runoff volume for watersheds whose time of
   concentration is less than 25 minutes. The PROGRAM User
   should check the applicability of using the small area unit
   hydrograph procedures, and follow the guidelines in
   Sections J and K.5 in complex watershed modeling.


**************************************************************************
  FLOW PROCESS FROM NODE    400.00 TO NODE    405.00 IS CODE = 1.2
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (SMALL AREA UNIT-HYDROGRAPH ANALYSIS) <<<<<
==========================================================================

  (SMALL AREA UNIT-HYDROGRAPH ADDED TO STREAM #1)

    RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
    TOTAL CATCHMENT AREA(ACRES) =    2.00
    SOIL-LOSS RATE, Fm,(INCH/HR) =  0.184
    LOW LOSS FRACTION = 0.612
    TIME OF CONCENTRATION(MIN.) =  9.46
    SMALL AREA PEAK Q COMPUTED USING PEAK FLOW RATE FORMULA
    ORANGE COUNTY "VALLEY" RAINFALL VALUES ARE USED:
    RETURN FREQUENCY(YEARS) =   2
       5-MINUTE POINT RAINFALL VALUE(INCHES) =  0.19
```

```
      30-MINUTE POINT RAINFALL VALUE(INCHES) =  0.40
       1-HOUR   POINT RAINFALL VALUE(INCHES) =  0.53
       3-HOUR   POINT RAINFALL VALUE(INCHES) =  0.89
       6-HOUR   POINT RAINFALL VALUE(INCHES) =  1.22
      24-HOUR   POINT RAINFALL VALUE(INCHES) =  2.05

--------------------------------------------------------------------------------
    TOTAL CATCHMENT   RUNOFF  VOLUME(ACRE-FEET) =     0.14
    TOTAL CATCHMENT SOIL-LOSS VOLUME(ACRE-FEET) =     0.20

--------------------------------------------------------------------------------
♠
================================================================================

                      2 4 - H O U R    S T O R M
                   R U N O F F    H Y D R O G R A P H

================================================================================
               HYDROGRAPH IN  ONE-MINUTE UNIT INTERVALS(CFS)
        (Notes: Time indicated is at END of Each Unit Intervals.
                Peak 5-minute rainfall intensity is modeled as
                a constant value for entire 5-minute period.)
--------------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.        0.6       1.2       1.9       2.5
--------------------------------------------------------------------------------
   0.017      0.0000      0.00  Q        .         .         .         .
   0.033      0.0000      0.00  Q        .         .         .         .
   0.050      0.0000      0.00  Q        .         .         .         .
   0.067      0.0000      0.01  Q        .         .         .         .
   0.083      0.0000      0.01  Q        .         .         .         .
   0.100      0.0000      0.01  Q        .         .         .         .
   0.117      0.0001      0.01  Q        .         .         .         .
   0.133      0.0001      0.01  Q        .         .         .         .
   0.150      0.0001      0.01  Q        .         .         .         .
   0.167      0.0001      0.02  Q        .         .         .         .
   0.183      0.0001      0.02  Q        .         .         .         .
   0.200      0.0002      0.02  Q        .         .         .         .
   0.217      0.0002      0.02  Q        .         .         .         .
   0.233      0.0002      0.02  Q        .         .         .         .
   0.250      0.0002      0.02  Q        .         .         .         .
   0.267      0.0003      0.02  Q        .         .         .         .
   0.283      0.0003      0.02  Q        .         .         .         .
   0.300      0.0003      0.02  Q        .         .         .         .
   0.317      0.0004      0.02  Q        .         .         .         .
   0.333      0.0004      0.02  Q        .         .         .         .
   0.350      0.0004      0.02  Q        .         .         .         .
   0.367      0.0005      0.02  Q        .         .         .         .
   0.383      0.0005      0.02  Q        .         .         .         .
   0.400      0.0005      0.02  Q        .         .         .         .
   0.417      0.0006      0.02  Q        .         .         .         .
```

0.433	0.0006	0.02	Q	.	.	.	.
0.450	0.0006	0.02	Q	.	.	.	.
0.467	0.0007	0.02	Q	.	.	.	.
0.483	0.0007	0.02	Q	.	.	.	.
0.500	0.0007	0.02	Q	.	.	.	.
0.517	0.0007	0.02	Q	.	.	.	.
0.533	0.0008	0.02	Q	.	.	.	.
0.550	0.0008	0.02	Q	.	.	.	.
0.567	0.0008	0.02	Q	.	.	.	.
0.583	0.0009	0.02	Q	.	.	.	.
0.600	0.0009	0.02	Q	.	.	.	.
0.617	0.0009	0.02	Q	.	.	.	.
0.633	0.0010	0.02	Q	.	.	.	.
0.650	0.0010	0.02	Q	.	.	.	.
0.667	0.0010	0.02	Q	.	.	.	.
0.683	0.0011	0.02	Q	.	.	.	.
0.700	0.0011	0.02	Q	.	.	.	.
0.717	0.0011	0.02	Q	.	.	.	.
0.733	0.0012	0.02	Q	.	.	.	.
0.750	0.0012	0.02	Q	.	.	.	.
0.767	0.0012	0.02	Q	.	.	.	.
0.783	0.0012	0.02	Q	.	.	.	.
0.800	0.0013	0.02	Q	.	.	.	.
0.817	0.0013	0.02	Q	.	.	.	.
0.833	0.0013	0.02	Q	.	.	.	.
0.850	0.0014	0.02	Q	.	.	.	.
0.867	0.0014	0.02	Q	.	.	.	.
0.883	0.0014	0.02	Q	.	.	.	.
0.900	0.0015	0.02	Q	.	.	.	.
0.917	0.0015	0.02	Q	.	.	.	.
0.933	0.0015	0.02	Q	.	.	.	.
0.950	0.0016	0.02	Q	.	.	.	.
0.967	0.0016	0.02	Q	.	.	.	.
0.983	0.0016	0.02	Q	.	.	.	.
1.000	0.0017	0.02	Q	.	.	.	.
1.017	0.0017	0.02	Q	.	.	.	.
1.033	0.0017	0.02	Q	.	.	.	.
1.050	0.0018	0.02	Q	.	.	.	.
1.067	0.0018	0.02	Q	.	.	.	.
1.083	0.0018	0.02	Q	.	.	.	.
1.100	0.0019	0.02	Q	.	.	.	.
1.117	0.0019	0.02	Q	.	.	.	.
1.133	0.0019	0.02	Q	.	.	.	.
1.150	0.0019	0.02	Q	.	.	.	.
1.167	0.0020	0.02	Q	.	.	.	.
1.183	0.0020	0.02	Q	.	.	.	.
1.200	0.0020	0.02	Q	.	.	.	.
1.217	0.0021	0.02	Q	.	.	.	.
1.233	0.0021	0.02	Q	.	.	.	.
1.250	0.0021	0.02	Q	.	.	.	.

1.267	0.0022	0.02	Q	.	.	.	.
1.283	0.0022	0.02	Q	.	.	.	.
1.300	0.0022	0.02	Q	.	.	.	.
1.317	0.0023	0.02	Q	.	.	.	.
1.333	0.0023	0.02	Q	.	.	.	.
1.350	0.0023	0.02	Q	.	.	.	.
1.367	0.0024	0.02	Q	.	.	.	.
1.383	0.0024	0.02	Q	.	.	.	.
1.400	0.0024	0.02	Q	.	.	.	.
1.417	0.0025	0.02	Q	.	.	.	.
1.433	0.0025	0.02	Q	.	.	.	.
1.450	0.0025	0.02	Q	.	.	.	.
1.467	0.0026	0.02	Q	.	.	.	.
1.483	0.0026	0.02	Q	.	.	.	.
1.500	0.0026	0.02	Q	.	.	.	.
1.517	0.0027	0.02	Q	.	.	.	.
1.533	0.0027	0.02	Q	.	.	.	.
1.550	0.0027	0.02	Q	.	.	.	.
1.567	0.0028	0.02	Q	.	.	.	.
1.583	0.0028	0.02	Q	.	.	.	.
1.600	0.0028	0.02	Q	.	.	.	.
1.617	0.0029	0.02	Q	.	.	.	.
1.633	0.0029	0.02	Q	.	.	.	.
1.650	0.0029	0.02	Q	.	.	.	.
1.667	0.0030	0.02	Q	.	.	.	.
1.683	0.0030	0.02	Q	.	.	.	.
1.700	0.0030	0.02	Q	.	.	.	.
1.717	0.0030	0.02	Q	.	.	.	.
1.733	0.0031	0.02	Q	.	.	.	.
1.750	0.0031	0.02	Q	.	.	.	.
1.767	0.0031	0.02	Q	.	.	.	.
1.783	0.0032	0.02	Q	.	.	.	.
1.800	0.0032	0.02	Q	.	.	.	.
1.817	0.0032	0.02	Q	.	.	.	.
1.833	0.0033	0.02	Q	.	.	.	.
1.850	0.0033	0.02	Q	.	.	.	.
1.867	0.0033	0.02	Q	.	.	.	.
1.883	0.0034	0.02	Q	.	.	.	.
1.900	0.0034	0.02	Q	.	.	.	.
1.917	0.0034	0.02	Q	.	.	.	.
1.933	0.0035	0.02	Q	.	.	.	.
1.950	0.0035	0.02	Q	.	.	.	.
1.967	0.0035	0.02	QV	.	.	.	.
1.983	0.0036	0.02	QV	.	.	.	.
2.000	0.0036	0.02	QV	.	.	.	.
2.017	0.0036	0.02	QV	.	.	.	.
2.033	0.0037	0.02	QV	.	.	.	.
2.050	0.0037	0.02	QV	.	.	.	.
2.067	0.0037	0.02	QV	.	.	.	.
2.083	0.0038	0.02	QV	.	.	.	.

2.100	0.0038	0.02	QV	.	.	.	.
2.117	0.0038	0.02	QV	.	.	.	.
2.133	0.0039	0.02	QV	.	.	.	.
2.150	0.0039	0.02	QV	.	.	.	.
2.167	0.0039	0.02	QV	.	.	.	.
2.183	0.0040	0.02	QV	.	.	.	.
2.200	0.0040	0.02	QV	.	.	.	.
2.217	0.0040	0.02	QV	.	.	.	.
2.233	0.0041	0.02	QV	.	.	.	.
2.250	0.0041	0.02	QV	.	.	.	.
2.267	0.0041	0.02	QV	.	.	.	.
2.283	0.0042	0.02	QV	.	.	.	.
2.300	0.0042	0.02	QV	.	.	.	.
2.317	0.0042	0.02	QV	.	.	.	.
2.333	0.0043	0.02	QV	.	.	.	.
2.350	0.0043	0.02	QV	.	.	.	.
2.367	0.0043	0.02	QV	.	.	.	.
2.383	0.0044	0.02	QV	.	.	.	.
2.400	0.0044	0.02	QV	.	.	.	.
2.417	0.0045	0.02	QV	.	.	.	.
2.433	0.0045	0.02	QV	.	.	.	.
2.450	0.0045	0.02	QV	.	.	.	.
2.467	0.0046	0.02	QV	.	.	.	.
2.483	0.0046	0.02	QV	.	.	.	.
2.500	0.0046	0.02	QV	.	.	.	.
2.517	0.0047	0.02	QV	.	.	.	.
2.533	0.0047	0.02	QV	.	.	.	.
2.550	0.0047	0.02	QV	.	.	.	.
2.567	0.0048	0.02	QV	.	.	.	.
2.583	0.0048	0.02	QV	.	.	.	.
2.600	0.0048	0.02	QV	.	.	.	.
2.617	0.0049	0.02	QV	.	.	.	.
2.633	0.0049	0.02	QV	.	.	.	.
2.650	0.0049	0.02	QV	.	.	.	.
2.667	0.0050	0.02	QV	.	.	.	.
2.683	0.0050	0.02	QV	.	.	.	.
2.700	0.0050	0.02	QV	.	.	.	.
2.717	0.0051	0.02	QV	.	.	.	.
2.733	0.0051	0.02	QV	.	.	.	.
2.750	0.0051	0.02	QV	.	.	.	.
2.767	0.0052	0.02	QV	.	.	.	.
2.783	0.0052	0.02	QV	.	.	.	.
2.800	0.0052	0.03	QV	.	.	.	.
2.817	0.0053	0.03	QV	.	.	.	.
2.833	0.0053	0.03	QV	.	.	.	.
2.850	0.0053	0.03	QV	.	.	.	.
2.867	0.0054	0.03	QV	.	.	.	.
2.883	0.0054	0.03	QV	.	.	.	.
2.900	0.0054	0.03	QV	.	.	.	.
2.917	0.0055	0.03	QV	.	.	.	.

2.933	0.0055	0.03	QV	.	.	.	.
2.950	0.0055	0.03	QV	.	.	.	.
2.967	0.0056	0.03	QV	.	.	.	.
2.983	0.0056	0.03	QV	.	.	.	.
3.000	0.0057	0.03	QV	.	.	.	.
3.017	0.0057	0.03	QV	.	.	.	.
3.033	0.0057	0.03	QV	.	.	.	.
3.050	0.0058	0.03	QV	.	.	.	.
3.067	0.0058	0.03	QV	.	.	.	.
3.083	0.0058	0.03	QV	.	.	.	.
3.100	0.0059	0.03	QV	.	.	.	.
3.117	0.0059	0.03	QV	.	.	.	.
3.133	0.0059	0.03	QV	.	.	.	.
3.150	0.0060	0.03	QV	.	.	.	.
3.167	0.0060	0.03	QV	.	.	.	.
3.183	0.0060	0.03	QV	.	.	.	.
3.200	0.0061	0.03	QV	.	.	.	.
3.217	0.0061	0.03	QV	.	.	.	.
3.233	0.0061	0.03	QV	.	.	.	.
3.250	0.0062	0.03	QV	.	.	.	.
3.267	0.0062	0.03	QV	.	.	.	.
3.283	0.0062	0.03	QV	.	.	.	.
3.300	0.0063	0.03	QV	.	.	.	.
3.317	0.0063	0.03	QV	.	.	.	.
3.333	0.0064	0.03	QV	.	.	.	.
3.350	0.0064	0.03	QV	.	.	.	.
3.367	0.0064	0.03	QV	.	.	.	.
3.383	0.0065	0.03	QV	.	.	.	.
3.400	0.0065	0.03	QV	.	.	.	.
3.417	0.0065	0.03	QV	.	.	.	.
3.433	0.0066	0.03	QV	.	.	.	.
3.450	0.0066	0.03	QV	.	.	.	.
3.467	0.0066	0.03	QV	.	.	.	.
3.483	0.0067	0.03	QV	.	.	.	.
3.500	0.0067	0.03	QV	.	.	.	.
3.517	0.0067	0.03	QV	.	.	.	.
3.533	0.0068	0.03	QV	.	.	.	.
3.550	0.0068	0.03	QV	.	.	.	.
3.567	0.0069	0.03	QV	.	.	.	.
3.583	0.0069	0.03	QV	.	.	.	.
3.600	0.0069	0.03	QV	.	.	.	.
3.617	0.0070	0.03	QV	.	.	.	.
3.633	0.0070	0.03	QV	.	.	.	.
3.650	0.0070	0.03	QV	.	.	.	.
3.667	0.0071	0.03	Q V	.	.	.	.
3.683	0.0071	0.03	Q V	.	.	.	.
3.700	0.0071	0.03	Q V	.	.	.	.
3.717	0.0072	0.03	Q V	.	.	.	.
3.733	0.0072	0.03	Q V	.	.	.	.
3.750	0.0072	0.03	Q V	.	.	.	.

3.767	0.0073	0.03	Q V	.	.	.	.
3.783	0.0073	0.03	Q V	.	.	.	.
3.800	0.0074	0.03	Q V	.	.	.	.
3.817	0.0074	0.03	Q V	.	.	.	.
3.833	0.0074	0.03	Q V	.	.	.	.
3.850	0.0075	0.03	Q V	.	.	.	.
3.867	0.0075	0.03	Q V	.	.	.	.
3.883	0.0075	0.03	Q V	.	.	.	.
3.900	0.0076	0.03	Q V	.	.	.	.
3.917	0.0076	0.03	Q V	.	.	.	.
3.933	0.0076	0.03	Q V	.	.	.	.
3.950	0.0077	0.03	Q V	.	.	.	.
3.967	0.0077	0.03	Q V	.	.	.	.
3.983	0.0078	0.03	Q V	.	.	.	.
4.000	0.0078	0.03	Q V	.	.	.	.
4.017	0.0078	0.03	Q V	.	.	.	.
4.033	0.0079	0.03	Q V	.	.	.	.
4.050	0.0079	0.03	Q V	.	.	.	.
4.067	0.0079	0.03	Q V	.	.	.	.
4.083	0.0080	0.03	Q V	.	.	.	.
4.100	0.0080	0.03	Q V	.	.	.	.
4.117	0.0080	0.03	Q V	.	.	.	.
4.133	0.0081	0.03	Q V	.	.	.	.
4.150	0.0081	0.03	Q V	.	.	.	.
4.167	0.0082	0.03	Q V	.	.	.	.
4.183	0.0082	0.03	Q V	.	.	.	.
4.200	0.0082	0.03	Q V	.	.	.	.
4.217	0.0083	0.03	Q V	.	.	.	.
4.233	0.0083	0.03	Q V	.	.	.	.
4.250	0.0083	0.03	Q V	.	.	.	.
4.267	0.0084	0.03	Q V	.	.	.	.
4.283	0.0084	0.03	Q V	.	.	.	.
4.300	0.0085	0.03	Q V	.	.	.	.
4.317	0.0085	0.03	Q V	.	.	.	.
4.333	0.0085	0.03	Q V	.	.	.	.
4.350	0.0086	0.03	Q V	.	.	.	.
4.367	0.0086	0.03	Q V	.	.	.	.
4.383	0.0086	0.03	Q V	.	.	.	.
4.400	0.0087	0.03	Q V	.	.	.	.
4.417	0.0087	0.03	Q V	.	.	.	.
4.433	0.0088	0.03	Q V	.	.	.	.
4.450	0.0088	0.03	Q V	.	.	.	.
4.467	0.0088	0.03	Q V	.	.	.	.
4.483	0.0089	0.03	Q V	.	.	.	.
4.500	0.0089	0.03	Q V	.	.	.	.
4.517	0.0089	0.03	Q V	.	.	.	.
4.533	0.0090	0.03	Q V	.	.	.	.
4.550	0.0090	0.03	Q V	.	.	.	.
4.567	0.0091	0.03	Q V	.	.	.	.
4.583	0.0091	0.03	Q V	.	.	.	.

4.600	0.0091	0.03	Q V	.	.	.	.
4.617	0.0092	0.03	Q V	.	.	.	.
4.633	0.0092	0.03	Q V	.	.	.	.
4.650	0.0092	0.03	Q V	.	.	.	.
4.667	0.0093	0.03	Q V	.	.	.	.
4.683	0.0093	0.03	Q V	.	.	.	.
4.700	0.0094	0.03	Q V	.	.	.	.
4.717	0.0094	0.03	Q V	.	.	.	.
4.733	0.0094	0.03	Q V	.	.	.	.
4.750	0.0095	0.03	Q V	.	.	.	.
4.767	0.0095	0.03	Q V	.	.	.	.
4.783	0.0095	0.03	Q V	.	.	.	.
4.800	0.0096	0.03	Q V	.	.	.	.
4.817	0.0096	0.03	Q V	.	.	.	.
4.833	0.0097	0.03	Q V	.	.	.	.
4.850	0.0097	0.03	Q V	.	.	.	.
4.867	0.0097	0.03	Q V	.	.	.	.
4.883	0.0098	0.03	Q V	.	.	.	.
4.900	0.0098	0.03	Q V	.	.	.	.
4.917	0.0099	0.03	Q V	.	.	.	.
4.933	0.0099	0.03	Q V	.	.	.	.
4.950	0.0099	0.03	Q V	.	.	.	.
4.967	0.0100	0.03	Q V	.	.	.	.
4.983	0.0100	0.03	Q V	.	.	.	.
5.000	0.0100	0.03	Q V	.	.	.	.
5.017	0.0101	0.03	Q V	.	.	.	.
5.033	0.0101	0.03	Q V	.	.	.	.
5.050	0.0102	0.03	Q V	.	.	.	.
5.067	0.0102	0.03	Q V	.	.	.	.
5.083	0.0102	0.03	Q V	.	.	.	.
5.100	0.0103	0.03	Q V	.	.	.	.
5.117	0.0103	0.03	Q V	.	.	.	.
5.133	0.0104	0.03	Q V	.	.	.	.
5.150	0.0104	0.03	Q V	.	.	.	.
5.167	0.0104	0.03	Q V	.	.	.	.
5.183	0.0105	0.03	Q V	.	.	.	.
5.200	0.0105	0.03	Q V	.	.	.	.
5.217	0.0106	0.03	Q V	.	.	.	.
5.233	0.0106	0.03	Q V	.	.	.	.
5.250	0.0106	0.03	Q V	.	.	.	.
5.267	0.0107	0.03	Q V	.	.	.	.
5.283	0.0107	0.03	Q V	.	.	.	.
5.300	0.0107	0.03	Q V	.	.	.	.
5.317	0.0108	0.03	Q V	.	.	.	.
5.333	0.0108	0.03	Q V	.	.	.	.
5.350	0.0109	0.03	Q V	.	.	.	.
5.367	0.0109	0.03	Q V	.	.	.	.
5.383	0.0109	0.03	Q V	.	.	.	.
5.400	0.0110	0.03	Q V	.	.	.	.
5.417	0.0110	0.03	Q V	.	.	.	.

5.433	0.0111	0.03	Q	V	.	.	.	.
5.450	0.0111	0.03	Q	V	.	.	.	.
5.467	0.0111	0.03	Q	V	.	.	.	.
5.483	0.0112	0.03	Q	V	.	.	.	.
5.500	0.0112	0.03	Q	V	.	.	.	.
5.517	0.0113	0.03	Q	V	.	.	.	.
5.533	0.0113	0.03	Q	V	.	.	.	.
5.550	0.0113	0.03	Q	V	.	.	.	.
5.567	0.0114	0.03	Q	V	.	.	.	.
5.583	0.0114	0.03	Q	V	.	.	.	.
5.600	0.0115	0.03	Q	V	.	.	.	.
5.617	0.0115	0.03	Q	V	.	.	.	.
5.633	0.0115	0.03	Q	V	.	.	.	.
5.650	0.0116	0.03	Q	V	.	.	.	.
5.667	0.0116	0.03	Q	V	.	.	.	.
5.683	0.0117	0.03	Q	V	.	.	.	.
5.700	0.0117	0.03	Q	V	.	.	.	.
5.717	0.0117	0.03	Q	V	.	.	.	.
5.733	0.0118	0.03	Q	V	.	.	.	.
5.750	0.0118	0.03	Q	V	.	.	.	.
5.767	0.0119	0.03	Q	V	.	.	.	.
5.783	0.0119	0.03	Q	V	.	.	.	.
5.800	0.0119	0.03	Q	V	.	.	.	.
5.817	0.0120	0.03	Q	V	.	.	.	.
5.833	0.0120	0.03	Q	V	.	.	.	.
5.850	0.0121	0.03	Q	V	.	.	.	.
5.867	0.0121	0.03	Q	V	.	.	.	.
5.883	0.0121	0.03	Q	V	.	.	.	.
5.900	0.0122	0.03	Q	V	.	.	.	.
5.917	0.0122	0.03	Q	V	.	.	.	.
5.933	0.0123	0.03	Q	V	.	.	.	.
5.950	0.0123	0.03	Q	V	.	.	.	.
5.967	0.0123	0.03	Q	V	.	.	.	.
5.983	0.0124	0.03	Q	V	.	.	.	.
6.000	0.0124	0.03	Q	V	.	.	.	.
6.017	0.0125	0.03	Q	V	.	.	.	.
6.033	0.0125	0.03	Q	V	.	.	.	.
6.050	0.0126	0.03	Q	V	.	.	.	.
6.067	0.0126	0.03	Q	V	.	.	.	.
6.083	0.0126	0.03	Q	V	.	.	.	.
6.100	0.0127	0.03	Q	V	.	.	.	.
6.117	0.0127	0.03	Q	V	.	.	.	.
6.133	0.0128	0.03	Q	V	.	.	.	.
6.150	0.0128	0.03	Q	V	.	.	.	.
6.167	0.0128	0.03	Q	V	.	.	.	.
6.183	0.0129	0.03	Q	V	.	.	.	.
6.200	0.0129	0.03	Q	V	.	.	.	.
6.217	0.0130	0.03	Q	V	.	.	.	.
6.233	0.0130	0.03	Q	V	.	.	.	.
6.250	0.0130	0.03	Q	V	.	.	.	.

6.267	0.0131	0.03	Q	V	.	.	.	.
6.283	0.0131	0.03	Q	V	.	.	.	.
6.300	0.0132	0.03	Q	V	.	.	.	.
6.317	0.0132	0.03	Q	V	.	.	.	.
6.333	0.0133	0.03	Q	V	.	.	.	.
6.350	0.0133	0.03	Q	V	.	.	.	.
6.367	0.0133	0.03	Q	V	.	.	.	.
6.383	0.0134	0.03	Q	V	.	.	.	.
6.400	0.0134	0.03	Q	V	.	.	.	.
6.417	0.0135	0.03	Q	V	.	.	.	.
6.433	0.0135	0.03	Q	V	.	.	.	.
6.450	0.0136	0.03	Q	V	.	.	.	.
6.467	0.0136	0.03	Q	V	.	.	.	.
6.483	0.0136	0.03	Q	V	.	.	.	.
6.500	0.0137	0.03	Q	V	.	.	.	.
6.517	0.0137	0.03	Q	V	.	.	.	.
6.533	0.0138	0.03	Q	V	.	.	.	.
6.550	0.0138	0.03	Q	V	.	.	.	.
6.567	0.0138	0.03	Q	V	.	.	.	.
6.583	0.0139	0.03	Q	V	.	.	.	.
6.600	0.0139	0.03	Q	V	.	.	.	.
6.617	0.0140	0.03	Q	V	.	.	.	.
6.633	0.0140	0.03	Q	V	.	.	.	.
6.650	0.0141	0.03	Q	V	.	.	.	.
6.667	0.0141	0.03	Q	V	.	.	.	.
6.683	0.0141	0.03	Q	V	.	.	.	.
6.700	0.0142	0.03	Q	V	.	.	.	.
6.717	0.0142	0.03	Q	V	.	.	.	.
6.733	0.0143	0.03	Q	V	.	.	.	.
6.750	0.0143	0.03	Q	V	.	.	.	.
6.767	0.0144	0.03	Q	V	.	.	.	.
6.783	0.0144	0.03	Q	V	.	.	.	.
6.800	0.0144	0.03	Q	V	.	.	.	.
6.817	0.0145	0.03	Q	V	.	.	.	.
6.833	0.0145	0.03	Q	V	.	.	.	.
6.850	0.0146	0.03	Q	V	.	.	.	.
6.867	0.0146	0.03	Q	V	.	.	.	.
6.883	0.0147	0.03	Q	V	.	.	.	.
6.900	0.0147	0.03	Q	V	.	.	.	.
6.917	0.0147	0.03	Q	V	.	.	.	.
6.933	0.0148	0.03	Q	V	.	.	.	.
6.950	0.0148	0.03	Q	V	.	.	.	.
6.967	0.0149	0.03	Q	V	.	.	.	.
6.983	0.0149	0.03	Q	V	.	.	.	.
7.000	0.0150	0.03	Q	V	.	.	.	.
7.017	0.0150	0.03	Q	V	.	.	.	.
7.033	0.0151	0.03	Q	V	.	.	.	.
7.050	0.0151	0.03	Q	V	.	.	.	.
7.067	0.0151	0.03	Q	V	.	.	.	.
7.083	0.0152	0.03	Q	V	.	.	.	.

7.100	0.0152	0.03	Q	V	.	.	.	.
7.117	0.0153	0.03	Q	V	.	.	.	.
7.133	0.0153	0.03	Q	V	.	.	.	.
7.150	0.0154	0.03	Q	V	.	.	.	.
7.167	0.0154	0.03	Q	V	.	.	.	.
7.183	0.0155	0.03	Q	V	.	.	.	.
7.200	0.0155	0.03	Q	V	.	.	.	.
7.217	0.0155	0.03	Q	V	.	.	.	.
7.233	0.0156	0.03	Q	V	.	.	.	.
7.250	0.0156	0.03	Q	V	.	.	.	.
7.267	0.0157	0.03	Q	V	.	.	.	.
7.283	0.0157	0.03	Q	V	.	.	.	.
7.300	0.0158	0.03	Q	V	.	.	.	.
7.317	0.0158	0.03	Q	V	.	.	.	.
7.333	0.0159	0.03	Q	V	.	.	.	.
7.350	0.0159	0.03	Q	V	.	.	.	.
7.367	0.0159	0.03	Q	V	.	.	.	.
7.383	0.0160	0.03	Q	V	.	.	.	.
7.400	0.0160	0.03	Q	V	.	.	.	.
7.417	0.0161	0.03	Q	V	.	.	.	.
7.433	0.0161	0.03	Q	V	.	.	.	.
7.450	0.0162	0.03	Q	V	.	.	.	.
7.467	0.0162	0.03	Q	V	.	.	.	.
7.483	0.0163	0.03	Q	V	.	.	.	.
7.500	0.0163	0.03	Q	V	.	.	.	.
7.517	0.0163	0.03	Q	V	.	.	.	.
7.533	0.0164	0.03	Q	V	.	.	.	.
7.550	0.0164	0.03	Q	V	.	.	.	.
7.567	0.0165	0.03	Q	V	.	.	.	.
7.583	0.0165	0.03	Q	V	.	.	.	.
7.600	0.0166	0.03	Q	V	.	.	.	.
7.617	0.0166	0.03	Q	V	.	.	.	.
7.633	0.0167	0.03	Q	V	.	.	.	.
7.650	0.0167	0.03	Q	V	.	.	.	.
7.667	0.0168	0.03	Q	V	.	.	.	.
7.683	0.0168	0.03	Q	V	.	.	.	.
7.700	0.0168	0.03	Q	V	.	.	.	.
7.717	0.0169	0.03	Q	V	.	.	.	.
7.733	0.0169	0.03	Q	V	.	.	.	.
7.750	0.0170	0.03	Q	V	.	.	.	.
7.767	0.0170	0.03	Q	V	.	.	.	.
7.783	0.0171	0.03	Q	V	.	.	.	.
7.800	0.0171	0.03	Q	V	.	.	.	.
7.817	0.0172	0.03	Q	V	.	.	.	.
7.833	0.0172	0.03	Q	V	.	.	.	.
7.850	0.0173	0.03	Q	V	.	.	.	.
7.867	0.0173	0.03	Q	V	.	.	.	.
7.883	0.0174	0.03	Q	V	.	.	.	.
7.900	0.0174	0.03	Q	V	.	.	.	.
7.917	0.0175	0.03	Q	V	.	.	.	.

7.933	0.0175	0.03	Q	V	.	.	.	.
7.950	0.0175	0.03	Q	V	.	.	.	.
7.967	0.0176	0.03	Q	V	.	.	.	.
7.983	0.0176	0.03	Q	V	.	.	.	.
8.000	0.0177	0.03	Q	V	.	.	.	.
8.017	0.0177	0.03	Q	V	.	.	.	.
8.033	0.0178	0.03	Q	V	.	.	.	.
8.050	0.0178	0.03	Q	V	.	.	.	.
8.067	0.0179	0.03	Q	V	.	.	.	.
8.083	0.0179	0.03	Q	V	.	.	.	.
8.100	0.0180	0.03	Q	V	.	.	.	.
8.117	0.0180	0.03	Q	V	.	.	.	.
8.133	0.0181	0.03	Q	V	.	.	.	.
8.150	0.0181	0.03	Q	V	.	.	.	.
8.167	0.0182	0.03	Q	V	.	.	.	.
8.183	0.0182	0.03	Q	V	.	.	.	.
8.200	0.0183	0.03	Q	V	.	.	.	.
8.217	0.0183	0.03	Q	V	.	.	.	.
8.233	0.0183	0.03	Q	V	.	.	.	.
8.250	0.0184	0.03	Q	V	.	.	.	.
8.267	0.0184	0.03	Q	V	.	.	.	.
8.283	0.0185	0.03	Q	V	.	.	.	.
8.300	0.0185	0.03	Q	V	.	.	.	.
8.317	0.0186	0.03	Q	V	.	.	.	.
8.333	0.0186	0.04	Q	V	.	.	.	.
8.350	0.0187	0.04	Q	V	.	.	.	.
8.367	0.0187	0.04	Q	V	.	.	.	.
8.383	0.0188	0.04	Q	V	.	.	.	.
8.400	0.0188	0.04	Q	V	.	.	.	.
8.417	0.0189	0.04	Q	V	.	.	.	.
8.433	0.0189	0.04	Q	V	.	.	.	.
8.450	0.0190	0.04	Q	V	.	.	.	.
8.467	0.0190	0.04	Q	V	.	.	.	.
8.483	0.0191	0.04	Q	V	.	.	.	.
8.500	0.0191	0.04	Q	V	.	.	.	.
8.517	0.0192	0.04	Q	V	.	.	.	.
8.533	0.0192	0.04	Q	V	.	.	.	.
8.550	0.0193	0.04	Q	V	.	.	.	.
8.567	0.0193	0.04	Q	V	.	.	.	.
8.583	0.0194	0.04	Q	V	.	.	.	.
8.600	0.0194	0.04	Q	V	.	.	.	.
8.617	0.0195	0.04	Q	V	.	.	.	.
8.633	0.0195	0.04	Q	V	.	.	.	.
8.650	0.0196	0.04	Q	V	.	.	.	.
8.667	0.0196	0.04	Q	V	.	.	.	.
8.683	0.0197	0.04	Q	V	.	.	.	.
8.700	0.0197	0.04	Q	V	.	.	.	.
8.717	0.0198	0.04	Q	V	.	.	.	.
8.733	0.0198	0.04	Q	V	.	.	.	.
8.750	0.0199	0.04	Q	V	.	.	.	.

8.767	0.0199	0.04	Q	V	.	.	.	.
8.783	0.0200	0.04	Q	V	.	.	.	.
8.800	0.0200	0.04	Q	V	.	.	.	.
8.817	0.0201	0.04	Q	V	.	.	.	.
8.833	0.0201	0.04	Q	V	.	.	.	.
8.850	0.0202	0.04	Q	V	.	.	.	.
8.867	0.0202	0.04	Q	V	.	.	.	.
8.883	0.0203	0.04	Q	V	.	.	.	.
8.900	0.0203	0.04	Q	V	.	.	.	.
8.917	0.0204	0.04	Q	V	.	.	.	.
8.933	0.0204	0.04	Q	V	.	.	.	.
8.950	0.0205	0.04	Q	V	.	.	.	.
8.967	0.0205	0.04	Q	V	.	.	.	.
8.983	0.0206	0.04	Q	V	.	.	.	.
9.000	0.0206	0.04	Q	V	.	.	.	.
9.017	0.0207	0.04	Q	V	.	.	.	.
9.033	0.0207	0.04	Q	V	.	.	.	.
9.050	0.0208	0.04	Q	V	.	.	.	.
9.067	0.0208	0.04	Q	V	.	.	.	.
9.083	0.0209	0.04	Q	V	.	.	.	.
9.100	0.0209	0.04	Q	V	.	.	.	.
9.117	0.0210	0.04	Q	V	.	.	.	.
9.133	0.0210	0.04	Q	V	.	.	.	.
9.150	0.0211	0.04	Q	V	.	.	.	.
9.167	0.0211	0.04	Q	V	.	.	.	.
9.183	0.0212	0.04	Q	V	.	.	.	.
9.200	0.0212	0.04	Q	V	.	.	.	.
9.217	0.0213	0.04	Q	V	.	.	.	.
9.233	0.0213	0.04	Q	V	.	.	.	.
9.250	0.0214	0.04	Q	V	.	.	.	.
9.267	0.0214	0.04	Q	V	.	.	.	.
9.283	0.0215	0.04	Q	V	.	.	.	.
9.300	0.0216	0.04	Q	V	.	.	.	.
9.317	0.0216	0.04	Q	V	.	.	.	.
9.333	0.0217	0.04	Q	V	.	.	.	.
9.350	0.0217	0.04	Q	V	.	.	.	.
9.367	0.0218	0.04	Q	V	.	.	.	.
9.383	0.0218	0.04	Q	V	.	.	.	.
9.400	0.0219	0.04	Q	V	.	.	.	.
9.417	0.0219	0.04	Q	V	.	.	.	.
9.433	0.0220	0.04	Q	V	.	.	.	.
9.450	0.0220	0.04	Q	V	.	.	.	.
9.467	0.0221	0.04	Q	V	.	.	.	.
9.483	0.0221	0.04	Q	V	.	.	.	.
9.500	0.0222	0.04	Q	V	.	.	.	.
9.517	0.0222	0.04	Q	V	.	.	.	.
9.533	0.0223	0.04	Q	V	.	.	.	.
9.550	0.0223	0.04	Q	V	.	.	.	.
9.567	0.0224	0.04	Q	V	.	.	.	.
9.583	0.0225	0.04	Q	V	.	.	.	.

9.600	0.0225	0.04	Q	V	.	.	.	.
9.617	0.0226	0.04	Q	V	.	.	.	.
9.633	0.0226	0.04	Q	V	.	.	.	.
9.650	0.0227	0.04	Q	V	.	.	.	.
9.667	0.0227	0.04	Q	V	.	.	.	.
9.683	0.0228	0.04	Q	V	.	.	.	.
9.700	0.0228	0.04	Q	V	.	.	.	.
9.717	0.0229	0.04	Q	V	.	.	.	.
9.733	0.0229	0.04	Q	V	.	.	.	.
9.750	0.0230	0.04	Q	V	.	.	.	.
9.767	0.0230	0.04	Q	V	.	.	.	.
9.783	0.0231	0.04	Q	V	.	.	.	.
9.800	0.0232	0.04	Q	V	.	.	.	.
9.817	0.0232	0.04	Q	V	.	.	.	.
9.833	0.0233	0.04	Q	V	.	.	.	.
9.850	0.0233	0.04	Q	V	.	.	.	.
9.867	0.0234	0.04	Q	V	.	.	.	.
9.883	0.0234	0.04	Q	V	.	.	.	.
9.900	0.0235	0.04	Q	V	.	.	.	.
9.917	0.0235	0.04	Q	V	.	.	.	.
9.933	0.0236	0.04	Q	V	.	.	.	.
9.950	0.0237	0.04	Q	V	.	.	.	.
9.967	0.0237	0.04	Q	V	.	.	.	.
9.983	0.0238	0.04	Q	V	.	.	.	.
10.000	0.0238	0.04	Q	V	.	.	.	.
10.017	0.0239	0.04	Q	V	.	.	.	.
10.033	0.0239	0.04	Q	V	.	.	.	.
10.050	0.0240	0.04	Q	V	.	.	.	.
10.067	0.0241	0.04	Q	V	.	.	.	.
10.083	0.0241	0.04	Q	V	.	.	.	.
10.100	0.0242	0.04	Q	V	.	.	.	.
10.117	0.0242	0.04	Q	V	.	.	.	.
10.133	0.0243	0.04	Q	V	.	.	.	.
10.150	0.0243	0.04	Q	V	.	.	.	.
10.167	0.0244	0.04	Q	V	.	.	.	.
10.183	0.0244	0.04	Q	V	.	.	.	.
10.200	0.0245	0.04	Q	V	.	.	.	.
10.217	0.0246	0.04	Q	V	.	.	.	.
10.233	0.0246	0.04	Q	V	.	.	.	.
10.250	0.0247	0.04	Q	V	.	.	.	.
10.267	0.0247	0.04	Q	V	.	.	.	.
10.283	0.0248	0.04	Q	V	.	.	.	.
10.300	0.0249	0.04	Q	V	.	.	.	.
10.317	0.0249	0.04	Q	V	.	.	.	.
10.333	0.0250	0.04	Q	V	.	.	.	.
10.350	0.0250	0.04	Q	V	.	.	.	.
10.367	0.0251	0.04	Q	V	.	.	.	.
10.383	0.0251	0.04	Q	V	.	.	.	.
10.400	0.0252	0.04	Q	V	.	.	.	.
10.417	0.0253	0.04	Q	V	.	.	.	.

10.433	0.0253	0.04	Q	V	.	.	.	.
10.450	0.0254	0.04	Q	V	.	.	.	.
10.467	0.0254	0.04	Q	V	.	.	.	.
10.483	0.0255	0.04	Q	V	.	.	.	.
10.500	0.0256	0.04	Q	V	.	.	.	.
10.517	0.0256	0.04	Q	V	.	.	.	.
10.533	0.0257	0.04	Q	V	.	.	.	.
10.550	0.0257	0.04	Q	V	.	.	.	.
10.567	0.0258	0.04	Q	V	.	.	.	.
10.583	0.0259	0.04	Q	V	.	.	.	.
10.600	0.0259	0.04	Q	V	.	.	.	.
10.617	0.0260	0.04	Q	V	.	.	.	.
10.633	0.0260	0.04	Q	V	.	.	.	.
10.650	0.0261	0.04	Q	V	.	.	.	.
10.667	0.0261	0.04	Q	V	.	.	.	.
10.683	0.0262	0.04	Q	V	.	.	.	.
10.700	0.0263	0.04	Q	V	.	.	.	.
10.717	0.0263	0.04	Q	V	.	.	.	.
10.733	0.0264	0.04	Q	V	.	.	.	.
10.750	0.0265	0.04	Q	V	.	.	.	.
10.767	0.0265	0.04	Q	V	.	.	.	.
10.783	0.0266	0.04	Q	V	.	.	.	.
10.800	0.0266	0.04	Q	V	.	.	.	.
10.817	0.0267	0.04	Q	V	.	.	.	.
10.833	0.0268	0.04	Q	V	.	.	.	.
10.850	0.0268	0.04	Q	V	.	.	.	.
10.867	0.0269	0.04	Q	V	.	.	.	.
10.883	0.0269	0.04	Q	V	.	.	.	.
10.900	0.0270	0.04	Q	V	.	.	.	.
10.917	0.0271	0.04	Q	V	.	.	.	.
10.933	0.0271	0.04	Q	V	.	.	.	.
10.950	0.0272	0.05	Q	V	.	.	.	.
10.967	0.0273	0.05	Q	V	.	.	.	.
10.983	0.0273	0.05	Q	V	.	.	.	.
11.000	0.0274	0.05	Q	V	.	.	.	.
11.017	0.0274	0.05	Q	V	.	.	.	.
11.033	0.0275	0.05	Q	V	.	.	.	.
11.050	0.0276	0.05	Q	V	.	.	.	.
11.067	0.0276	0.05	Q	V	.	.	.	.
11.083	0.0277	0.05	Q	V	.	.	.	.
11.100	0.0278	0.05	Q	V	.	.	.	.
11.117	0.0278	0.05	Q	V	.	.	.	.
11.133	0.0279	0.05	Q	V	.	.	.	.
11.150	0.0279	0.05	Q	V	.	.	.	.
11.167	0.0280	0.05	Q	V	.	.	.	.
11.183	0.0281	0.05	Q	V	.	.	.	.
11.200	0.0281	0.05	Q	V	.	.	.	.
11.217	0.0282	0.05	Q	V	.	.	.	.
11.233	0.0283	0.05	Q	V	.	.	.	.
11.250	0.0283	0.05	Q	V	.	.	.	.

11.267	0.0284	0.05	Q	V	.	.	.	.
11.283	0.0285	0.05	Q	V	.	.	.	.
11.300	0.0285	0.05	Q	V	.	.	.	.
11.317	0.0286	0.05	Q	V	.	.	.	.
11.333	0.0287	0.05	Q	V	.	.	.	.
11.350	0.0287	0.05	Q	V	.	.	.	.
11.367	0.0288	0.05	Q	V	.	.	.	.
11.383	0.0289	0.05	Q	V	.	.	.	.
11.400	0.0289	0.05	Q	V	.	.	.	.
11.417	0.0290	0.05	Q	V	.	.	.	.
11.433	0.0291	0.05	Q	V	.	.	.	.
11.450	0.0291	0.05	Q	V	.	.	.	.
11.467	0.0292	0.05	Q	V	.	.	.	.
11.483	0.0293	0.05	Q	V	.	.	.	.
11.500	0.0293	0.05	Q	V	.	.	.	.
11.517	0.0294	0.05	Q	V	.	.	.	.
11.533	0.0295	0.05	Q	V	.	.	.	.
11.550	0.0295	0.05	Q	V	.	.	.	.
11.567	0.0296	0.05	Q	V	.	.	.	.
11.583	0.0297	0.05	Q	V	.	.	.	.
11.600	0.0297	0.05	Q	V	.	.	.	.
11.617	0.0298	0.05	Q	V	.	.	.	.
11.633	0.0299	0.05	Q	V	.	.	.	.
11.650	0.0299	0.05	Q	V	.	.	.	.
11.667	0.0300	0.05	Q	V	.	.	.	.
11.683	0.0301	0.05	Q	V	.	.	.	.
11.700	0.0301	0.05	Q	V	.	.	.	.
11.717	0.0302	0.05	Q	V	.	.	.	.
11.733	0.0303	0.05	Q	V	.	.	.	.
11.750	0.0303	0.05	Q	V	.	.	.	.
11.767	0.0304	0.05	Q	V	.	.	.	.
11.783	0.0305	0.05	Q	V	.	.	.	.
11.800	0.0305	0.05	Q	V	.	.	.	.
11.817	0.0306	0.05	Q	V	.	.	.	.
11.833	0.0307	0.05	Q	V	.	.	.	.
11.850	0.0308	0.05	Q	V	.	.	.	.
11.867	0.0308	0.05	Q	V	.	.	.	.
11.883	0.0309	0.05	Q	V	.	.	.	.
11.900	0.0310	0.05	Q	V	.	.	.	.
11.917	0.0310	0.05	Q	V	.	.	.	.
11.933	0.0311	0.05	Q	V	.	.	.	.
11.950	0.0312	0.05	Q	V	.	.	.	.
11.967	0.0313	0.05	Q	V	.	.	.	.
11.983	0.0313	0.05	Q	V	.	.	.	.
12.000	0.0314	0.05	Q	V	.	.	.	.
12.017	0.0315	0.05	Q	V	.	.	.	.
12.033	0.0315	0.05	Q	V	.	.	.	.
12.050	0.0316	0.05	Q	V	.	.	.	.
12.067	0.0317	0.05	Q	V	.	.	.	.
12.083	0.0318	0.05	Q	V	.	.	.	.

12.100	0.0318	0.06	Q	V.	.	.	.
12.117	0.0319	0.06	Q	V.	.	.	.
12.133	0.0320	0.06	Q	V.	.	.	.
12.150	0.0321	0.06	Q	V.	.	.	.
12.167	0.0322	0.06	Q	V.	.	.	.
12.183	0.0323	0.06	Q	V.	.	.	.
12.200	0.0323	0.06	.Q	V.	.	.	.
12.217	0.0324	0.06	.Q	V.	.	.	.
12.233	0.0325	0.07	.Q	V.	.	.	.
12.250	0.0326	0.07	.Q	V.	.	.	.
12.267	0.0327	0.07	.Q	V.	.	.	.
12.283	0.0328	0.07	.Q	V.	.	.	.
12.300	0.0329	0.07	.Q	V.	.	.	.
12.317	0.0330	0.07	.Q	V.	.	.	.
12.333	0.0331	0.07	.Q	V.	.	.	.
12.350	0.0332	0.07	.Q	V.	.	.	.
12.367	0.0332	0.07	.Q	V.	.	.	.
12.383	0.0333	0.07	.Q	V.	.	.	.
12.400	0.0334	0.07	.Q	V.	.	.	.
12.417	0.0335	0.07	.Q	V.	.	.	.
12.433	0.0336	0.07	.Q	V.	.	.	.
12.450	0.0337	0.07	.Q	V.	.	.	.
12.467	0.0338	0.07	.Q	V.	.	.	.
12.483	0.0339	0.07	.Q	V.	.	.	.
12.500	0.0340	0.07	.Q	V.	.	.	.
12.517	0.0341	0.07	.Q	V.	.	.	.
12.533	0.0342	0.07	.Q	V.	.	.	.
12.550	0.0343	0.07	.Q	V.	.	.	.
12.567	0.0344	0.07	.Q	V.	.	.	.
12.583	0.0345	0.07	.Q	V.	.	.	.
12.600	0.0346	0.07	.Q	V.	.	.	.
12.617	0.0347	0.07	.Q	V.	.	.	.
12.633	0.0347	0.07	.Q	V.	.	.	.
12.650	0.0348	0.07	.Q	V.	.	.	.
12.667	0.0349	0.07	.Q	V.	.	.	.
12.683	0.0350	0.07	.Q	V.	.	.	.
12.700	0.0351	0.07	.Q	V.	.	.	.
12.717	0.0352	0.07	.Q	V.	.	.	.
12.733	0.0353	0.07	.Q	V	.	.	.
12.750	0.0354	0.07	.Q	V	.	.	.
12.767	0.0355	0.07	.Q	V	.	.	.
12.783	0.0356	0.07	.Q	V	.	.	.
12.800	0.0357	0.07	.Q	V	.	.	.
12.817	0.0358	0.07	.Q	V	.	.	.
12.833	0.0359	0.07	.Q	V	.	.	.
12.850	0.0360	0.07	.Q	V	.	.	.
12.867	0.0361	0.07	.Q	V	.	.	.
12.883	0.0362	0.07	.Q	V	.	.	.
12.900	0.0363	0.07	.Q	V	.	.	.
12.917	0.0364	0.07	.Q	V	.	.	.

12.933	0.0365	0.07	.Q	V	.	.	.
12.950	0.0366	0.07	.Q	V	.	.	.
12.967	0.0367	0.07	.Q	V	.	.	.
12.983	0.0368	0.07	.Q	V	.	.	.
13.000	0.0369	0.07	.Q	V	.	.	.
13.017	0.0370	0.07	.Q	V	.	.	.
13.033	0.0371	0.07	.Q	V	.	.	.
13.050	0.0372	0.07	.Q	V	.	.	.
13.067	0.0373	0.07	.Q	V	.	.	.
13.083	0.0374	0.07	.Q	V	.	.	.
13.100	0.0375	0.08	.Q	V	.	.	.
13.117	0.0376	0.08	.Q	V	.	.	.
13.133	0.0377	0.08	.Q	V	.	.	.
13.150	0.0378	0.08	.Q	V	.	.	.
13.167	0.0380	0.08	.Q	V	.	.	.
13.183	0.0381	0.08	.Q	V	.	.	.
13.200	0.0382	0.08	.Q	V	.	.	.
13.217	0.0383	0.08	.Q	V	.	.	.
13.233	0.0384	0.08	.Q	V	.	.	.
13.250	0.0385	0.08	.Q	V	.	.	.
13.267	0.0386	0.08	.Q	V	.	.	.
13.283	0.0387	0.08	.Q	V	.	.	.
13.300	0.0388	0.08	.Q	V	.	.	.
13.317	0.0389	0.08	.Q	.V	.	.	.
13.333	0.0390	0.08	.Q	.V	.	.	.
13.350	0.0391	0.08	.Q	.V	.	.	.
13.367	0.0392	0.08	.Q	.V	.	.	.
13.383	0.0393	0.08	.Q	.V	.	.	.
13.400	0.0395	0.08	.Q	.V	.	.	.
13.417	0.0396	0.08	.Q	.V	.	.	.
13.433	0.0397	0.08	.Q	.V	.	.	.
13.450	0.0398	0.08	.Q	.V	.	.	.
13.467	0.0399	0.08	.Q	.V	.	.	.
13.483	0.0400	0.08	.Q	.V	.	.	.
13.500	0.0401	0.08	.Q	.V	.	.	.
13.517	0.0402	0.08	.Q	.V	.	.	.
13.533	0.0403	0.08	.Q	.V	.	.	.
13.550	0.0405	0.08	.Q	.V	.	.	.
13.567	0.0406	0.08	.Q	.V	.	.	.
13.583	0.0407	0.08	.Q	.V	.	.	.
13.600	0.0408	0.08	.Q	.V	.	.	.
13.617	0.0409	0.08	.Q	.V	.	.	.
13.633	0.0410	0.08	.Q	.V	.	.	.
13.650	0.0411	0.08	.Q	.V	.	.	.
13.667	0.0413	0.08	.Q	.V	.	.	.
13.683	0.0414	0.08	.Q	.V	.	.	.
13.700	0.0415	0.08	.Q	.V	.	.	.
13.717	0.0416	0.08	.Q	.V	.	.	.
13.733	0.0417	0.09	.Q	.V	.	.	.
13.750	0.0418	0.09	.Q	.V	.	.	.

13.767	0.0420	0.09	.Q	.V	.	.	.
13.783	0.0421	0.09	.Q	.V	.	.	.
13.800	0.0422	0.09	.Q	.V	.	.	.
13.817	0.0423	0.09	.Q	.V	.	.	.
13.833	0.0424	0.09	.Q	. V	.	.	.
13.850	0.0426	0.09	.Q	. V	.	.	.
13.867	0.0427	0.09	.Q	. V	.	.	.
13.883	0.0428	0.09	.Q	. V	.	.	.
13.900	0.0429	0.09	.Q	. V	.	.	.
13.917	0.0430	0.09	.Q	. V	.	.	.
13.933	0.0432	0.09	.Q	. V	.	.	.
13.950	0.0433	0.09	.Q	. V	.	.	.
13.967	0.0434	0.09	.Q	. V	.	.	.
13.983	0.0435	0.09	.Q	. V	.	.	.
14.000	0.0437	0.09	.Q	. V	.	.	.
14.017	0.0438	0.09	.Q	. V	.	.	.
14.033	0.0439	0.09	.Q	. V	.	.	.
14.050	0.0440	0.09	.Q	. V	.	.	.
14.067	0.0442	0.09	.Q	. V	.	.	.
14.083	0.0443	0.09	.Q	. V	.	.	.
14.100	0.0444	0.09	.Q	. V	.	.	.
14.117	0.0446	0.09	.Q	. V	.	.	.
14.133	0.0447	0.09	.Q	. V	.	.	.
14.150	0.0448	0.10	.Q	. V	.	.	.
14.167	0.0450	0.10	.Q	. V	.	.	.
14.183	0.0451	0.10	.Q	. V	.	.	.
14.200	0.0452	0.10	.Q	. V	.	.	.
14.217	0.0454	0.10	.Q	. V	.	.	.
14.233	0.0455	0.10	.Q	. V	.	.	.
14.250	0.0456	0.10	.Q	. V	.	.	.
14.267	0.0458	0.10	.Q	. V	.	.	.
14.283	0.0459	0.10	.Q	. V	.	.	.
14.300	0.0461	0.10	.Q	. V	.	.	.
14.317	0.0462	0.10	.Q	. V	.	.	.
14.333	0.0463	0.10	.Q	. V	.	.	.
14.350	0.0465	0.10	.Q	. V	.	.	.
14.367	0.0466	0.10	.Q	. V	.	.	.
14.383	0.0468	0.10	.Q	. V	.	.	.
14.400	0.0469	0.10	.Q	. V	.	.	.
14.417	0.0471	0.11	.Q	. V	.	.	.
14.433	0.0472	0.11	.Q	. V	.	.	.
14.450	0.0473	0.11	.Q	. V	.	.	.
14.467	0.0475	0.11	.Q	. V	.	.	.
14.483	0.0476	0.11	.Q	. V	.	.	.
14.500	0.0478	0.11	.Q	. V	.	.	.
14.517	0.0479	0.11	.Q	. V	.	.	.
14.533	0.0481	0.11	.Q	. V	.	.	.
14.550	0.0483	0.11	.Q	. V	.	.	.
14.567	0.0484	0.11	.Q	. V	.	.	.
14.583	0.0486	0.11	.Q	. V	.	.	.

14.600	0.0487	0.11	.Q	.	V	.	.	.
14.617	0.0489	0.11	.Q	.	V	.	.	.
14.633	0.0490	0.11	.Q	.	V	.	.	.
14.650	0.0492	0.11	.Q	.	V	.	.	.
14.667	0.0493	0.11	.Q	.	V	.	.	.
14.683	0.0495	0.12	.Q	.	V	.	.	.
14.700	0.0497	0.12	.Q	.	V	.	.	.
14.717	0.0498	0.12	.Q	.	V	.	.	.
14.733	0.0500	0.12	.Q	.	V	.	.	.
14.750	0.0501	0.12	.Q	.	V	.	.	.
14.767	0.0503	0.12	.Q	.	V	.	.	.
14.783	0.0505	0.12	.Q	.	V	.	.	.
14.800	0.0506	0.12	.Q	.	V	.	.	.
14.817	0.0508	0.12	.Q	.	V	.	.	.
14.833	0.0510	0.12	.Q	.	V	.	.	.
14.850	0.0511	0.12	.Q	.	V	.	.	.
14.867	0.0513	0.13	. Q	.	V	.	.	.
14.883	0.0515	0.13	. Q	.	V	.	.	.
14.900	0.0517	0.13	. Q	.	V	.	.	.
14.917	0.0518	0.13	. Q	.	V	.	.	.
14.933	0.0520	0.13	. Q	.	V	.	.	.
14.950	0.0522	0.13	. Q	.	V	.	.	.
14.967	0.0524	0.13	. Q	.	V	.	.	.
14.983	0.0526	0.13	. Q	.	V	.	.	.
15.000	0.0527	0.13	. Q	.	V	.	.	.
15.017	0.0529	0.13	. Q	.	V	.	.	.
15.033	0.0531	0.13	. Q	.	V	.	.	.
15.050	0.0533	0.13	. Q	.	V	.	.	.
15.067	0.0535	0.13	. Q	.	V	.	.	.
15.083	0.0537	0.14	. Q	.	V	.	.	.
15.100	0.0539	0.14	. Q	.	V	.	.	.
15.117	0.0540	0.14	. Q	.	V	.	.	.
15.133	0.0542	0.14	. Q	.	V	.	.	.
15.150	0.0544	0.14	. Q	.	V	.	.	.
15.167	0.0546	0.14	. Q	.	V	.	.	.
15.183	0.0548	0.15	. Q	.	V	.	.	.
15.200	0.0550	0.15	. Q	.	V	.	.	.
15.217	0.0552	0.15	. Q	.	V	.	.	.
15.233	0.0555	0.15	. Q	.	V	.	.	.
15.250	0.0557	0.15	. Q	.	V	.	.	.
15.267	0.0559	0.15	. Q	.	V	.	.	.
15.283	0.0561	0.15	. Q	.	V	.	.	.
15.300	0.0563	0.15	. Q	.	V	.	.	.
15.317	0.0565	0.16	. Q	.	V	.	.	.
15.333	0.0567	0.16	. Q	.	V	.	.	.
15.350	0.0569	0.16	. Q	.	V	.	.	.
15.367	0.0572	0.16	. Q	.	V	.	.	.
15.383	0.0574	0.16	. Q	.	V	.	.	.
15.400	0.0576	0.16	. Q	.	V	.	.	.
15.417	0.0578	0.16	. Q	.	V	.	.	.

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15.433      0.0580      0.16  . Q       .     V   .         .         .
15.450      0.0583      0.16  . Q       .     V   .         .         .
15.467      0.0585      0.16  . Q       .     V   .         .         .
15.483      0.0587      0.16  . Q       .     V   .         .         .
15.500      0.0589      0.16  . Q       .     V   .         .         .
15.517      0.0592      0.16  . Q       .     V   .         .         .
15.533      0.0594      0.16  . Q       .     V   .         .         .
15.550      0.0596      0.17  . Q       .     V   .         .         .
15.567      0.0599      0.17  . Q       .     V   .         .         .
15.583      0.0601      0.17  . Q       .      V  .         .         .
15.600      0.0603      0.17  . Q       .      V  .         .         .
15.617      0.0606      0.17  . Q       .      V  .         .         .
15.633      0.0608      0.18  . Q       .      V  .         .         .
15.650      0.0611      0.18  . Q       .      V  .         .         .
15.667      0.0613      0.18  . Q       .      V  .         .         .
15.683      0.0616      0.18  . Q       .      V  .         .         .
15.700      0.0618      0.19  .  Q      .      V  .         .         .
15.717      0.0621      0.21  .  Q      .      V  .         .         .
15.733      0.0624      0.23  .  Q      .      V  .         .         .
15.750      0.0628      0.25  .  Q      .      V  .         .         .
15.767      0.0631      0.27  .   Q     .      V  .         .         .
15.783      0.0635      0.29  .   Q     .       V .         .         .
15.800      0.0640      0.30  .   Q     .       V .         .         .
15.817      0.0644      0.32  .    Q    .       V .         .         .
15.833      0.0649      0.34  .    Q    .       V .         .         .
15.850      0.0654      0.36  .    Q    .       V .         .         .
15.867      0.0659      0.39  .     Q   .       V .         .         .
15.883      0.0665      0.41  .     Q   .       V .         .         .
15.900      0.0671      0.44  .      Q  .        V.         .         .
15.917      0.0677      0.47  .      Q  .        V.         .         .
15.933      0.0684      0.49  .      Q  .        V.         .         .
15.950      0.0691      0.52  .       Q .        V.         .         .
15.967      0.0699      0.55  .       Q .        V.         .         .
15.983      0.0706      0.57  .        Q.         V         .         .
16.000      0.0715      0.60  .        Q.         V         .         .
16.017      0.0725      0.71  .         .Q        V         .         .
16.033      0.0737      0.91  .         .   Q     V         .         .
16.050      0.0752      1.11  .         .      Q  .V        .         .
16.067      0.0770      1.31  .         .         QV        .         .
16.083      0.0791      1.51  .         .         . V Q     .         .
16.100      0.0815      1.71  .         .         .  V   Q  .         .
16.117      0.0841      1.91  .         .         .  V      Q         .
16.133      0.0870      2.11  .         .         .   V     .  Q      .
16.150      0.0902      2.30  .         .         .    V    .     Q   .
16.167      0.0936      2.50  .         .         .     V   .         Q
16.183      0.0967      2.25  .         .         .      V  .    Q    .
16.200      0.0995      2.01  .         .         .       V . Q       .
16.217      0.1019      1.77  .         .         .       Q .         .
16.233      0.1040      1.53  .         .         .   Q    V.         .
16.250      0.1058      1.29  .         .         Q        V.         .
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16.267      0.1072      1.05  .          .     Q   .          V          .
16.283      0.1083      0.81  .          . Q       .          V          .
16.300      0.1091      0.57  .         Q.         .          V          .
16.317      0.1095      0.33  .    Q     .         .          .V         .
16.333      0.1098      0.22  .  Q       .         .          .V         .
16.350      0.1101      0.21  .  Q       .         .          .V         .
16.367      0.1104      0.21  .  Q       .         .          .V         .
16.383      0.1107      0.20  .  Q       .         .          .V         .
16.400      0.1110      0.20  .  Q       .         .          .V         .
16.417      0.1112      0.19  .  Q       .         .          .V         .
16.433      0.1115      0.18  . Q        .         .          .V         .
16.450      0.1117      0.18  . Q        .         .          .V         .
16.467      0.1120      0.17  . Q        .         .          .V         .
16.483      0.1122      0.16  . Q        .         .          .V         .
16.500      0.1124      0.16  . Q        .         .          .V         .
16.517      0.1126      0.16  . Q        .         .          .V         .
16.533      0.1128      0.16  . Q        .         .          .V         .
16.550      0.1131      0.15  . Q        .         .          . V        .
16.567      0.1133      0.15  . Q        .         .          . V        .
16.583      0.1135      0.15  . Q        .         .          . V        .
16.600      0.1137      0.15  . Q        .         .          . V        .
16.617      0.1139      0.14  . Q        .         .          . V        .
16.633      0.1141      0.14  . Q        .         .          . V        .
16.650      0.1143      0.14  . Q        .         .          . V        .
16.667      0.1145      0.14  . Q        .         .          . V        .
16.683      0.1146      0.14  . Q        .         .          . V        .
16.700      0.1148      0.13  . Q        .         .          . V        .
16.717      0.1150      0.13  . Q        .         .          . V        .
16.733      0.1152      0.13  . Q        .         .          . V        .
16.750      0.1154      0.13  . Q        .         .          . V        .
16.767      0.1155      0.13  . Q        .         .          . V        .
16.783      0.1157      0.12  .Q         .         .          . V        .
16.800      0.1159      0.12  .Q         .         .          . V        .
16.817      0.1160      0.12  .Q         .         .          . V        .
16.833      0.1162      0.12  .Q         .         .          . V        .
16.850      0.1164      0.12  .Q         .         .          . V        .
16.867      0.1165      0.12  .Q         .         .          .  V       .
16.883      0.1167      0.11  .Q         .         .          .  V       .
16.900      0.1168      0.11  .Q         .         .          .  V       .
16.917      0.1170      0.11  .Q         .         .          .  V       .
16.933      0.1171      0.11  .Q         .         .          .  V       .
16.950      0.1173      0.11  .Q         .         .          .  V       .
16.967      0.1174      0.11  .Q         .         .          .  V       .
16.983      0.1176      0.11  .Q         .         .          .  V       .
17.000      0.1177      0.11  .Q         .         .          .  V       .
17.017      0.1179      0.11  .Q         .         .          .  V       .
17.033      0.1180      0.10  .Q         .         .          .  V       .
17.050      0.1182      0.10  .Q         .         .          .  V       .
17.067      0.1183      0.10  .Q         .         .          .  V       .
17.083      0.1184      0.10  .Q         .         .          .  V       .
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17.100	0.1186	0.10	.Q	.	.	.	V	.
17.117	0.1187	0.10	.Q	.	.	.	V	.
17.133	0.1189	0.10	.Q	.	.	.	V	.
17.150	0.1190	0.10	.Q	.	.	.	V	.
17.167	0.1191	0.10	.Q	.	.	.	V	.
17.183	0.1193	0.09	.Q	.	.	.	V	.
17.200	0.1194	0.09	.Q	.	.	.	V	.
17.217	0.1195	0.09	.Q	.	.	.	V	.
17.233	0.1196	0.09	.Q	.	.	.	V	.
17.250	0.1198	0.09	.Q	.	.	.	V	.
17.267	0.1199	0.09	.Q	.	.	.	V	.
17.283	0.1200	0.09	.Q	.	.	.	V	.
17.300	0.1201	0.09	.Q	.	.	.	V	.
17.317	0.1202	0.09	.Q	.	.	.	V	.
17.333	0.1204	0.09	.Q	.	.	.	V	.
17.350	0.1205	0.09	.Q	.	.	.	V	.
17.367	0.1206	0.08	.Q	.	.	.	V	.
17.383	0.1207	0.08	.Q	.	.	.	V	.
17.400	0.1208	0.08	.Q	.	.	.	V	.
17.417	0.1209	0.08	.Q	.	.	.	V	.
17.433	0.1210	0.08	.Q	.	.	.	V	.
17.450	0.1212	0.08	.Q	.	.	.	V	.
17.467	0.1213	0.08	.Q	.	.	.	V	.
17.483	0.1214	0.08	.Q	.	.	.	V	.
17.500	0.1215	0.08	.Q	.	.	.	V	.
17.517	0.1216	0.08	.Q	.	.	.	V	.
17.533	0.1217	0.08	.Q	.	.	.	V	.
17.550	0.1218	0.08	.Q	.	.	.	V	.
17.567	0.1219	0.08	.Q	.	.	.	V	.
17.583	0.1220	0.08	.Q	.	.	.	V	.
17.600	0.1221	0.08	.Q	.	.	.	V	.
17.617	0.1222	0.08	.Q	.	.	.	V	.
17.633	0.1223	0.08	.Q	.	.	.	V	.
17.650	0.1224	0.08	.Q	.	.	.	V	.
17.667	0.1225	0.07	.Q	.	.	.	V	.
17.683	0.1227	0.07	.Q	.	.	.	V	.
17.700	0.1228	0.07	.Q	.	.	.	V	.
17.717	0.1229	0.07	.Q	.	.	.	V	.
17.733	0.1230	0.07	.Q	.	.	.	V	.
17.750	0.1231	0.07	.Q	.	.	.	V	.
17.767	0.1232	0.07	.Q	.	.	.	V	.
17.783	0.1233	0.07	.Q	.	.	.	V	.
17.800	0.1234	0.07	.Q	.	.	.	V	.
17.817	0.1235	0.07	.Q	.	.	.	V	.
17.833	0.1235	0.07	.Q	.	.	.	V	.
17.850	0.1236	0.07	.Q	.	.	.	V	.
17.867	0.1237	0.07	.Q	.	.	.	V	.
17.883	0.1238	0.07	.Q	.	.	.	V	.
17.900	0.1239	0.07	.Q	.	.	.	V	.
17.917	0.1240	0.07	.Q	.	.	.	V	.

17.933	0.1241	0.07	.Q	.	.	.	V	.
17.950	0.1242	0.07	.Q	.	.	.	V	.
17.967	0.1243	0.07	.Q	.	.	.	V	.
17.983	0.1244	0.07	.Q	.	.	.	V	.
18.000	0.1245	0.07	.Q	.	.	.	V	.
18.017	0.1246	0.07	.Q	.	.	.	V	.
18.033	0.1247	0.07	.Q	.	.	.	V	.
18.050	0.1248	0.07	.Q	.	.	.	V	.
18.067	0.1249	0.07	.Q	.	.	.	V	.
18.083	0.1250	0.06	.Q	.	.	.	V	.
18.100	0.1250	0.06	Q	.	.	.	V	.
18.117	0.1251	0.06	Q	.	.	.	V	.
18.133	0.1252	0.06	Q	.	.	.	V	.
18.150	0.1253	0.06	Q	.	.	.	V	.
18.167	0.1254	0.06	Q	.	.	.	V	.
18.183	0.1254	0.05	Q	.	.	.	V	.
18.200	0.1255	0.05	Q	.	.	.	V	.
18.217	0.1256	0.05	Q	.	.	.	V	.
18.233	0.1257	0.05	Q	.	.	.	V	.
18.250	0.1257	0.05	Q	.	.	.	V	.
18.267	0.1258	0.05	Q	.	.	.	V	.
18.283	0.1259	0.05	Q	.	.	.	V	.
18.300	0.1259	0.05	Q	.	.	.	V	.
18.317	0.1260	0.05	Q	.	.	.	V	.
18.333	0.1261	0.05	Q	.	.	.	V	.
18.350	0.1261	0.05	Q	.	.	.	V	.
18.367	0.1262	0.05	Q	.	.	.	V	.
18.383	0.1263	0.05	Q	.	.	.	V	.
18.400	0.1263	0.05	Q	.	.	.	V	.
18.417	0.1264	0.05	Q	.	.	.	V	.
18.433	0.1265	0.05	Q	.	.	.	V	.
18.450	0.1265	0.05	Q	.	.	.	V	.
18.467	0.1266	0.05	Q	.	.	.	V	.
18.483	0.1267	0.05	Q	.	.	.	V	.
18.500	0.1267	0.05	Q	.	.	.	V	.
18.517	0.1268	0.05	Q	.	.	.	V	.
18.533	0.1269	0.05	Q	.	.	.	V	.
18.550	0.1269	0.05	Q	.	.	.	V	.
18.567	0.1270	0.05	Q	.	.	.	V	.
18.583	0.1271	0.05	Q	.	.	.	V	.
18.600	0.1271	0.05	Q	.	.	.	V	.
18.617	0.1272	0.05	Q	.	.	.	V	.
18.633	0.1273	0.05	Q	.	.	.	V	.
18.650	0.1273	0.05	Q	.	.	.	V	.
18.667	0.1274	0.05	Q	.	.	.	V	.
18.683	0.1275	0.05	Q	.	.	.	V	.
18.700	0.1275	0.05	Q	.	.	.	V	.
18.717	0.1276	0.05	Q	.	.	.	V	.
18.733	0.1276	0.05	Q	.	.	.	V	.
18.750	0.1277	0.05	Q	.	.	.	V	.

18.767	0.1278	0.04	Q	.	.	.	V	.
18.783	0.1278	0.04	Q	.	.	.	V	.
18.800	0.1279	0.04	Q	.	.	.	V	.
18.817	0.1279	0.04	Q	.	.	.	V	.
18.833	0.1280	0.04	Q	.	.	.	V	.
18.850	0.1281	0.04	Q	.	.	.	V	.
18.867	0.1281	0.04	Q	.	.	.	V	.
18.883	0.1282	0.04	Q	.	.	.	V	.
18.900	0.1283	0.04	Q	.	.	.	V	.
18.917	0.1283	0.04	Q	.	.	.	V	.
18.933	0.1284	0.04	Q	.	.	.	V	.
18.950	0.1284	0.04	Q	.	.	.	V	.
18.967	0.1285	0.04	Q	.	.	.	V	.
18.983	0.1285	0.04	Q	.	.	.	V	.
19.000	0.1286	0.04	Q	.	.	.	V	.
19.017	0.1287	0.04	Q	.	.	.	V	.
19.033	0.1287	0.04	Q	.	.	.	V	.
19.050	0.1288	0.04	Q	.	.	.	V	.
19.067	0.1288	0.04	Q	.	.	.	V	.
19.083	0.1289	0.04	Q	.	.	.	V	.
19.100	0.1290	0.04	Q	.	.	.	V	.
19.117	0.1290	0.04	Q	.	.	.	V	.
19.133	0.1291	0.04	Q	.	.	.	V	.
19.150	0.1291	0.04	Q	.	.	.	V	.
19.167	0.1292	0.04	Q	.	.	.	V	.
19.183	0.1292	0.04	Q	.	.	.	V	.
19.200	0.1293	0.04	Q	.	.	.	V	.
19.217	0.1293	0.04	Q	.	.	.	V	.
19.233	0.1294	0.04	Q	.	.	.	V	.
19.250	0.1295	0.04	Q	.	.	.	V	.
19.267	0.1295	0.04	Q	.	.	.	V	.
19.283	0.1296	0.04	Q	.	.	.	V	.
19.300	0.1296	0.04	Q	.	.	.	V	.
19.317	0.1297	0.04	Q	.	.	.	V	.
19.333	0.1297	0.04	Q	.	.	.	V	.
19.350	0.1298	0.04	Q	.	.	.	V	.
19.367	0.1298	0.04	Q	.	.	.	V	.
19.383	0.1299	0.04	Q	.	.	.	V	.
19.400	0.1300	0.04	Q	.	.	.	V	.
19.417	0.1300	0.04	Q	.	.	.	V	.
19.433	0.1301	0.04	Q	.	.	.	V	.
19.450	0.1301	0.04	Q	.	.	.	V	.
19.467	0.1302	0.04	Q	.	.	.	V	.
19.483	0.1302	0.04	Q	.	.	.	V	.
19.500	0.1303	0.04	Q	.	.	.	V	.
19.517	0.1303	0.04	Q	.	.	.	V	.
19.533	0.1304	0.04	Q	.	.	.	V	.
19.550	0.1304	0.04	Q	.	.	.	V	.
19.567	0.1305	0.04	Q	.	.	.	V	.
19.583	0.1305	0.04	Q	.	.	.	V	.

19.600	0.1306	0.04	Q	.	.	.	V	.
19.617	0.1306	0.04	Q	.	.	.	V	.
19.633	0.1307	0.04	Q	.	.	.	V	.
19.650	0.1307	0.04	Q	.	.	.	V	.
19.667	0.1308	0.04	Q	.	.	.	V	.
19.683	0.1308	0.04	Q	.	.	.	V	.
19.700	0.1309	0.04	Q	.	.	.	V	.
19.717	0.1309	0.04	Q	.	.	.	V	.
19.733	0.1310	0.04	Q	.	.	.	V	.
19.750	0.1310	0.04	Q	.	.	.	V	.
19.767	0.1311	0.04	Q	.	.	.	V	.
19.783	0.1311	0.04	Q	.	.	.	V	.
19.800	0.1312	0.04	Q	.	.	.	V	.
19.817	0.1312	0.04	Q	.	.	.	V	.
19.833	0.1313	0.04	Q	.	.	.	V	.
19.850	0.1313	0.04	Q	.	.	.	V	.
19.867	0.1314	0.04	Q	.	.	.	V	.
19.883	0.1314	0.04	Q	.	.	.	V	.
19.900	0.1315	0.04	Q	.	.	.	V	.
19.917	0.1315	0.04	Q	.	.	.	V	.
19.933	0.1316	0.04	Q	.	.	.	V	.
19.950	0.1316	0.04	Q	.	.	.	V	.
19.967	0.1317	0.04	Q	.	.	.	V	.
19.983	0.1317	0.04	Q	.	.	.	V	.
20.000	0.1318	0.04	Q	.	.	.	V	.
20.017	0.1318	0.04	Q	.	.	.	V	.
20.033	0.1319	0.04	Q	.	.	.	V	.
20.050	0.1319	0.03	Q	.	.	.	V	.
20.067	0.1320	0.03	Q	.	.	.	V	.
20.083	0.1320	0.03	Q	.	.	.	V	.
20.100	0.1321	0.03	Q	.	.	.	V	.
20.117	0.1321	0.03	Q	.	.	.	V	.
20.133	0.1322	0.03	Q	.	.	.	V	.
20.150	0.1322	0.03	Q	.	.	.	V	.
20.167	0.1323	0.03	Q	.	.	.	V	.
20.183	0.1323	0.03	Q	.	.	.	V	.
20.200	0.1324	0.03	Q	.	.	.	V	.
20.217	0.1324	0.03	Q	.	.	.	V	.
20.233	0.1325	0.03	Q	.	.	.	V	.
20.250	0.1325	0.03	Q	.	.	.	V	.
20.267	0.1325	0.03	Q	.	.	.	V	.
20.283	0.1326	0.03	Q	.	.	.	V	.
20.300	0.1326	0.03	Q	.	.	.	V	.
20.317	0.1327	0.03	Q	.	.	.	V	.
20.333	0.1327	0.03	Q	.	.	.	V	.
20.350	0.1328	0.03	Q	.	.	.	V	.
20.367	0.1328	0.03	Q	.	.	.	V	.
20.383	0.1329	0.03	Q	.	.	.	V	.
20.400	0.1329	0.03	Q	.	.	.	V	.
20.417	0.1330	0.03	Q	.	.	.	V	.

20.433	0.1330	0.03	Q	.	.	.	V .
20.450	0.1331	0.03	Q	.	.	.	V .
20.467	0.1331	0.03	Q	.	.	.	V .
20.483	0.1331	0.03	Q	.	.	.	V .
20.500	0.1332	0.03	Q	.	.	.	V .
20.517	0.1332	0.03	Q	.	.	.	V .
20.533	0.1333	0.03	Q	.	.	.	V .
20.550	0.1333	0.03	Q	.	.	.	V .
20.567	0.1334	0.03	Q	.	.	.	V .
20.583	0.1334	0.03	Q	.	.	.	V .
20.600	0.1335	0.03	Q	.	.	.	V .
20.617	0.1335	0.03	Q	.	.	.	V .
20.633	0.1335	0.03	Q	.	.	.	V .
20.650	0.1336	0.03	Q	.	.	.	V .
20.667	0.1336	0.03	Q	.	.	.	V .
20.683	0.1337	0.03	Q	.	.	.	V .
20.700	0.1337	0.03	Q	.	.	.	V .
20.717	0.1338	0.03	Q	.	.	.	V .
20.733	0.1338	0.03	Q	.	.	.	V .
20.750	0.1338	0.03	Q	.	.	.	V .
20.767	0.1339	0.03	Q	.	.	.	V .
20.783	0.1339	0.03	Q	.	.	.	V .
20.800	0.1340	0.03	Q	.	.	.	V .
20.817	0.1340	0.03	Q	.	.	.	V .
20.833	0.1341	0.03	Q	.	.	.	V .
20.850	0.1341	0.03	Q	.	.	.	V .
20.867	0.1342	0.03	Q	.	.	.	V .
20.883	0.1342	0.03	Q	.	.	.	V .
20.900	0.1342	0.03	Q	.	.	.	V .
20.917	0.1343	0.03	Q	.	.	.	V .
20.933	0.1343	0.03	Q	.	.	.	V .
20.950	0.1344	0.03	Q	.	.	.	V .
20.967	0.1344	0.03	Q	.	.	.	V .
20.983	0.1344	0.03	Q	.	.	.	V .
21.000	0.1345	0.03	Q	.	.	.	V .
21.017	0.1345	0.03	Q	.	.	.	V .
21.033	0.1346	0.03	Q	.	.	.	V .
21.050	0.1346	0.03	Q	.	.	.	V .
21.067	0.1347	0.03	Q	.	.	.	V .
21.083	0.1347	0.03	Q	.	.	.	V .
21.100	0.1347	0.03	Q	.	.	.	V .
21.117	0.1348	0.03	Q	.	.	.	V .
21.133	0.1348	0.03	Q	.	.	.	V .
21.150	0.1349	0.03	Q	.	.	.	V .
21.167	0.1349	0.03	Q	.	.	.	V .
21.183	0.1349	0.03	Q	.	.	.	V .
21.200	0.1350	0.03	Q	.	.	.	V .
21.217	0.1350	0.03	Q	.	.	.	V .
21.233	0.1351	0.03	Q	.	.	.	V .
21.250	0.1351	0.03	Q	.	.	.	V .

21.267	0.1352	0.03	Q	.	.	.	V .
21.283	0.1352	0.03	Q	.	.	.	V .
21.300	0.1352	0.03	Q	.	.	.	V .
21.317	0.1353	0.03	Q	.	.	.	V .
21.333	0.1353	0.03	Q	.	.	.	V .
21.350	0.1354	0.03	Q	.	.	.	V .
21.367	0.1354	0.03	Q	.	.	.	V .
21.383	0.1354	0.03	Q	.	.	.	V .
21.400	0.1355	0.03	Q	.	.	.	V .
21.417	0.1355	0.03	Q	.	.	.	V .
21.433	0.1356	0.03	Q	.	.	.	V .
21.450	0.1356	0.03	Q	.	.	.	V .
21.467	0.1356	0.03	Q	.	.	.	V .
21.483	0.1357	0.03	Q	.	.	.	V .
21.500	0.1357	0.03	Q	.	.	.	V .
21.517	0.1357	0.03	Q	.	.	.	V .
21.533	0.1358	0.03	Q	.	.	.	V .
21.550	0.1358	0.03	Q	.	.	.	V .
21.567	0.1359	0.03	Q	.	.	.	V .
21.583	0.1359	0.03	Q	.	.	.	V .
21.600	0.1359	0.03	Q	.	.	.	V .
21.617	0.1360	0.03	Q	.	.	.	V .
21.633	0.1360	0.03	Q	.	.	.	V .
21.650	0.1361	0.03	Q	.	.	.	V .
21.667	0.1361	0.03	Q	.	.	.	V .
21.683	0.1361	0.03	Q	.	.	.	V .
21.700	0.1362	0.03	Q	.	.	.	V .
21.717	0.1362	0.03	Q	.	.	.	V .
21.733	0.1363	0.03	Q	.	.	.	V .
21.750	0.1363	0.03	Q	.	.	.	V .
21.767	0.1363	0.03	Q	.	.	.	V .
21.783	0.1364	0.03	Q	.	.	.	V .
21.800	0.1364	0.03	Q	.	.	.	V .
21.817	0.1364	0.03	Q	.	.	.	V .
21.833	0.1365	0.03	Q	.	.	.	V .
21.850	0.1365	0.03	Q	.	.	.	V .
21.867	0.1366	0.03	Q	.	.	.	V .
21.883	0.1366	0.03	Q	.	.	.	V .
21.900	0.1366	0.03	Q	.	.	.	V .
21.917	0.1367	0.03	Q	.	.	.	V .
21.933	0.1367	0.03	Q	.	.	.	V .
21.950	0.1367	0.03	Q	.	.	.	V .
21.967	0.1368	0.03	Q	.	.	.	V .
21.983	0.1368	0.03	Q	.	.	.	V .
22.000	0.1369	0.03	Q	.	.	.	V .
22.017	0.1369	0.03	Q	.	.	.	V .
22.033	0.1369	0.03	Q	.	.	.	V .
22.050	0.1370	0.03	Q	.	.	.	V .
22.067	0.1370	0.03	Q	.	.	.	V .
22.083	0.1370	0.03	Q	.	.	.	V .

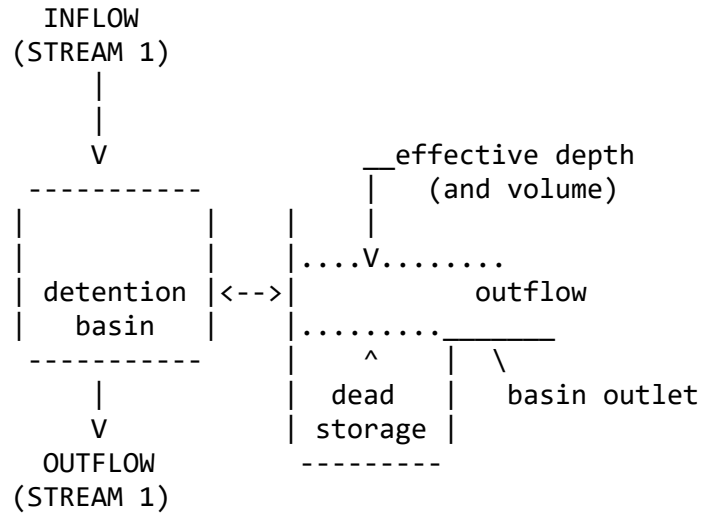
22.100	0.1371	0.03	Q	.	.	.	V .
22.117	0.1371	0.03	Q	.	.	.	V .
22.133	0.1372	0.03	Q	.	.	.	V .
22.150	0.1372	0.03	Q	.	.	.	V .
22.167	0.1372	0.03	Q	.	.	.	V .
22.183	0.1373	0.03	Q	.	.	.	V .
22.200	0.1373	0.03	Q	.	.	.	V .
22.217	0.1373	0.03	Q	.	.	.	V .
22.233	0.1374	0.03	Q	.	.	.	V .
22.250	0.1374	0.03	Q	.	.	.	V .
22.267	0.1375	0.03	Q	.	.	.	V .
22.283	0.1375	0.03	Q	.	.	.	V .
22.300	0.1375	0.03	Q	.	.	.	V .
22.317	0.1376	0.03	Q	.	.	.	V .
22.333	0.1376	0.03	Q	.	.	.	V .
22.350	0.1376	0.03	Q	.	.	.	V.
22.367	0.1377	0.03	Q	.	.	.	V.
22.383	0.1377	0.03	Q	.	.	.	V.
22.400	0.1377	0.03	Q	.	.	.	V.
22.417	0.1378	0.03	Q	.	.	.	V.
22.433	0.1378	0.03	Q	.	.	.	V.
22.450	0.1378	0.03	Q	.	.	.	V.
22.467	0.1379	0.03	Q	.	.	.	V.
22.483	0.1379	0.03	Q	.	.	.	V.
22.500	0.1380	0.03	Q	.	.	.	V.
22.517	0.1380	0.03	Q	.	.	.	V.
22.533	0.1380	0.03	Q	.	.	.	V.
22.550	0.1381	0.03	Q	.	.	.	V.
22.567	0.1381	0.03	Q	.	.	.	V.
22.583	0.1381	0.03	Q	.	.	.	V.
22.600	0.1382	0.03	Q	.	.	.	V.
22.617	0.1382	0.03	Q	.	.	.	V.
22.633	0.1382	0.03	Q	.	.	.	V.
22.650	0.1383	0.03	Q	.	.	.	V.
22.667	0.1383	0.03	Q	.	.	.	V.
22.683	0.1383	0.03	Q	.	.	.	V.
22.700	0.1384	0.03	Q	.	.	.	V.
22.717	0.1384	0.03	Q	.	.	.	V.
22.733	0.1384	0.03	Q	.	.	.	V.
22.750	0.1385	0.03	Q	.	.	.	V.
22.767	0.1385	0.03	Q	.	.	.	V.
22.783	0.1385	0.03	Q	.	.	.	V.
22.800	0.1386	0.03	Q	.	.	.	V.
22.817	0.1386	0.03	Q	.	.	.	V.
22.833	0.1387	0.02	Q	.	.	.	V.
22.850	0.1387	0.02	Q	.	.	.	V.
22.867	0.1387	0.02	Q	.	.	.	V.
22.883	0.1388	0.02	Q	.	.	.	V.
22.900	0.1388	0.02	Q	.	.	.	V.
22.917	0.1388	0.02	Q	.	.	.	V.

22.933	0.1389	0.02	Q	.	.	.	V.
22.950	0.1389	0.02	Q	.	.	.	V.
22.967	0.1389	0.02	Q	.	.	.	V.
22.983	0.1390	0.02	Q	.	.	.	V.
23.000	0.1390	0.02	Q	.	.	.	V.
23.017	0.1390	0.02	Q	.	.	.	V.
23.033	0.1391	0.02	Q	.	.	.	V.
23.050	0.1391	0.02	Q	.	.	.	V.
23.067	0.1391	0.02	Q	.	.	.	V.
23.083	0.1392	0.02	Q	.	.	.	V.
23.100	0.1392	0.02	Q	.	.	.	V.
23.117	0.1392	0.02	Q	.	.	.	V.
23.133	0.1393	0.02	Q	.	.	.	V.
23.150	0.1393	0.02	Q	.	.	.	V.
23.167	0.1393	0.02	Q	.	.	.	V.
23.183	0.1394	0.02	Q	.	.	.	V.
23.200	0.1394	0.02	Q	.	.	.	V.
23.217	0.1394	0.02	Q	.	.	.	V.
23.233	0.1395	0.02	Q	.	.	.	V.
23.250	0.1395	0.02	Q	.	.	.	V.
23.267	0.1395	0.02	Q	.	.	.	V.
23.283	0.1396	0.02	Q	.	.	.	V.
23.300	0.1396	0.02	Q	.	.	.	V.
23.317	0.1396	0.02	Q	.	.	.	V.
23.333	0.1397	0.02	Q	.	.	.	V.
23.350	0.1397	0.02	Q	.	.	.	V.
23.367	0.1397	0.02	Q	.	.	.	V.
23.383	0.1398	0.02	Q	.	.	.	V.
23.400	0.1398	0.02	Q	.	.	.	V.
23.417	0.1398	0.02	Q	.	.	.	V.
23.433	0.1399	0.02	Q	.	.	.	V.
23.450	0.1399	0.02	Q	.	.	.	V.
23.467	0.1399	0.02	Q	.	.	.	V.
23.483	0.1400	0.02	Q	.	.	.	V.
23.500	0.1400	0.02	Q	.	.	.	V.
23.517	0.1400	0.02	Q	.	.	.	V.
23.533	0.1401	0.02	Q	.	.	.	V.
23.550	0.1401	0.02	Q	.	.	.	V.
23.567	0.1401	0.02	Q	.	.	.	V.
23.583	0.1401	0.02	Q	.	.	.	V.
23.600	0.1402	0.02	Q	.	.	.	V.
23.617	0.1402	0.02	Q	.	.	.	V.
23.633	0.1402	0.02	Q	.	.	.	V.
23.650	0.1403	0.02	Q	.	.	.	V.
23.667	0.1403	0.02	Q	.	.	.	V.
23.683	0.1403	0.02	Q	.	.	.	V.
23.700	0.1404	0.02	Q	.	.	.	V.
23.717	0.1404	0.02	Q	.	.	.	V.
23.733	0.1404	0.02	Q	.	.	.	V.
23.750	0.1405	0.02	Q	.	.	.	V.

```
  23.767      0.1405      0.02  Q         .         .         .         V.
  23.783      0.1405      0.02  Q         .         .         .         V.
  23.800      0.1406      0.02  Q         .         .         .         V.
  23.817      0.1406      0.02  Q         .         .         .         V.
  23.833      0.1406      0.02  Q         .         .         .         V.
  23.850      0.1407      0.02  Q         .         .         .         V.
  23.867      0.1407      0.02  Q         .         .         .         V.
  23.883      0.1407      0.02  Q         .         .         .         V.
  23.900      0.1408      0.02  Q         .         .         .         V.
  23.917      0.1408      0.02  Q         .         .         .         V.
  23.933      0.1408      0.02  Q         .         .         .         V.
  23.950      0.1408      0.02  Q         .         .         .         V.
  23.967      0.1409      0.02  Q         .         .         .         V.
  23.983      0.1409      0.02  Q         .         .         .         V.
  24.000      0.1409      0.02  Q         .         .         .         V.
  24.017      0.1410      0.02  Q         .         .         .         V.
  24.033      0.1410      0.02  Q         .         .         .         V.
  24.050      0.1410      0.02  Q         .         .         .         V.
  24.067      0.1411      0.02  Q         .         .         .         V.
  24.083      0.1411      0.02  Q         .         .         .         V.
  24.100      0.1411      0.02  Q         .         .         .         V.
  24.117      0.1411      0.01  Q         .         .         .         V.
  24.133      0.1411      0.01  Q         .         .         .         V.
  24.150      0.1411      0.01  Q         .         .         .         V.
--------------------------------------------------------------------------------
   TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
   (Note: 100% of Peak Flow Rate estimate assumed to have
   an instantaneous time duration)

   Percentile of Estimated               Duration
       Peak Flow Rate                    (minutes)
   ======================                =========
              0%                          1449.0
             10%                           170.0
             20%                           110.0
             30%                            80.0
             40%                            70.0
             50%                            60.0
             60%                            50.0
             70%                            35.0
             80%                            25.0
             90%                            10.0


********************************************************************************
  FLOW PROCESS FROM NODE    405.00 TO NODE    405.00 IS CODE = 3.2
--------------------------------------------------------------------------------
  >>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #1<<<<<
================================================================================
```



ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 1
THROUGH A FLOW-THROUGH DETENTION BASIN
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
  DEAD STORAGE(AF) = 0.000
  SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
  SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
  DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.30	6.52	0.100
3	1.50	7.61	0.118
4	2.00	9.83	0.175
5	2.50	11.63	0.236
6	3.00	13.19	0.305
7	3.50	14.58	0.366
8	4.00	15.85	0.423
9	4.50	17.03	0.475
10	5.00	18.13	0.517
11	5.50	19.16	0.541

==========

MODIFIED-PULS BASIN ROUTING MODEL RESULTS(1-MINUTE COMPUTATION INTERVALS):
(Note: Computed EFFECTIVE DEPTH and VOLUME are estimated at the clock time;
MEAN OUTFLOW is the average value during the unit interval.)

CLOCK MEAN

TIME (HRS)	DEAD-STORAGE FILLED(AF)	INFLOW (CFS)	LOSS (CFS)	EFFECTIVE DEPTH(FT)	OUTFLOW (CFS)	EFFECTIVE VOLUME(AF)
0.017	0.000	0.00	0.00	0.00	0.0	0.000
0.033	0.000	0.00	0.00	0.00	0.0	0.000
0.050	0.000	0.00	0.00	0.00	0.0	0.000
0.067	0.000	0.01	0.00	0.00	0.0	0.000
0.083	0.000	0.01	0.00	0.00	0.0	0.000
0.100	0.000	0.01	0.00	0.00	0.0	0.000
0.117	0.000	0.01	0.00	0.00	0.0	0.000
0.133	0.000	0.01	0.00	0.00	0.0	0.000
0.150	0.000	0.01	0.00	0.00	0.0	0.000
0.167	0.000	0.02	0.00	0.00	0.0	0.000
0.183	0.000	0.02	0.00	0.00	0.0	0.000
0.200	0.000	0.02	0.00	0.00	0.0	0.000
0.217	0.000	0.02	0.00	0.00	0.0	0.000
0.233	0.000	0.02	0.00	0.00	0.0	0.000
0.250	0.000	0.02	0.00	0.00	0.0	0.000
0.267	0.000	0.02	0.00	0.00	0.0	0.000
0.283	0.000	0.02	0.00	0.00	0.0	0.000
0.300	0.000	0.02	0.00	0.00	0.0	0.000
0.317	0.000	0.02	0.00	0.00	0.0	0.000
0.333	0.000	0.02	0.00	0.00	0.0	0.000
0.350	0.000	0.02	0.00	0.00	0.0	0.000
0.367	0.000	0.02	0.00	0.00	0.0	0.000
0.383	0.000	0.02	0.00	0.00	0.0	0.000
0.400	0.000	0.02	0.00	0.00	0.0	0.000
0.417	0.000	0.02	0.00	0.00	0.0	0.000
0.433	0.000	0.02	0.00	0.00	0.0	0.000
0.450	0.000	0.02	0.00	0.00	0.0	0.000
0.467	0.000	0.02	0.00	0.00	0.0	0.000
0.483	0.000	0.02	0.00	0.00	0.0	0.000
0.500	0.000	0.02	0.00	0.00	0.0	0.000
0.517	0.000	0.02	0.00	0.00	0.0	0.000
0.533	0.000	0.02	0.00	0.00	0.0	0.000
0.550	0.000	0.02	0.00	0.00	0.0	0.000
0.567	0.000	0.02	0.00	0.00	0.0	0.000
0.583	0.000	0.02	0.00	0.00	0.0	0.000
0.600	0.000	0.02	0.00	0.00	0.0	0.000
0.617	0.000	0.02	0.00	0.00	0.0	0.000
0.633	0.000	0.02	0.00	0.00	0.0	0.000
0.650	0.000	0.02	0.00	0.00	0.0	0.000
0.667	0.000	0.02	0.00	0.00	0.0	0.000
0.683	0.000	0.02	0.00	0.00	0.0	0.000
0.700	0.000	0.02	0.00	0.00	0.0	0.000
0.717	0.000	0.02	0.00	0.00	0.0	0.000
0.733	0.000	0.02	0.00	0.00	0.0	0.000
0.750	0.000	0.02	0.00	0.00	0.0	0.000
0.767	0.000	0.02	0.00	0.00	0.0	0.000
0.783	0.000	0.02	0.00	0.00	0.0	0.000

0.800	0.000	0.02	0.00	0.00	0.0	0.000
0.817	0.000	0.02	0.00	0.00	0.0	0.000
0.833	0.000	0.02	0.00	0.00	0.0	0.000
0.850	0.000	0.02	0.00	0.00	0.0	0.000
0.867	0.000	0.02	0.00	0.00	0.0	0.000
0.883	0.000	0.02	0.00	0.00	0.0	0.000
0.900	0.000	0.02	0.00	0.00	0.0	0.000
0.917	0.000	0.02	0.00	0.00	0.0	0.000
0.933	0.000	0.02	0.00	0.00	0.0	0.000
0.950	0.000	0.02	0.00	0.00	0.0	0.000
0.967	0.000	0.02	0.00	0.00	0.0	0.000
0.983	0.000	0.02	0.00	0.00	0.0	0.000
1.000	0.000	0.02	0.00	0.00	0.0	0.000
1.017	0.000	0.02	0.00	0.00	0.0	0.000
1.033	0.000	0.02	0.00	0.00	0.0	0.000
1.050	0.000	0.02	0.00	0.00	0.0	0.000
1.067	0.000	0.02	0.00	0.00	0.0	0.000
1.083	0.000	0.02	0.00	0.00	0.0	0.000
1.100	0.000	0.02	0.00	0.00	0.0	0.000
1.117	0.000	0.02	0.00	0.00	0.0	0.000
1.133	0.000	0.02	0.00	0.00	0.0	0.000
1.150	0.000	0.02	0.00	0.00	0.0	0.000
1.167	0.000	0.02	0.00	0.00	0.0	0.000
1.183	0.000	0.02	0.00	0.00	0.0	0.000
1.200	0.000	0.02	0.00	0.00	0.0	0.000
1.217	0.000	0.02	0.00	0.00	0.0	0.000
1.233	0.000	0.02	0.00	0.00	0.0	0.000
1.250	0.000	0.02	0.00	0.00	0.0	0.000
1.267	0.000	0.02	0.00	0.00	0.0	0.000
1.283	0.000	0.02	0.00	0.00	0.0	0.000
1.300	0.000	0.02	0.00	0.00	0.0	0.000
1.317	0.000	0.02	0.00	0.00	0.0	0.000
1.333	0.000	0.02	0.00	0.00	0.0	0.000
1.350	0.000	0.02	0.00	0.00	0.0	0.000
1.367	0.000	0.02	0.00	0.00	0.0	0.000
1.383	0.000	0.02	0.00	0.00	0.0	0.000
1.400	0.000	0.02	0.00	0.00	0.0	0.000
1.417	0.000	0.02	0.00	0.00	0.0	0.000
1.433	0.000	0.02	0.00	0.00	0.0	0.000
1.450	0.000	0.02	0.00	0.00	0.0	0.000
1.467	0.000	0.02	0.00	0.00	0.0	0.000
1.483	0.000	0.02	0.00	0.00	0.0	0.000
1.500	0.000	0.02	0.00	0.00	0.0	0.000
1.517	0.000	0.02	0.00	0.00	0.0	0.000
1.533	0.000	0.02	0.00	0.00	0.0	0.000
1.550	0.000	0.02	0.00	0.00	0.0	0.000
1.567	0.000	0.02	0.00	0.00	0.0	0.000
1.583	0.000	0.02	0.00	0.00	0.0	0.000
1.600	0.000	0.02	0.00	0.00	0.0	0.000
1.617	0.000	0.02	0.00	0.00	0.0	0.000

1.633	0.000	0.02	0.00	0.00	0.0	0.000
1.650	0.000	0.02	0.00	0.00	0.0	0.000
1.667	0.000	0.02	0.00	0.00	0.0	0.000
1.683	0.000	0.02	0.00	0.00	0.0	0.000
1.700	0.000	0.02	0.00	0.00	0.0	0.000
1.717	0.000	0.02	0.00	0.00	0.0	0.000
1.733	0.000	0.02	0.00	0.00	0.0	0.000
1.750	0.000	0.02	0.00	0.00	0.0	0.000
1.767	0.000	0.02	0.00	0.00	0.0	0.000
1.783	0.000	0.02	0.00	0.00	0.0	0.000
1.800	0.000	0.02	0.00	0.00	0.0	0.000
1.817	0.000	0.02	0.00	0.00	0.0	0.000
1.833	0.000	0.02	0.00	0.00	0.0	0.000
1.850	0.000	0.02	0.00	0.00	0.0	0.000
1.867	0.000	0.02	0.00	0.00	0.0	0.000
1.883	0.000	0.02	0.00	0.00	0.0	0.000
1.900	0.000	0.02	0.00	0.00	0.0	0.000
1.917	0.000	0.02	0.00	0.00	0.0	0.000
1.933	0.000	0.02	0.00	0.00	0.0	0.000
1.950	0.000	0.02	0.00	0.00	0.0	0.000
1.967	0.000	0.02	0.00	0.00	0.0	0.000
1.983	0.000	0.02	0.00	0.00	0.0	0.000
2.000	0.000	0.02	0.00	0.00	0.0	0.000
2.017	0.000	0.02	0.00	0.00	0.0	0.000
2.033	0.000	0.02	0.00	0.00	0.0	0.000
2.050	0.000	0.02	0.00	0.00	0.0	0.000
2.067	0.000	0.02	0.00	0.00	0.0	0.000
2.083	0.000	0.02	0.00	0.00	0.0	0.000
2.100	0.000	0.02	0.00	0.00	0.0	0.000
2.117	0.000	0.02	0.00	0.00	0.0	0.000
2.133	0.000	0.02	0.00	0.00	0.0	0.000
2.150	0.000	0.02	0.00	0.00	0.0	0.000
2.167	0.000	0.02	0.00	0.00	0.0	0.000
2.183	0.000	0.02	0.00	0.00	0.0	0.000
2.200	0.000	0.02	0.00	0.00	0.0	0.000
2.217	0.000	0.02	0.00	0.00	0.0	0.000
2.233	0.000	0.02	0.00	0.00	0.0	0.000
2.250	0.000	0.02	0.00	0.00	0.0	0.000
2.267	0.000	0.02	0.00	0.00	0.0	0.000
2.283	0.000	0.02	0.00	0.00	0.0	0.000
2.300	0.000	0.02	0.00	0.00	0.0	0.000
2.317	0.000	0.02	0.00	0.00	0.0	0.000
2.333	0.000	0.02	0.00	0.00	0.0	0.000
2.350	0.000	0.02	0.00	0.00	0.0	0.000
2.367	0.000	0.02	0.00	0.00	0.0	0.000
2.383	0.000	0.02	0.00	0.00	0.0	0.000
2.400	0.000	0.02	0.00	0.00	0.0	0.000
2.417	0.000	0.02	0.00	0.00	0.0	0.000
2.433	0.000	0.02	0.00	0.00	0.0	0.000
2.450	0.000	0.02	0.00	0.00	0.0	0.000

2.467	0.000	0.02	0.00	0.00	0.0	0.000
2.483	0.000	0.02	0.00	0.00	0.0	0.000
2.500	0.000	0.02	0.00	0.00	0.0	0.000
2.517	0.000	0.02	0.00	0.00	0.0	0.000
2.533	0.000	0.02	0.00	0.00	0.0	0.000
2.550	0.000	0.02	0.00	0.00	0.0	0.000
2.567	0.000	0.02	0.00	0.00	0.0	0.000
2.583	0.000	0.02	0.00	0.00	0.0	0.000
2.600	0.000	0.02	0.00	0.00	0.0	0.000
2.617	0.000	0.02	0.00	0.00	0.0	0.000
2.633	0.000	0.02	0.00	0.00	0.0	0.000
2.650	0.000	0.02	0.00	0.00	0.0	0.000
2.667	0.000	0.02	0.00	0.00	0.0	0.000
2.683	0.000	0.02	0.00	0.00	0.0	0.000
2.700	0.000	0.02	0.00	0.00	0.0	0.000
2.717	0.000	0.02	0.00	0.00	0.0	0.000
2.733	0.000	0.02	0.00	0.00	0.0	0.000
2.750	0.000	0.02	0.00	0.00	0.0	0.000
2.767	0.000	0.02	0.00	0.00	0.0	0.000
2.783	0.000	0.02	0.00	0.00	0.0	0.000
2.800	0.000	0.03	0.00	0.00	0.0	0.000
2.817	0.000	0.03	0.00	0.00	0.0	0.000
2.833	0.000	0.03	0.00	0.00	0.0	0.000
2.850	0.000	0.03	0.00	0.00	0.0	0.000
2.867	0.000	0.03	0.00	0.00	0.0	0.000
2.883	0.000	0.03	0.00	0.00	0.0	0.000
2.900	0.000	0.03	0.00	0.00	0.0	0.000
2.917	0.000	0.03	0.00	0.00	0.0	0.000
2.933	0.000	0.03	0.00	0.00	0.0	0.000
2.950	0.000	0.03	0.00	0.00	0.0	0.000
2.967	0.000	0.03	0.00	0.00	0.0	0.000
2.983	0.000	0.03	0.00	0.00	0.0	0.000
3.000	0.000	0.03	0.00	0.00	0.0	0.000
3.017	0.000	0.03	0.00	0.00	0.0	0.000
3.033	0.000	0.03	0.00	0.01	0.0	0.000
3.050	0.000	0.03	0.00	0.01	0.0	0.000
3.067	0.000	0.03	0.00	0.01	0.0	0.000
3.083	0.000	0.03	0.00	0.01	0.0	0.000
3.100	0.000	0.03	0.00	0.01	0.0	0.000
3.117	0.000	0.03	0.00	0.01	0.0	0.000
3.133	0.000	0.03	0.00	0.01	0.0	0.000
3.150	0.000	0.03	0.00	0.01	0.0	0.000
3.167	0.000	0.03	0.00	0.01	0.0	0.000
3.183	0.000	0.03	0.00	0.01	0.0	0.000
3.200	0.000	0.03	0.00	0.01	0.0	0.000
3.217	0.000	0.03	0.00	0.01	0.0	0.000
3.233	0.000	0.03	0.00	0.01	0.0	0.000
3.250	0.000	0.03	0.00	0.01	0.0	0.000
3.267	0.000	0.03	0.00	0.01	0.0	0.000
3.283	0.000	0.03	0.00	0.01	0.0	0.000

3.300	0.000	0.03	0.00	0.01	0.0	0.000
3.317	0.000	0.03	0.00	0.01	0.0	0.000
3.333	0.000	0.03	0.00	0.01	0.0	0.000
3.350	0.000	0.03	0.00	0.01	0.0	0.000
3.367	0.000	0.03	0.00	0.01	0.0	0.000
3.383	0.000	0.03	0.00	0.01	0.0	0.000
3.400	0.000	0.03	0.00	0.01	0.0	0.000
3.417	0.000	0.03	0.00	0.01	0.0	0.000
3.433	0.000	0.03	0.00	0.01	0.0	0.000
3.450	0.000	0.03	0.00	0.01	0.0	0.000
3.467	0.000	0.03	0.00	0.01	0.0	0.000
3.483	0.000	0.03	0.00	0.01	0.0	0.000
3.500	0.000	0.03	0.00	0.01	0.0	0.000
3.517	0.000	0.03	0.00	0.01	0.0	0.000
3.533	0.000	0.03	0.00	0.01	0.0	0.000
3.550	0.000	0.03	0.00	0.01	0.0	0.000
3.567	0.000	0.03	0.00	0.01	0.0	0.000
3.583	0.000	0.03	0.00	0.01	0.0	0.000
3.600	0.000	0.03	0.00	0.01	0.0	0.000
3.617	0.000	0.03	0.00	0.01	0.0	0.000
3.633	0.000	0.03	0.00	0.01	0.0	0.000
3.650	0.000	0.03	0.00	0.01	0.0	0.000
3.667	0.000	0.03	0.00	0.01	0.0	0.000
3.683	0.000	0.03	0.00	0.01	0.0	0.000
3.700	0.000	0.03	0.00	0.01	0.0	0.000
3.717	0.000	0.03	0.00	0.01	0.0	0.000
3.733	0.000	0.03	0.00	0.01	0.0	0.000
3.750	0.000	0.03	0.00	0.01	0.0	0.000
3.767	0.000	0.03	0.00	0.01	0.0	0.000
3.783	0.000	0.03	0.00	0.01	0.0	0.000
3.800	0.000	0.03	0.00	0.01	0.0	0.000
3.817	0.000	0.03	0.00	0.01	0.0	0.000
3.833	0.000	0.03	0.00	0.01	0.0	0.000
3.850	0.000	0.03	0.00	0.01	0.0	0.000
3.867	0.000	0.03	0.00	0.01	0.0	0.000
3.883	0.000	0.03	0.00	0.01	0.0	0.000
3.900	0.000	0.03	0.00	0.01	0.0	0.000
3.917	0.000	0.03	0.00	0.01	0.0	0.000
3.933	0.000	0.03	0.00	0.01	0.0	0.000
3.950	0.000	0.03	0.00	0.01	0.0	0.000
3.967	0.000	0.03	0.00	0.01	0.0	0.000
3.983	0.000	0.03	0.00	0.01	0.0	0.000
4.000	0.000	0.03	0.00	0.01	0.0	0.000
4.017	0.000	0.03	0.00	0.01	0.0	0.000
4.033	0.000	0.03	0.00	0.01	0.0	0.000
4.050	0.000	0.03	0.00	0.01	0.0	0.000
4.067	0.000	0.03	0.00	0.01	0.0	0.000
4.083	0.000	0.03	0.00	0.01	0.0	0.000
4.100	0.000	0.03	0.00	0.01	0.0	0.000
4.117	0.000	0.03	0.00	0.01	0.0	0.000

4.133	0.000	0.03	0.00	0.01	0.0	0.000
4.150	0.000	0.03	0.00	0.01	0.0	0.000
4.167	0.000	0.03	0.00	0.01	0.0	0.000
4.183	0.000	0.03	0.00	0.01	0.0	0.000
4.200	0.000	0.03	0.00	0.01	0.0	0.000
4.217	0.000	0.03	0.00	0.01	0.0	0.000
4.233	0.000	0.03	0.00	0.01	0.0	0.000
4.250	0.000	0.03	0.00	0.01	0.0	0.000
4.267	0.000	0.03	0.00	0.01	0.0	0.000
4.283	0.000	0.03	0.00	0.01	0.0	0.000
4.300	0.000	0.03	0.00	0.01	0.0	0.000
4.317	0.000	0.03	0.00	0.01	0.0	0.000
4.333	0.000	0.03	0.00	0.01	0.0	0.000
4.350	0.000	0.03	0.00	0.01	0.0	0.000
4.367	0.000	0.03	0.00	0.01	0.0	0.000
4.383	0.000	0.03	0.00	0.01	0.0	0.000
4.400	0.000	0.03	0.00	0.01	0.0	0.000
4.417	0.000	0.03	0.00	0.01	0.0	0.000
4.433	0.000	0.03	0.00	0.01	0.0	0.000
4.450	0.000	0.03	0.00	0.01	0.0	0.000
4.467	0.000	0.03	0.00	0.01	0.0	0.000
4.483	0.000	0.03	0.00	0.01	0.0	0.000
4.500	0.000	0.03	0.00	0.01	0.0	0.000
4.517	0.000	0.03	0.00	0.01	0.0	0.000
4.533	0.000	0.03	0.00	0.01	0.0	0.000
4.550	0.000	0.03	0.00	0.01	0.0	0.000
4.567	0.000	0.03	0.00	0.01	0.0	0.000
4.583	0.000	0.03	0.00	0.01	0.0	0.000
4.600	0.000	0.03	0.00	0.01	0.0	0.000
4.617	0.000	0.03	0.00	0.01	0.0	0.000
4.633	0.000	0.03	0.00	0.01	0.0	0.000
4.650	0.000	0.03	0.00	0.01	0.0	0.000
4.667	0.000	0.03	0.00	0.01	0.0	0.000
4.683	0.000	0.03	0.00	0.01	0.0	0.000
4.700	0.000	0.03	0.00	0.01	0.0	0.000
4.717	0.000	0.03	0.00	0.01	0.0	0.000
4.733	0.000	0.03	0.00	0.01	0.0	0.000
4.750	0.000	0.03	0.00	0.01	0.0	0.000
4.767	0.000	0.03	0.00	0.01	0.0	0.000
4.783	0.000	0.03	0.00	0.01	0.0	0.000
4.800	0.000	0.03	0.00	0.01	0.0	0.000
4.817	0.000	0.03	0.00	0.01	0.0	0.000
4.833	0.000	0.03	0.00	0.01	0.0	0.000
4.850	0.000	0.03	0.00	0.01	0.0	0.000
4.867	0.000	0.03	0.00	0.01	0.0	0.000
4.883	0.000	0.03	0.00	0.01	0.0	0.000
4.900	0.000	0.03	0.00	0.01	0.0	0.000
4.917	0.000	0.03	0.00	0.01	0.0	0.000
4.933	0.000	0.03	0.00	0.01	0.0	0.000
4.950	0.000	0.03	0.00	0.01	0.0	0.000

4.967	0.000	0.03	0.00	0.01	0.0	0.000
4.983	0.000	0.03	0.00	0.01	0.0	0.000
5.000	0.000	0.03	0.00	0.01	0.0	0.000
5.017	0.000	0.03	0.00	0.01	0.0	0.000
5.033	0.000	0.03	0.00	0.01	0.0	0.000
5.050	0.000	0.03	0.00	0.01	0.0	0.000
5.067	0.000	0.03	0.00	0.01	0.0	0.000
5.083	0.000	0.03	0.00	0.01	0.0	0.000
5.100	0.000	0.03	0.00	0.01	0.0	0.000
5.117	0.000	0.03	0.00	0.01	0.0	0.000
5.133	0.000	0.03	0.00	0.01	0.0	0.000
5.150	0.000	0.03	0.00	0.01	0.0	0.000
5.167	0.000	0.03	0.00	0.01	0.0	0.000
5.183	0.000	0.03	0.00	0.01	0.0	0.000
5.200	0.000	0.03	0.00	0.01	0.0	0.000
5.217	0.000	0.03	0.00	0.01	0.0	0.000
5.233	0.000	0.03	0.00	0.01	0.0	0.000
5.250	0.000	0.03	0.00	0.01	0.0	0.000
5.267	0.000	0.03	0.00	0.01	0.0	0.000
5.283	0.000	0.03	0.00	0.01	0.0	0.000
5.300	0.000	0.03	0.00	0.01	0.0	0.000
5.317	0.000	0.03	0.00	0.01	0.0	0.000
5.333	0.000	0.03	0.00	0.01	0.0	0.000
5.350	0.000	0.03	0.00	0.01	0.0	0.000
5.367	0.000	0.03	0.00	0.01	0.0	0.000
5.383	0.000	0.03	0.00	0.01	0.0	0.000
5.400	0.000	0.03	0.00	0.01	0.0	0.000
5.417	0.000	0.03	0.00	0.01	0.0	0.000
5.433	0.000	0.03	0.00	0.01	0.0	0.000
5.450	0.000	0.03	0.00	0.01	0.0	0.000
5.467	0.000	0.03	0.00	0.01	0.0	0.000
5.483	0.000	0.03	0.00	0.01	0.0	0.000
5.500	0.000	0.03	0.00	0.01	0.0	0.000
5.517	0.000	0.03	0.00	0.01	0.0	0.000
5.533	0.000	0.03	0.00	0.01	0.0	0.000
5.550	0.000	0.03	0.00	0.01	0.0	0.000
5.567	0.000	0.03	0.00	0.01	0.0	0.000
5.583	0.000	0.03	0.00	0.01	0.0	0.000
5.600	0.000	0.03	0.00	0.01	0.0	0.000
5.617	0.000	0.03	0.00	0.01	0.0	0.000
5.633	0.000	0.03	0.00	0.01	0.0	0.000
5.650	0.000	0.03	0.00	0.01	0.0	0.000
5.667	0.000	0.03	0.00	0.01	0.0	0.000
5.683	0.000	0.03	0.00	0.01	0.0	0.000
5.700	0.000	0.03	0.00	0.01	0.0	0.000
5.717	0.000	0.03	0.00	0.01	0.0	0.000
5.733	0.000	0.03	0.00	0.01	0.0	0.000
5.750	0.000	0.03	0.00	0.01	0.0	0.000
5.767	0.000	0.03	0.00	0.01	0.0	0.000
5.783	0.000	0.03	0.00	0.01	0.0	0.000

5.800	0.000	0.03	0.00	0.01	0.0	0.000
5.817	0.000	0.03	0.00	0.01	0.0	0.000
5.833	0.000	0.03	0.00	0.01	0.0	0.000
5.850	0.000	0.03	0.00	0.01	0.0	0.000
5.867	0.000	0.03	0.00	0.01	0.0	0.000
5.883	0.000	0.03	0.00	0.01	0.0	0.000
5.900	0.000	0.03	0.00	0.01	0.0	0.000
5.917	0.000	0.03	0.00	0.01	0.0	0.000
5.933	0.000	0.03	0.00	0.01	0.0	0.000
5.950	0.000	0.03	0.00	0.01	0.0	0.000
5.967	0.000	0.03	0.00	0.01	0.0	0.000
5.983	0.000	0.03	0.00	0.01	0.0	0.000
6.000	0.000	0.03	0.00	0.01	0.0	0.000
6.017	0.000	0.03	0.00	0.01	0.0	0.000
6.033	0.000	0.03	0.00	0.01	0.0	0.000
6.050	0.000	0.03	0.00	0.01	0.0	0.000
6.067	0.000	0.03	0.00	0.01	0.0	0.000
6.083	0.000	0.03	0.00	0.01	0.0	0.000
6.100	0.000	0.03	0.00	0.01	0.0	0.000
6.117	0.000	0.03	0.00	0.01	0.0	0.000
6.133	0.000	0.03	0.00	0.01	0.0	0.000
6.150	0.000	0.03	0.00	0.01	0.0	0.000
6.167	0.000	0.03	0.00	0.01	0.0	0.000
6.183	0.000	0.03	0.00	0.01	0.0	0.000
6.200	0.000	0.03	0.00	0.01	0.0	0.000
6.217	0.000	0.03	0.00	0.01	0.0	0.000
6.233	0.000	0.03	0.00	0.01	0.0	0.000
6.250	0.000	0.03	0.00	0.01	0.0	0.000
6.267	0.000	0.03	0.00	0.01	0.0	0.000
6.283	0.000	0.03	0.00	0.01	0.0	0.000
6.300	0.000	0.03	0.00	0.01	0.0	0.000
6.317	0.000	0.03	0.00	0.01	0.0	0.000
6.333	0.000	0.03	0.00	0.01	0.0	0.000
6.350	0.000	0.03	0.00	0.01	0.0	0.000
6.367	0.000	0.03	0.00	0.01	0.0	0.000
6.383	0.000	0.03	0.00	0.01	0.0	0.000
6.400	0.000	0.03	0.00	0.01	0.0	0.000
6.417	0.000	0.03	0.00	0.01	0.0	0.000
6.433	0.000	0.03	0.00	0.01	0.0	0.000
6.450	0.000	0.03	0.00	0.01	0.0	0.000
6.467	0.000	0.03	0.00	0.01	0.0	0.000
6.483	0.000	0.03	0.00	0.01	0.0	0.000
6.500	0.000	0.03	0.00	0.01	0.0	0.000
6.517	0.000	0.03	0.00	0.01	0.0	0.000
6.533	0.000	0.03	0.00	0.01	0.0	0.000
6.550	0.000	0.03	0.00	0.01	0.0	0.000
6.567	0.000	0.03	0.00	0.01	0.0	0.000
6.583	0.000	0.03	0.00	0.01	0.0	0.000
6.600	0.000	0.03	0.00	0.01	0.0	0.000
6.617	0.000	0.03	0.00	0.01	0.0	0.000

6.633	0.000	0.03	0.00	0.01	0.0	0.000
6.650	0.000	0.03	0.00	0.01	0.0	0.000
6.667	0.000	0.03	0.00	0.01	0.0	0.000
6.683	0.000	0.03	0.00	0.01	0.0	0.000
6.700	0.000	0.03	0.00	0.01	0.0	0.000
6.717	0.000	0.03	0.00	0.01	0.0	0.000
6.733	0.000	0.03	0.00	0.01	0.0	0.000
6.750	0.000	0.03	0.00	0.01	0.0	0.000
6.767	0.000	0.03	0.00	0.01	0.0	0.000
6.783	0.000	0.03	0.00	0.01	0.0	0.000
6.800	0.000	0.03	0.00	0.01	0.0	0.000
6.817	0.000	0.03	0.00	0.01	0.0	0.000
6.833	0.000	0.03	0.00	0.01	0.0	0.000
6.850	0.000	0.03	0.00	0.01	0.0	0.000
6.867	0.000	0.03	0.00	0.01	0.0	0.000
6.883	0.000	0.03	0.00	0.01	0.0	0.000
6.900	0.000	0.03	0.00	0.01	0.0	0.000
6.917	0.000	0.03	0.00	0.01	0.0	0.000
6.933	0.000	0.03	0.00	0.01	0.0	0.000
6.950	0.000	0.03	0.00	0.01	0.0	0.000
6.967	0.000	0.03	0.00	0.01	0.0	0.000
6.983	0.000	0.03	0.00	0.01	0.0	0.000
7.000	0.000	0.03	0.00	0.01	0.0	0.000
7.017	0.000	0.03	0.00	0.01	0.0	0.000
7.033	0.000	0.03	0.00	0.01	0.0	0.000
7.050	0.000	0.03	0.00	0.01	0.0	0.000
7.067	0.000	0.03	0.00	0.01	0.0	0.000
7.083	0.000	0.03	0.00	0.01	0.0	0.000
7.100	0.000	0.03	0.00	0.01	0.0	0.000
7.117	0.000	0.03	0.00	0.01	0.0	0.000
7.133	0.000	0.03	0.00	0.01	0.0	0.000
7.150	0.000	0.03	0.00	0.01	0.0	0.000
7.167	0.000	0.03	0.00	0.01	0.0	0.000
7.183	0.000	0.03	0.00	0.01	0.0	0.000
7.200	0.000	0.03	0.00	0.01	0.0	0.000
7.217	0.000	0.03	0.00	0.01	0.0	0.000
7.233	0.000	0.03	0.00	0.01	0.0	0.000
7.250	0.000	0.03	0.00	0.01	0.0	0.000
7.267	0.000	0.03	0.00	0.01	0.0	0.000
7.283	0.000	0.03	0.00	0.01	0.0	0.000
7.300	0.000	0.03	0.00	0.01	0.0	0.000
7.317	0.000	0.03	0.00	0.01	0.0	0.000
7.333	0.000	0.03	0.00	0.01	0.0	0.000
7.350	0.000	0.03	0.00	0.01	0.0	0.000
7.367	0.000	0.03	0.00	0.01	0.0	0.000
7.383	0.000	0.03	0.00	0.01	0.0	0.000
7.400	0.000	0.03	0.00	0.01	0.0	0.000
7.417	0.000	0.03	0.00	0.01	0.0	0.000
7.433	0.000	0.03	0.00	0.01	0.0	0.000
7.450	0.000	0.03	0.00	0.01	0.0	0.000

7.467	0.000	0.03	0.00	0.01	0.0	0.000
7.483	0.000	0.03	0.00	0.01	0.0	0.000
7.500	0.000	0.03	0.00	0.01	0.0	0.000
7.517	0.000	0.03	0.00	0.01	0.0	0.000
7.533	0.000	0.03	0.00	0.01	0.0	0.000
7.550	0.000	0.03	0.00	0.01	0.0	0.000
7.567	0.000	0.03	0.00	0.01	0.0	0.000
7.583	0.000	0.03	0.00	0.01	0.0	0.001
7.600	0.000	0.03	0.00	0.01	0.0	0.001
7.617	0.000	0.03	0.00	0.01	0.0	0.001
7.633	0.000	0.03	0.00	0.01	0.0	0.001
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7.667	0.000	0.03	0.00	0.01	0.0	0.001
7.683	0.000	0.03	0.00	0.01	0.0	0.001
7.700	0.000	0.03	0.00	0.01	0.0	0.001
7.717	0.000	0.03	0.00	0.01	0.0	0.001
7.733	0.000	0.03	0.00	0.01	0.0	0.001
7.750	0.000	0.03	0.00	0.01	0.0	0.001
7.767	0.000	0.03	0.00	0.01	0.0	0.001
7.783	0.000	0.03	0.00	0.01	0.0	0.001
7.800	0.000	0.03	0.00	0.01	0.0	0.001
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7.833	0.000	0.03	0.00	0.01	0.0	0.001
7.850	0.000	0.03	0.00	0.01	0.0	0.001
7.867	0.000	0.03	0.00	0.01	0.0	0.001
7.883	0.000	0.03	0.00	0.01	0.0	0.001
7.900	0.000	0.03	0.00	0.01	0.0	0.001
7.917	0.000	0.03	0.00	0.01	0.0	0.001
7.933	0.000	0.03	0.00	0.01	0.0	0.001
7.950	0.000	0.03	0.00	0.01	0.0	0.001
7.967	0.000	0.03	0.00	0.01	0.0	0.001
7.983	0.000	0.03	0.00	0.01	0.0	0.001
8.000	0.000	0.03	0.00	0.01	0.0	0.001
8.017	0.000	0.03	0.00	0.01	0.0	0.001
8.033	0.000	0.03	0.00	0.01	0.0	0.001
8.050	0.000	0.03	0.00	0.01	0.0	0.001
8.067	0.000	0.03	0.00	0.01	0.0	0.001
8.083	0.000	0.03	0.00	0.01	0.0	0.001
8.100	0.000	0.03	0.00	0.01	0.0	0.001
8.117	0.000	0.03	0.00	0.01	0.0	0.001
8.133	0.000	0.03	0.00	0.01	0.0	0.001
8.150	0.000	0.03	0.00	0.01	0.0	0.001
8.167	0.000	0.03	0.00	0.01	0.0	0.001
8.183	0.000	0.03	0.00	0.01	0.0	0.001
8.200	0.000	0.03	0.00	0.01	0.0	0.001
8.217	0.000	0.03	0.00	0.01	0.0	0.001
8.233	0.000	0.03	0.00	0.01	0.0	0.001
8.250	0.000	0.03	0.00	0.01	0.0	0.001
8.267	0.000	0.03	0.00	0.01	0.0	0.001
8.283	0.000	0.03	0.00	0.01	0.0	0.001

8.300	0.000	0.03	0.00	0.01	0.0	0.001
8.317	0.000	0.03	0.00	0.01	0.0	0.001
8.333	0.000	0.04	0.00	0.01	0.0	0.001
8.350	0.000	0.04	0.00	0.01	0.0	0.001
8.367	0.000	0.04	0.00	0.01	0.0	0.001
8.383	0.000	0.04	0.00	0.01	0.0	0.001
8.400	0.000	0.04	0.00	0.01	0.0	0.001
8.417	0.000	0.04	0.00	0.01	0.0	0.001
8.433	0.000	0.04	0.00	0.01	0.0	0.001
8.450	0.000	0.04	0.00	0.01	0.0	0.001
8.467	0.000	0.04	0.00	0.01	0.0	0.001
8.483	0.000	0.04	0.00	0.01	0.0	0.001
8.500	0.000	0.04	0.00	0.01	0.0	0.001
8.517	0.000	0.04	0.00	0.01	0.0	0.001
8.533	0.000	0.04	0.00	0.01	0.0	0.001
8.550	0.000	0.04	0.00	0.01	0.0	0.001
8.567	0.000	0.04	0.00	0.01	0.0	0.001
8.583	0.000	0.04	0.00	0.01	0.0	0.001
8.600	0.000	0.04	0.00	0.01	0.0	0.001
8.617	0.000	0.04	0.00	0.01	0.0	0.001
8.633	0.000	0.04	0.00	0.01	0.0	0.001
8.650	0.000	0.04	0.00	0.01	0.0	0.001
8.667	0.000	0.04	0.00	0.01	0.0	0.001
8.683	0.000	0.04	0.00	0.01	0.0	0.001
8.700	0.000	0.04	0.00	0.01	0.0	0.001
8.717	0.000	0.04	0.00	0.01	0.0	0.001
8.733	0.000	0.04	0.00	0.01	0.0	0.001
8.750	0.000	0.04	0.00	0.01	0.0	0.001
8.767	0.000	0.04	0.00	0.01	0.0	0.001
8.783	0.000	0.04	0.00	0.01	0.0	0.001
8.800	0.000	0.04	0.00	0.01	0.0	0.001
8.817	0.000	0.04	0.00	0.01	0.0	0.001
8.833	0.000	0.04	0.00	0.01	0.0	0.001
8.850	0.000	0.04	0.00	0.01	0.0	0.001
8.867	0.000	0.04	0.00	0.01	0.0	0.001
8.883	0.000	0.04	0.00	0.01	0.0	0.001
8.900	0.000	0.04	0.00	0.01	0.0	0.001
8.917	0.000	0.04	0.00	0.01	0.0	0.001
8.933	0.000	0.04	0.00	0.01	0.0	0.001
8.950	0.000	0.04	0.00	0.01	0.0	0.001
8.967	0.000	0.04	0.00	0.01	0.0	0.001
8.983	0.000	0.04	0.00	0.01	0.0	0.001
9.000	0.000	0.04	0.00	0.01	0.0	0.001
9.017	0.000	0.04	0.00	0.01	0.0	0.001
9.033	0.000	0.04	0.00	0.01	0.0	0.001
9.050	0.000	0.04	0.00	0.01	0.0	0.001
9.067	0.000	0.04	0.00	0.01	0.0	0.001
9.083	0.000	0.04	0.00	0.01	0.0	0.001
9.100	0.000	0.04	0.00	0.01	0.0	0.001
9.117	0.000	0.04	0.00	0.01	0.0	0.001

9.133	0.000	0.04	0.00	0.01	0.0	0.001
9.150	0.000	0.04	0.00	0.01	0.0	0.001
9.167	0.000	0.04	0.00	0.01	0.0	0.001
9.183	0.000	0.04	0.00	0.01	0.0	0.001
9.200	0.000	0.04	0.00	0.01	0.0	0.001
9.217	0.000	0.04	0.00	0.01	0.0	0.001
9.233	0.000	0.04	0.00	0.01	0.0	0.001
9.250	0.000	0.04	0.00	0.01	0.0	0.001
9.267	0.000	0.04	0.00	0.01	0.0	0.001
9.283	0.000	0.04	0.00	0.01	0.0	0.001
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9.317	0.000	0.04	0.00	0.01	0.0	0.001
9.333	0.000	0.04	0.00	0.01	0.0	0.001
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9.367	0.000	0.04	0.00	0.01	0.0	0.001
9.383	0.000	0.04	0.00	0.01	0.0	0.001
9.400	0.000	0.04	0.00	0.01	0.0	0.001
9.417	0.000	0.04	0.00	0.01	0.0	0.001
9.433	0.000	0.04	0.00	0.01	0.0	0.001
9.450	0.000	0.04	0.00	0.01	0.0	0.001
9.467	0.000	0.04	0.00	0.01	0.0	0.001
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9.550	0.000	0.04	0.00	0.01	0.0	0.001
9.567	0.000	0.04	0.00	0.01	0.0	0.001
9.583	0.000	0.04	0.00	0.01	0.0	0.001
9.600	0.000	0.04	0.00	0.01	0.0	0.001
9.617	0.000	0.04	0.00	0.01	0.0	0.001
9.633	0.000	0.04	0.00	0.01	0.0	0.001
9.650	0.000	0.04	0.00	0.01	0.0	0.001
9.667	0.000	0.04	0.00	0.01	0.0	0.001
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9.767	0.000	0.04	0.00	0.01	0.0	0.001
9.783	0.000	0.04	0.00	0.01	0.0	0.001
9.800	0.000	0.04	0.00	0.01	0.0	0.001
9.817	0.000	0.04	0.00	0.01	0.0	0.001
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9.850	0.000	0.04	0.00	0.01	0.0	0.001
9.867	0.000	0.04	0.00	0.01	0.0	0.001
9.883	0.000	0.04	0.00	0.01	0.0	0.001
9.900	0.000	0.04	0.00	0.01	0.0	0.001
9.917	0.000	0.04	0.00	0.01	0.0	0.001
9.933	0.000	0.04	0.00	0.01	0.0	0.001
9.950	0.000	0.04	0.00	0.01	0.0	0.001

9.967	0.000	0.04	0.00	0.01	0.0	0.001
9.983	0.000	0.04	0.00	0.01	0.0	0.001
10.000	0.000	0.04	0.00	0.01	0.0	0.001
10.017	0.000	0.04	0.00	0.01	0.0	0.001
10.033	0.000	0.04	0.00	0.01	0.0	0.001
10.050	0.000	0.04	0.00	0.01	0.0	0.001
10.067	0.000	0.04	0.00	0.01	0.0	0.001
10.083	0.000	0.04	0.00	0.01	0.0	0.001
10.100	0.000	0.04	0.00	0.01	0.0	0.001
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10.167	0.000	0.04	0.00	0.01	0.0	0.001
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10.217	0.000	0.04	0.00	0.01	0.0	0.001
10.233	0.000	0.04	0.00	0.01	0.0	0.001
10.250	0.000	0.04	0.00	0.01	0.0	0.001
10.267	0.000	0.04	0.00	0.01	0.0	0.001
10.283	0.000	0.04	0.00	0.01	0.0	0.001
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10.317	0.000	0.04	0.00	0.01	0.0	0.001
10.333	0.000	0.04	0.00	0.01	0.0	0.001
10.350	0.000	0.04	0.00	0.01	0.0	0.001
10.367	0.000	0.04	0.00	0.01	0.0	0.001
10.383	0.000	0.04	0.00	0.01	0.0	0.001
10.400	0.000	0.04	0.00	0.01	0.0	0.001
10.417	0.000	0.04	0.00	0.01	0.0	0.001
10.433	0.000	0.04	0.00	0.01	0.0	0.001
10.450	0.000	0.04	0.00	0.01	0.0	0.001
10.467	0.000	0.04	0.00	0.01	0.0	0.001
10.483	0.000	0.04	0.00	0.01	0.0	0.001
10.500	0.000	0.04	0.00	0.01	0.0	0.001
10.517	0.000	0.04	0.00	0.01	0.0	0.001
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10.567	0.000	0.04	0.00	0.01	0.0	0.001
10.583	0.000	0.04	0.00	0.01	0.0	0.001
10.600	0.000	0.04	0.00	0.01	0.0	0.001
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10.667	0.000	0.04	0.00	0.01	0.0	0.001
10.683	0.000	0.04	0.00	0.01	0.0	0.001
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10.717	0.000	0.04	0.00	0.01	0.0	0.001
10.733	0.000	0.04	0.00	0.01	0.0	0.001
10.750	0.000	0.04	0.00	0.01	0.0	0.001
10.767	0.000	0.04	0.00	0.01	0.0	0.001
10.783	0.000	0.04	0.00	0.01	0.0	0.001

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10.817	0.000	0.04	0.00	0.01	0.0	0.001
10.833	0.000	0.04	0.00	0.01	0.0	0.001
10.850	0.000	0.04	0.00	0.01	0.0	0.001
10.867	0.000	0.04	0.00	0.01	0.0	0.001
10.883	0.000	0.04	0.00	0.01	0.0	0.001
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10.917	0.000	0.04	0.00	0.01	0.0	0.001
10.933	0.000	0.04	0.00	0.01	0.0	0.001
10.950	0.000	0.05	0.00	0.01	0.0	0.001
10.967	0.000	0.05	0.00	0.01	0.0	0.001
10.983	0.000	0.05	0.00	0.01	0.0	0.001
11.000	0.000	0.05	0.00	0.01	0.0	0.001
11.017	0.000	0.05	0.00	0.01	0.0	0.001
11.033	0.000	0.05	0.00	0.01	0.0	0.001
11.050	0.000	0.05	0.00	0.01	0.0	0.001
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11.217	0.000	0.05	0.00	0.01	0.0	0.001
11.233	0.000	0.05	0.00	0.01	0.0	0.001
11.250	0.000	0.05	0.00	0.01	0.0	0.001
11.267	0.000	0.05	0.00	0.01	0.0	0.001
11.283	0.000	0.05	0.00	0.01	0.0	0.001
11.300	0.000	0.05	0.00	0.01	0.0	0.001
11.317	0.000	0.05	0.00	0.01	0.0	0.001
11.333	0.000	0.05	0.00	0.01	0.0	0.001
11.350	0.000	0.05	0.00	0.01	0.0	0.001
11.367	0.000	0.05	0.00	0.01	0.0	0.001
11.383	0.000	0.05	0.00	0.01	0.0	0.001
11.400	0.000	0.05	0.00	0.01	0.0	0.001
11.417	0.000	0.05	0.00	0.01	0.0	0.001
11.433	0.000	0.05	0.00	0.01	0.0	0.001
11.450	0.000	0.05	0.00	0.01	0.0	0.001
11.467	0.000	0.05	0.00	0.01	0.0	0.001
11.483	0.000	0.05	0.00	0.01	0.0	0.001
11.500	0.000	0.05	0.00	0.01	0.0	0.001
11.517	0.000	0.05	0.00	0.01	0.0	0.001
11.533	0.000	0.05	0.00	0.01	0.0	0.001
11.550	0.000	0.05	0.00	0.01	0.0	0.001
11.567	0.000	0.05	0.00	0.01	0.0	0.001
11.583	0.000	0.05	0.00	0.01	0.0	0.001
11.600	0.000	0.05	0.00	0.01	0.0	0.001
11.617	0.000	0.05	0.00	0.01	0.0	0.001

11.633	0.000	0.05	0.00	0.01	0.0	0.001
11.650	0.000	0.05	0.00	0.01	0.0	0.001
11.667	0.000	0.05	0.00	0.01	0.0	0.001
11.683	0.000	0.05	0.00	0.01	0.0	0.001
11.700	0.000	0.05	0.00	0.01	0.0	0.001
11.717	0.000	0.05	0.00	0.01	0.0	0.001
11.733	0.000	0.05	0.00	0.01	0.0	0.001
11.750	0.000	0.05	0.00	0.01	0.0	0.001
11.767	0.000	0.05	0.00	0.01	0.0	0.001
11.783	0.000	0.05	0.00	0.01	0.0	0.001
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11.900	0.000	0.05	0.00	0.01	0.0	0.001
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11.983	0.000	0.05	0.00	0.01	0.1	0.001
12.000	0.000	0.05	0.00	0.01	0.1	0.001
12.017	0.000	0.05	0.00	0.01	0.1	0.001
12.033	0.000	0.05	0.00	0.01	0.1	0.001
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12.367	0.000	0.07	0.00	0.01	0.1	0.001
12.383	0.000	0.07	0.00	0.01	0.1	0.001
12.400	0.000	0.07	0.00	0.01	0.1	0.001
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12.567	0.000	0.07	0.00	0.01	0.1	0.001
12.583	0.000	0.07	0.00	0.01	0.1	0.001
12.600	0.000	0.07	0.00	0.01	0.1	0.001
12.617	0.000	0.07	0.00	0.01	0.1	0.001
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12.733	0.000	0.07	0.00	0.01	0.1	0.001
12.750	0.000	0.07	0.00	0.01	0.1	0.001
12.767	0.000	0.07	0.00	0.01	0.1	0.001
12.783	0.000	0.07	0.00	0.01	0.1	0.001
12.800	0.000	0.07	0.00	0.01	0.1	0.001
12.817	0.000	0.07	0.00	0.01	0.1	0.001
12.833	0.000	0.07	0.00	0.01	0.1	0.001
12.850	0.000	0.07	0.00	0.01	0.1	0.001
12.867	0.000	0.07	0.00	0.01	0.1	0.001
12.883	0.000	0.07	0.00	0.01	0.1	0.001
12.900	0.000	0.07	0.00	0.01	0.1	0.001
12.917	0.000	0.07	0.00	0.01	0.1	0.001
12.933	0.000	0.07	0.00	0.01	0.1	0.001
12.950	0.000	0.07	0.00	0.01	0.1	0.001
12.967	0.000	0.07	0.00	0.01	0.1	0.001
12.983	0.000	0.07	0.00	0.01	0.1	0.001
13.000	0.000	0.07	0.00	0.01	0.1	0.001
13.017	0.000	0.07	0.00	0.01	0.1	0.001
13.033	0.000	0.07	0.00	0.01	0.1	0.001
13.050	0.000	0.07	0.00	0.01	0.1	0.001
13.067	0.000	0.07	0.00	0.01	0.1	0.001
13.083	0.000	0.07	0.00	0.01	0.1	0.001
13.100	0.000	0.08	0.00	0.01	0.1	0.001
13.117	0.000	0.08	0.00	0.01	0.1	0.001
13.133	0.000	0.08	0.00	0.01	0.1	0.001
13.150	0.000	0.08	0.00	0.01	0.1	0.001
13.167	0.000	0.08	0.00	0.01	0.1	0.001
13.183	0.000	0.08	0.00	0.01	0.1	0.001
13.200	0.000	0.08	0.00	0.01	0.1	0.001
13.217	0.000	0.08	0.00	0.01	0.1	0.001
13.233	0.000	0.08	0.00	0.01	0.1	0.001
13.250	0.000	0.08	0.00	0.01	0.1	0.001
13.267	0.000	0.08	0.00	0.01	0.1	0.001
13.283	0.000	0.08	0.00	0.01	0.1	0.001

13.300	0.000	0.08	0.00	0.02	0.1	0.001
13.317	0.000	0.08	0.00	0.02	0.1	0.001
13.333	0.000	0.08	0.00	0.02	0.1	0.001
13.350	0.000	0.08	0.00	0.02	0.1	0.001
13.367	0.000	0.08	0.00	0.02	0.1	0.001
13.383	0.000	0.08	0.00	0.02	0.1	0.001
13.400	0.000	0.08	0.00	0.02	0.1	0.001
13.417	0.000	0.08	0.00	0.02	0.1	0.001
13.433	0.000	0.08	0.00	0.02	0.1	0.001
13.450	0.000	0.08	0.00	0.02	0.1	0.001
13.467	0.000	0.08	0.00	0.02	0.1	0.001
13.483	0.000	0.08	0.00	0.02	0.1	0.001
13.500	0.000	0.08	0.00	0.02	0.1	0.001
13.517	0.000	0.08	0.00	0.02	0.1	0.001
13.533	0.000	0.08	0.00	0.02	0.1	0.001
13.550	0.000	0.08	0.00	0.02	0.1	0.001
13.567	0.000	0.08	0.00	0.02	0.1	0.001
13.583	0.000	0.08	0.00	0.02	0.1	0.001
13.600	0.000	0.08	0.00	0.02	0.1	0.001
13.617	0.000	0.08	0.00	0.02	0.1	0.001
13.633	0.000	0.08	0.00	0.02	0.1	0.001
13.650	0.000	0.08	0.00	0.02	0.1	0.001
13.667	0.000	0.08	0.00	0.02	0.1	0.001
13.683	0.000	0.08	0.00	0.02	0.1	0.001
13.700	0.000	0.08	0.00	0.02	0.1	0.001
13.717	0.000	0.08	0.00	0.02	0.1	0.001
13.733	0.000	0.09	0.00	0.02	0.1	0.001
13.750	0.000	0.09	0.00	0.02	0.1	0.001
13.767	0.000	0.09	0.00	0.02	0.1	0.001
13.783	0.000	0.09	0.00	0.02	0.1	0.001
13.800	0.000	0.09	0.00	0.02	0.1	0.001
13.817	0.000	0.09	0.00	0.02	0.1	0.001
13.833	0.000	0.09	0.00	0.02	0.1	0.001
13.850	0.000	0.09	0.00	0.02	0.1	0.001
13.867	0.000	0.09	0.00	0.02	0.1	0.001
13.883	0.000	0.09	0.00	0.02	0.1	0.001
13.900	0.000	0.09	0.00	0.02	0.1	0.001
13.917	0.000	0.09	0.00	0.02	0.1	0.001
13.933	0.000	0.09	0.00	0.02	0.1	0.001
13.950	0.000	0.09	0.00	0.02	0.1	0.001
13.967	0.000	0.09	0.00	0.02	0.1	0.001
13.983	0.000	0.09	0.00	0.02	0.1	0.001
14.000	0.000	0.09	0.00	0.02	0.1	0.001
14.017	0.000	0.09	0.00	0.02	0.1	0.001
14.033	0.000	0.09	0.00	0.02	0.1	0.001
14.050	0.000	0.09	0.00	0.02	0.1	0.001
14.067	0.000	0.09	0.00	0.02	0.1	0.001
14.083	0.000	0.09	0.00	0.02	0.1	0.001
14.100	0.000	0.09	0.00	0.02	0.1	0.001
14.117	0.000	0.09	0.00	0.02	0.1	0.001

14.133	0.000	0.09	0.00	0.02	0.1	0.001
14.150	0.000	0.10	0.00	0.02	0.1	0.001
14.167	0.000	0.10	0.00	0.02	0.1	0.001
14.183	0.000	0.10	0.00	0.02	0.1	0.001
14.200	0.000	0.10	0.00	0.02	0.1	0.001
14.217	0.000	0.10	0.00	0.02	0.1	0.001
14.233	0.000	0.10	0.00	0.02	0.1	0.001
14.250	0.000	0.10	0.00	0.02	0.1	0.001
14.267	0.000	0.10	0.00	0.02	0.1	0.001
14.283	0.000	0.10	0.00	0.02	0.1	0.001
14.300	0.000	0.10	0.00	0.02	0.1	0.001
14.317	0.000	0.10	0.00	0.02	0.1	0.001
14.333	0.000	0.10	0.00	0.02	0.1	0.001
14.350	0.000	0.10	0.00	0.02	0.1	0.001
14.367	0.000	0.10	0.00	0.02	0.1	0.002
14.383	0.000	0.10	0.00	0.02	0.1	0.002
14.400	0.000	0.10	0.00	0.02	0.1	0.002
14.417	0.000	0.11	0.00	0.02	0.1	0.002
14.433	0.000	0.11	0.00	0.02	0.1	0.002
14.450	0.000	0.11	0.00	0.02	0.1	0.002
14.467	0.000	0.11	0.00	0.02	0.1	0.002
14.483	0.000	0.11	0.00	0.02	0.1	0.002
14.500	0.000	0.11	0.00	0.02	0.1	0.002
14.517	0.000	0.11	0.00	0.02	0.1	0.002
14.533	0.000	0.11	0.00	0.02	0.1	0.002
14.550	0.000	0.11	0.00	0.02	0.1	0.002
14.567	0.000	0.11	0.00	0.02	0.1	0.002
14.583	0.000	0.11	0.00	0.02	0.1	0.002
14.600	0.000	0.11	0.00	0.02	0.1	0.002
14.617	0.000	0.11	0.00	0.02	0.1	0.002
14.633	0.000	0.11	0.00	0.02	0.1	0.002
14.650	0.000	0.11	0.00	0.02	0.1	0.002
14.667	0.000	0.11	0.00	0.02	0.1	0.002
14.683	0.000	0.12	0.00	0.02	0.1	0.002
14.700	0.000	0.12	0.00	0.02	0.1	0.002
14.717	0.000	0.12	0.00	0.02	0.1	0.002
14.733	0.000	0.12	0.00	0.02	0.1	0.002
14.750	0.000	0.12	0.00	0.02	0.1	0.002
14.767	0.000	0.12	0.00	0.02	0.1	0.002
14.783	0.000	0.12	0.00	0.02	0.1	0.002
14.800	0.000	0.12	0.00	0.02	0.1	0.002
14.817	0.000	0.12	0.00	0.02	0.1	0.002
14.833	0.000	0.12	0.00	0.02	0.1	0.002
14.850	0.000	0.12	0.00	0.02	0.1	0.002
14.867	0.000	0.13	0.00	0.02	0.1	0.002
14.883	0.000	0.13	0.00	0.02	0.1	0.002
14.900	0.000	0.13	0.00	0.02	0.1	0.002
14.917	0.000	0.13	0.00	0.02	0.1	0.002
14.933	0.000	0.13	0.00	0.02	0.1	0.002
14.950	0.000	0.13	0.00	0.02	0.1	0.002

14.967	0.000	0.13	0.00	0.02	0.1	0.002
14.983	0.000	0.13	0.00	0.02	0.1	0.002
15.000	0.000	0.13	0.00	0.02	0.1	0.002
15.017	0.000	0.13	0.00	0.02	0.1	0.002
15.033	0.000	0.13	0.00	0.02	0.1	0.002
15.050	0.000	0.13	0.00	0.02	0.1	0.002
15.067	0.000	0.13	0.00	0.03	0.1	0.002
15.083	0.000	0.14	0.00	0.03	0.1	0.002
15.100	0.000	0.14	0.00	0.03	0.1	0.002
15.117	0.000	0.14	0.00	0.03	0.1	0.002
15.133	0.000	0.14	0.00	0.03	0.1	0.002
15.150	0.000	0.14	0.00	0.03	0.1	0.002
15.167	0.000	0.14	0.00	0.03	0.1	0.002
15.183	0.000	0.15	0.00	0.03	0.1	0.002
15.200	0.000	0.15	0.00	0.03	0.1	0.002
15.217	0.000	0.15	0.00	0.03	0.1	0.002
15.233	0.000	0.15	0.00	0.03	0.1	0.002
15.250	0.000	0.15	0.00	0.03	0.1	0.002
15.267	0.000	0.15	0.00	0.03	0.1	0.002
15.283	0.000	0.15	0.00	0.03	0.1	0.002
15.300	0.000	0.15	0.00	0.03	0.1	0.002
15.317	0.000	0.16	0.00	0.03	0.1	0.002
15.333	0.000	0.16	0.00	0.03	0.1	0.002
15.350	0.000	0.16	0.00	0.03	0.1	0.002
15.367	0.000	0.16	0.00	0.03	0.1	0.002
15.383	0.000	0.16	0.00	0.03	0.1	0.002
15.400	0.000	0.16	0.00	0.03	0.1	0.002
15.417	0.000	0.16	0.00	0.03	0.1	0.002
15.433	0.000	0.16	0.00	0.03	0.2	0.002
15.450	0.000	0.16	0.00	0.03	0.2	0.002
15.467	0.000	0.16	0.00	0.03	0.2	0.002
15.483	0.000	0.16	0.00	0.03	0.2	0.002
15.500	0.000	0.16	0.00	0.03	0.2	0.002
15.517	0.000	0.16	0.00	0.03	0.2	0.002
15.533	0.000	0.16	0.00	0.03	0.2	0.002
15.550	0.000	0.17	0.00	0.03	0.2	0.002
15.567	0.000	0.17	0.00	0.03	0.2	0.002
15.583	0.000	0.17	0.00	0.03	0.2	0.002
15.600	0.000	0.17	0.00	0.03	0.2	0.002
15.617	0.000	0.17	0.00	0.03	0.2	0.002
15.633	0.000	0.18	0.00	0.03	0.2	0.002
15.650	0.000	0.18	0.00	0.03	0.2	0.003
15.667	0.000	0.18	0.00	0.03	0.2	0.003
15.683	0.000	0.18	0.00	0.03	0.2	0.003
15.700	0.000	0.19	0.00	0.03	0.2	0.003
15.717	0.000	0.21	0.00	0.03	0.2	0.003
15.733	0.000	0.23	0.00	0.04	0.2	0.003
15.750	0.000	0.25	0.00	0.04	0.2	0.003
15.767	0.000	0.27	0.00	0.04	0.2	0.003
15.783	0.000	0.29	0.00	0.04	0.2	0.003

15.800	0.000	0.30	0.00	0.04	0.2	0.003
15.817	0.000	0.32	0.00	0.04	0.2	0.003
15.833	0.000	0.34	0.00	0.05	0.2	0.004
15.850	0.000	0.36	0.00	0.05	0.2	0.004
15.867	0.000	0.39	0.00	0.05	0.2	0.004
15.883	0.000	0.41	0.00	0.05	0.3	0.004
15.900	0.000	0.44	0.00	0.06	0.3	0.004
15.917	0.000	0.47	0.00	0.06	0.3	0.005
15.933	0.000	0.49	0.00	0.06	0.3	0.005
15.950	0.000	0.52	0.00	0.07	0.3	0.005
15.967	0.000	0.55	0.00	0.07	0.3	0.005
15.983	0.000	0.57	0.00	0.07	0.4	0.006
16.000	0.000	0.60	0.00	0.08	0.4	0.006
16.017	0.000	0.71	0.00	0.08	0.4	0.006
16.033	0.000	0.91	0.00	0.09	0.4	0.007
16.050	0.000	1.11	0.00	0.10	0.5	0.008
16.067	0.000	1.31	0.00	0.12	0.5	0.009
16.083	0.000	1.51	0.00	0.13	0.6	0.010
16.100	0.000	1.71	0.00	0.15	0.7	0.012
16.117	0.000	1.91	0.00	0.17	0.8	0.013
16.133	0.000	2.11	0.00	0.19	0.9	0.015
16.150	0.000	2.30	0.00	0.21	1.0	0.016
16.167	0.000	2.50	0.00	0.24	1.1	0.018
16.183	0.000	2.25	0.00	0.26	1.2	0.020
16.200	0.000	2.01	0.00	0.27	1.3	0.021
16.217	0.000	1.77	0.00	0.28	1.4	0.021
16.233	0.000	1.53	0.00	0.28	1.4	0.021
16.250	0.000	1.29	0.00	0.28	1.4	0.021
16.267	0.000	1.05	0.00	0.27	1.4	0.021
16.283	0.000	0.81	0.00	0.26	1.3	0.020
16.300	0.000	0.57	0.00	0.25	1.3	0.019
16.317	0.000	0.33	0.00	0.23	1.2	0.018
16.333	0.000	0.22	0.00	0.22	1.1	0.017
16.350	0.000	0.21	0.00	0.20	1.0	0.016
16.367	0.000	0.21	0.00	0.19	1.0	0.014
16.383	0.000	0.20	0.00	0.18	0.9	0.013
16.400	0.000	0.20	0.00	0.16	0.8	0.013
16.417	0.000	0.19	0.00	0.15	0.8	0.012
16.433	0.000	0.18	0.00	0.14	0.7	0.011
16.450	0.000	0.18	0.00	0.13	0.7	0.010
16.467	0.000	0.17	0.00	0.12	0.6	0.010
16.483	0.000	0.16	0.00	0.12	0.6	0.009
16.500	0.000	0.16	0.00	0.11	0.6	0.008
16.517	0.000	0.16	0.00	0.10	0.5	0.008
16.533	0.000	0.16	0.00	0.10	0.5	0.007
16.550	0.000	0.15	0.00	0.09	0.5	0.007
16.567	0.000	0.15	0.00	0.09	0.4	0.007
16.583	0.000	0.15	0.00	0.08	0.4	0.006
16.600	0.000	0.15	0.00	0.08	0.4	0.006
16.617	0.000	0.14	0.00	0.07	0.4	0.006

16.633	0.000	0.14	0.00	0.07	0.4	0.005
16.650	0.000	0.14	0.00	0.07	0.3	0.005
16.667	0.000	0.14	0.00	0.06	0.3	0.005
16.683	0.000	0.14	0.00	0.06	0.3	0.005
16.700	0.000	0.13	0.00	0.06	0.3	0.004
16.717	0.000	0.13	0.00	0.05	0.3	0.004
16.733	0.000	0.13	0.00	0.05	0.3	0.004
16.750	0.000	0.13	0.00	0.05	0.3	0.004
16.767	0.000	0.13	0.00	0.05	0.2	0.004
16.783	0.000	0.12	0.00	0.05	0.2	0.003
16.800	0.000	0.12	0.00	0.04	0.2	0.003
16.817	0.000	0.12	0.00	0.04	0.2	0.003
16.833	0.000	0.12	0.00	0.04	0.2	0.003
16.850	0.000	0.12	0.00	0.04	0.2	0.003
16.867	0.000	0.12	0.00	0.04	0.2	0.003
16.883	0.000	0.11	0.00	0.04	0.2	0.003
16.900	0.000	0.11	0.00	0.03	0.2	0.003
16.917	0.000	0.11	0.00	0.03	0.2	0.003
16.933	0.000	0.11	0.00	0.03	0.2	0.003
16.950	0.000	0.11	0.00	0.03	0.2	0.002
16.967	0.000	0.11	0.00	0.03	0.2	0.002
16.983	0.000	0.11	0.00	0.03	0.2	0.002
17.000	0.000	0.11	0.00	0.03	0.1	0.002
17.017	0.000	0.11	0.00	0.03	0.1	0.002
17.033	0.000	0.10	0.00	0.03	0.1	0.002
17.050	0.000	0.10	0.00	0.03	0.1	0.002
17.067	0.000	0.10	0.00	0.03	0.1	0.002
17.083	0.000	0.10	0.00	0.03	0.1	0.002
17.100	0.000	0.10	0.00	0.03	0.1	0.002
17.117	0.000	0.10	0.00	0.03	0.1	0.002
17.133	0.000	0.10	0.00	0.02	0.1	0.002
17.150	0.000	0.10	0.00	0.02	0.1	0.002
17.167	0.000	0.10	0.00	0.02	0.1	0.002
17.183	0.000	0.09	0.00	0.02	0.1	0.002
17.200	0.000	0.09	0.00	0.02	0.1	0.002
17.217	0.000	0.09	0.00	0.02	0.1	0.002
17.233	0.000	0.09	0.00	0.02	0.1	0.002
17.250	0.000	0.09	0.00	0.02	0.1	0.002
17.267	0.000	0.09	0.00	0.02	0.1	0.002
17.283	0.000	0.09	0.00	0.02	0.1	0.002
17.300	0.000	0.09	0.00	0.02	0.1	0.002
17.317	0.000	0.09	0.00	0.02	0.1	0.002
17.333	0.000	0.09	0.00	0.02	0.1	0.002
17.350	0.000	0.09	0.00	0.02	0.1	0.002
17.367	0.000	0.08	0.00	0.02	0.1	0.002
17.383	0.000	0.08	0.00	0.02	0.1	0.001
17.400	0.000	0.08	0.00	0.02	0.1	0.001
17.417	0.000	0.08	0.00	0.02	0.1	0.001
17.433	0.000	0.08	0.00	0.02	0.1	0.001
17.450	0.000	0.08	0.00	0.02	0.1	0.001

17.467	0.000	0.08	0.00	0.02	0.1	0.001
17.483	0.000	0.08	0.00	0.02	0.1	0.001
17.500	0.000	0.08	0.00	0.02	0.1	0.001
17.517	0.000	0.08	0.00	0.02	0.1	0.001
17.533	0.000	0.08	0.00	0.02	0.1	0.001
17.550	0.000	0.08	0.00	0.02	0.1	0.001
17.567	0.000	0.08	0.00	0.02	0.1	0.001
17.583	0.000	0.08	0.00	0.02	0.1	0.001
17.600	0.000	0.08	0.00	0.02	0.1	0.001
17.617	0.000	0.08	0.00	0.02	0.1	0.001
17.633	0.000	0.08	0.00	0.02	0.1	0.001
17.650	0.000	0.08	0.00	0.02	0.1	0.001
17.667	0.000	0.07	0.00	0.02	0.1	0.001
17.683	0.000	0.07	0.00	0.02	0.1	0.001
17.700	0.000	0.07	0.00	0.02	0.1	0.001
17.717	0.000	0.07	0.00	0.02	0.1	0.001
17.733	0.000	0.07	0.00	0.02	0.1	0.001
17.750	0.000	0.07	0.00	0.02	0.1	0.001
17.767	0.000	0.07	0.00	0.02	0.1	0.001
17.783	0.000	0.07	0.00	0.02	0.1	0.001
17.800	0.000	0.07	0.00	0.02	0.1	0.001
17.817	0.000	0.07	0.00	0.02	0.1	0.001
17.833	0.000	0.07	0.00	0.02	0.1	0.001
17.850	0.000	0.07	0.00	0.02	0.1	0.001
17.867	0.000	0.07	0.00	0.02	0.1	0.001
17.883	0.000	0.07	0.00	0.01	0.1	0.001
17.900	0.000	0.07	0.00	0.01	0.1	0.001
17.917	0.000	0.07	0.00	0.01	0.1	0.001
17.933	0.000	0.07	0.00	0.01	0.1	0.001
17.950	0.000	0.07	0.00	0.01	0.1	0.001
17.967	0.000	0.07	0.00	0.01	0.1	0.001
17.983	0.000	0.07	0.00	0.01	0.1	0.001
18.000	0.000	0.07	0.00	0.01	0.1	0.001
18.017	0.000	0.07	0.00	0.01	0.1	0.001
18.033	0.000	0.07	0.00	0.01	0.1	0.001
18.050	0.000	0.07	0.00	0.01	0.1	0.001
18.067	0.000	0.07	0.00	0.01	0.1	0.001
18.083	0.000	0.06	0.00	0.01	0.1	0.001
18.100	0.000	0.06	0.00	0.01	0.1	0.001
18.117	0.000	0.06	0.00	0.01	0.1	0.001
18.133	0.000	0.06	0.00	0.01	0.1	0.001
18.150	0.000	0.06	0.00	0.01	0.1	0.001
18.167	0.000	0.06	0.00	0.01	0.1	0.001
18.183	0.000	0.05	0.00	0.01	0.1	0.001
18.200	0.000	0.05	0.00	0.01	0.1	0.001
18.217	0.000	0.05	0.00	0.01	0.1	0.001
18.233	0.000	0.05	0.00	0.01	0.1	0.001
18.250	0.000	0.05	0.00	0.01	0.1	0.001
18.267	0.000	0.05	0.00	0.01	0.1	0.001
18.283	0.000	0.05	0.00	0.01	0.1	0.001

18.300	0.000	0.05	0.00	0.01	0.1	0.001
18.317	0.000	0.05	0.00	0.01	0.1	0.001
18.333	0.000	0.05	0.00	0.01	0.1	0.001
18.350	0.000	0.05	0.00	0.01	0.1	0.001
18.367	0.000	0.05	0.00	0.01	0.1	0.001
18.383	0.000	0.05	0.00	0.01	0.1	0.001
18.400	0.000	0.05	0.00	0.01	0.1	0.001
18.417	0.000	0.05	0.00	0.01	0.1	0.001
18.433	0.000	0.05	0.00	0.01	0.1	0.001
18.450	0.000	0.05	0.00	0.01	0.1	0.001
18.467	0.000	0.05	0.00	0.01	0.1	0.001
18.483	0.000	0.05	0.00	0.01	0.1	0.001
18.500	0.000	0.05	0.00	0.01	0.1	0.001
18.517	0.000	0.05	0.00	0.01	0.1	0.001
18.533	0.000	0.05	0.00	0.01	0.1	0.001
18.550	0.000	0.05	0.00	0.01	0.1	0.001
18.567	0.000	0.05	0.00	0.01	0.1	0.001
18.583	0.000	0.05	0.00	0.01	0.1	0.001
18.600	0.000	0.05	0.00	0.01	0.1	0.001
18.617	0.000	0.05	0.00	0.01	0.0	0.001
18.633	0.000	0.05	0.00	0.01	0.0	0.001
18.650	0.000	0.05	0.00	0.01	0.0	0.001
18.667	0.000	0.05	0.00	0.01	0.0	0.001
18.683	0.000	0.05	0.00	0.01	0.0	0.001
18.700	0.000	0.05	0.00	0.01	0.0	0.001
18.717	0.000	0.05	0.00	0.01	0.0	0.001
18.733	0.000	0.05	0.00	0.01	0.0	0.001
18.750	0.000	0.05	0.00	0.01	0.0	0.001
18.767	0.000	0.04	0.00	0.01	0.0	0.001
18.783	0.000	0.04	0.00	0.01	0.0	0.001
18.800	0.000	0.04	0.00	0.01	0.0	0.001
18.817	0.000	0.04	0.00	0.01	0.0	0.001
18.833	0.000	0.04	0.00	0.01	0.0	0.001
18.850	0.000	0.04	0.00	0.01	0.0	0.001
18.867	0.000	0.04	0.00	0.01	0.0	0.001
18.883	0.000	0.04	0.00	0.01	0.0	0.001
18.900	0.000	0.04	0.00	0.01	0.0	0.001
18.917	0.000	0.04	0.00	0.01	0.0	0.001
18.933	0.000	0.04	0.00	0.01	0.0	0.001
18.950	0.000	0.04	0.00	0.01	0.0	0.001
18.967	0.000	0.04	0.00	0.01	0.0	0.001
18.983	0.000	0.04	0.00	0.01	0.0	0.001
19.000	0.000	0.04	0.00	0.01	0.0	0.001
19.017	0.000	0.04	0.00	0.01	0.0	0.001
19.033	0.000	0.04	0.00	0.01	0.0	0.001
19.050	0.000	0.04	0.00	0.01	0.0	0.001
19.067	0.000	0.04	0.00	0.01	0.0	0.001
19.083	0.000	0.04	0.00	0.01	0.0	0.001
19.100	0.000	0.04	0.00	0.01	0.0	0.001
19.117	0.000	0.04	0.00	0.01	0.0	0.001

19.133	0.000	0.04	0.00	0.01	0.0	0.001
19.150	0.000	0.04	0.00	0.01	0.0	0.001
19.167	0.000	0.04	0.00	0.01	0.0	0.001
19.183	0.000	0.04	0.00	0.01	0.0	0.001
19.200	0.000	0.04	0.00	0.01	0.0	0.001
19.217	0.000	0.04	0.00	0.01	0.0	0.001
19.233	0.000	0.04	0.00	0.01	0.0	0.001
19.250	0.000	0.04	0.00	0.01	0.0	0.001
19.267	0.000	0.04	0.00	0.01	0.0	0.001
19.283	0.000	0.04	0.00	0.01	0.0	0.001
19.300	0.000	0.04	0.00	0.01	0.0	0.001
19.317	0.000	0.04	0.00	0.01	0.0	0.001
19.333	0.000	0.04	0.00	0.01	0.0	0.001
19.350	0.000	0.04	0.00	0.01	0.0	0.001
19.367	0.000	0.04	0.00	0.01	0.0	0.001
19.383	0.000	0.04	0.00	0.01	0.0	0.001
19.400	0.000	0.04	0.00	0.01	0.0	0.001
19.417	0.000	0.04	0.00	0.01	0.0	0.001
19.433	0.000	0.04	0.00	0.01	0.0	0.001
19.450	0.000	0.04	0.00	0.01	0.0	0.001
19.467	0.000	0.04	0.00	0.01	0.0	0.001
19.483	0.000	0.04	0.00	0.01	0.0	0.001
19.500	0.000	0.04	0.00	0.01	0.0	0.001
19.517	0.000	0.04	0.00	0.01	0.0	0.001
19.533	0.000	0.04	0.00	0.01	0.0	0.001
19.550	0.000	0.04	0.00	0.01	0.0	0.001
19.567	0.000	0.04	0.00	0.01	0.0	0.001
19.583	0.000	0.04	0.00	0.01	0.0	0.001
19.600	0.000	0.04	0.00	0.01	0.0	0.001
19.617	0.000	0.04	0.00	0.01	0.0	0.001
19.633	0.000	0.04	0.00	0.01	0.0	0.001
19.650	0.000	0.04	0.00	0.01	0.0	0.001
19.667	0.000	0.04	0.00	0.01	0.0	0.001
19.683	0.000	0.04	0.00	0.01	0.0	0.001
19.700	0.000	0.04	0.00	0.01	0.0	0.001
19.717	0.000	0.04	0.00	0.01	0.0	0.001
19.733	0.000	0.04	0.00	0.01	0.0	0.001
19.750	0.000	0.04	0.00	0.01	0.0	0.001
19.767	0.000	0.04	0.00	0.01	0.0	0.001
19.783	0.000	0.04	0.00	0.01	0.0	0.001
19.800	0.000	0.04	0.00	0.01	0.0	0.001
19.817	0.000	0.04	0.00	0.01	0.0	0.001
19.833	0.000	0.04	0.00	0.01	0.0	0.001
19.850	0.000	0.04	0.00	0.01	0.0	0.001
19.867	0.000	0.04	0.00	0.01	0.0	0.001
19.883	0.000	0.04	0.00	0.01	0.0	0.001
19.900	0.000	0.04	0.00	0.01	0.0	0.001
19.917	0.000	0.04	0.00	0.01	0.0	0.001
19.933	0.000	0.04	0.00	0.01	0.0	0.001
19.950	0.000	0.04	0.00	0.01	0.0	0.001

19.967	0.000	0.04	0.00	0.01	0.0	0.001
19.983	0.000	0.04	0.00	0.01	0.0	0.001
20.000	0.000	0.04	0.00	0.01	0.0	0.001
20.017	0.000	0.04	0.00	0.01	0.0	0.001
20.033	0.000	0.04	0.00	0.01	0.0	0.001
20.050	0.000	0.03	0.00	0.01	0.0	0.001
20.067	0.000	0.03	0.00	0.01	0.0	0.001
20.083	0.000	0.03	0.00	0.01	0.0	0.001
20.100	0.000	0.03	0.00	0.01	0.0	0.001
20.117	0.000	0.03	0.00	0.01	0.0	0.001
20.133	0.000	0.03	0.00	0.01	0.0	0.001
20.150	0.000	0.03	0.00	0.01	0.0	0.001
20.167	0.000	0.03	0.00	0.01	0.0	0.001
20.183	0.000	0.03	0.00	0.01	0.0	0.001
20.200	0.000	0.03	0.00	0.01	0.0	0.001
20.217	0.000	0.03	0.00	0.01	0.0	0.001
20.233	0.000	0.03	0.00	0.01	0.0	0.001
20.250	0.000	0.03	0.00	0.01	0.0	0.001
20.267	0.000	0.03	0.00	0.01	0.0	0.001
20.283	0.000	0.03	0.00	0.01	0.0	0.001
20.300	0.000	0.03	0.00	0.01	0.0	0.001
20.317	0.000	0.03	0.00	0.01	0.0	0.001
20.333	0.000	0.03	0.00	0.01	0.0	0.001
20.350	0.000	0.03	0.00	0.01	0.0	0.001
20.367	0.000	0.03	0.00	0.01	0.0	0.001
20.383	0.000	0.03	0.00	0.01	0.0	0.001
20.400	0.000	0.03	0.00	0.01	0.0	0.001
20.417	0.000	0.03	0.00	0.01	0.0	0.001
20.433	0.000	0.03	0.00	0.01	0.0	0.001
20.450	0.000	0.03	0.00	0.01	0.0	0.001
20.467	0.000	0.03	0.00	0.01	0.0	0.001
20.483	0.000	0.03	0.00	0.01	0.0	0.001
20.500	0.000	0.03	0.00	0.01	0.0	0.001
20.517	0.000	0.03	0.00	0.01	0.0	0.001
20.533	0.000	0.03	0.00	0.01	0.0	0.001
20.550	0.000	0.03	0.00	0.01	0.0	0.001
20.567	0.000	0.03	0.00	0.01	0.0	0.001
20.583	0.000	0.03	0.00	0.01	0.0	0.001
20.600	0.000	0.03	0.00	0.01	0.0	0.001
20.617	0.000	0.03	0.00	0.01	0.0	0.001
20.633	0.000	0.03	0.00	0.01	0.0	0.001
20.650	0.000	0.03	0.00	0.01	0.0	0.001
20.667	0.000	0.03	0.00	0.01	0.0	0.001
20.683	0.000	0.03	0.00	0.01	0.0	0.001
20.700	0.000	0.03	0.00	0.01	0.0	0.000
20.717	0.000	0.03	0.00	0.01	0.0	0.000
20.733	0.000	0.03	0.00	0.01	0.0	0.000
20.750	0.000	0.03	0.00	0.01	0.0	0.000
20.767	0.000	0.03	0.00	0.01	0.0	0.000
20.783	0.000	0.03	0.00	0.01	0.0	0.000

20.800	0.000	0.03	0.00	0.01	0.0	0.000
20.817	0.000	0.03	0.00	0.01	0.0	0.000
20.833	0.000	0.03	0.00	0.01	0.0	0.000
20.850	0.000	0.03	0.00	0.01	0.0	0.000
20.867	0.000	0.03	0.00	0.01	0.0	0.000
20.883	0.000	0.03	0.00	0.01	0.0	0.000
20.900	0.000	0.03	0.00	0.01	0.0	0.000
20.917	0.000	0.03	0.00	0.01	0.0	0.000
20.933	0.000	0.03	0.00	0.01	0.0	0.000
20.950	0.000	0.03	0.00	0.01	0.0	0.000
20.967	0.000	0.03	0.00	0.01	0.0	0.000
20.983	0.000	0.03	0.00	0.01	0.0	0.000
21.000	0.000	0.03	0.00	0.01	0.0	0.000
21.017	0.000	0.03	0.00	0.01	0.0	0.000
21.033	0.000	0.03	0.00	0.01	0.0	0.000
21.050	0.000	0.03	0.00	0.01	0.0	0.000
21.067	0.000	0.03	0.00	0.01	0.0	0.000
21.083	0.000	0.03	0.00	0.01	0.0	0.000
21.100	0.000	0.03	0.00	0.01	0.0	0.000
21.117	0.000	0.03	0.00	0.01	0.0	0.000
21.133	0.000	0.03	0.00	0.01	0.0	0.000
21.150	0.000	0.03	0.00	0.01	0.0	0.000
21.167	0.000	0.03	0.00	0.01	0.0	0.000
21.183	0.000	0.03	0.00	0.01	0.0	0.000
21.200	0.000	0.03	0.00	0.01	0.0	0.000
21.217	0.000	0.03	0.00	0.01	0.0	0.000
21.233	0.000	0.03	0.00	0.01	0.0	0.000
21.250	0.000	0.03	0.00	0.01	0.0	0.000
21.267	0.000	0.03	0.00	0.01	0.0	0.000
21.283	0.000	0.03	0.00	0.01	0.0	0.000
21.300	0.000	0.03	0.00	0.01	0.0	0.000
21.317	0.000	0.03	0.00	0.01	0.0	0.000
21.333	0.000	0.03	0.00	0.01	0.0	0.000
21.350	0.000	0.03	0.00	0.01	0.0	0.000
21.367	0.000	0.03	0.00	0.01	0.0	0.000
21.383	0.000	0.03	0.00	0.01	0.0	0.000
21.400	0.000	0.03	0.00	0.01	0.0	0.000
21.417	0.000	0.03	0.00	0.01	0.0	0.000
21.433	0.000	0.03	0.00	0.01	0.0	0.000
21.450	0.000	0.03	0.00	0.01	0.0	0.000
21.467	0.000	0.03	0.00	0.01	0.0	0.000
21.483	0.000	0.03	0.00	0.01	0.0	0.000
21.500	0.000	0.03	0.00	0.01	0.0	0.000
21.517	0.000	0.03	0.00	0.01	0.0	0.000
21.533	0.000	0.03	0.00	0.01	0.0	0.000
21.550	0.000	0.03	0.00	0.01	0.0	0.000
21.567	0.000	0.03	0.00	0.01	0.0	0.000
21.583	0.000	0.03	0.00	0.01	0.0	0.000
21.600	0.000	0.03	0.00	0.01	0.0	0.000
21.617	0.000	0.03	0.00	0.01	0.0	0.000

21.633	0.000	0.03	0.00	0.01	0.0	0.000
21.650	0.000	0.03	0.00	0.01	0.0	0.000
21.667	0.000	0.03	0.00	0.01	0.0	0.000
21.683	0.000	0.03	0.00	0.01	0.0	0.000
21.700	0.000	0.03	0.00	0.01	0.0	0.000
21.717	0.000	0.03	0.00	0.01	0.0	0.000
21.733	0.000	0.03	0.00	0.01	0.0	0.000
21.750	0.000	0.03	0.00	0.01	0.0	0.000
21.767	0.000	0.03	0.00	0.01	0.0	0.000
21.783	0.000	0.03	0.00	0.01	0.0	0.000
21.800	0.000	0.03	0.00	0.01	0.0	0.000
21.817	0.000	0.03	0.00	0.01	0.0	0.000
21.833	0.000	0.03	0.00	0.01	0.0	0.000
21.850	0.000	0.03	0.00	0.01	0.0	0.000
21.867	0.000	0.03	0.00	0.01	0.0	0.000
21.883	0.000	0.03	0.00	0.01	0.0	0.000
21.900	0.000	0.03	0.00	0.01	0.0	0.000
21.917	0.000	0.03	0.00	0.01	0.0	0.000
21.933	0.000	0.03	0.00	0.01	0.0	0.000
21.950	0.000	0.03	0.00	0.01	0.0	0.000
21.967	0.000	0.03	0.00	0.01	0.0	0.000
21.983	0.000	0.03	0.00	0.01	0.0	0.000
22.000	0.000	0.03	0.00	0.01	0.0	0.000
22.017	0.000	0.03	0.00	0.01	0.0	0.000
22.033	0.000	0.03	0.00	0.01	0.0	0.000
22.050	0.000	0.03	0.00	0.01	0.0	0.000
22.067	0.000	0.03	0.00	0.01	0.0	0.000
22.083	0.000	0.03	0.00	0.01	0.0	0.000
22.100	0.000	0.03	0.00	0.01	0.0	0.000
22.117	0.000	0.03	0.00	0.01	0.0	0.000
22.133	0.000	0.03	0.00	0.01	0.0	0.000
22.150	0.000	0.03	0.00	0.01	0.0	0.000
22.167	0.000	0.03	0.00	0.01	0.0	0.000
22.183	0.000	0.03	0.00	0.01	0.0	0.000
22.200	0.000	0.03	0.00	0.01	0.0	0.000
22.216	0.000	0.03	0.00	0.01	0.0	0.000
22.233	0.000	0.03	0.00	0.01	0.0	0.000
22.250	0.000	0.03	0.00	0.01	0.0	0.000
22.266	0.000	0.03	0.00	0.01	0.0	0.000
22.283	0.000	0.03	0.00	0.01	0.0	0.000
22.300	0.000	0.03	0.00	0.01	0.0	0.000
22.316	0.000	0.03	0.00	0.01	0.0	0.000
22.333	0.000	0.03	0.00	0.01	0.0	0.000
22.350	0.000	0.03	0.00	0.01	0.0	0.000
22.366	0.000	0.03	0.00	0.01	0.0	0.000
22.383	0.000	0.03	0.00	0.01	0.0	0.000
22.400	0.000	0.03	0.00	0.01	0.0	0.000
22.416	0.000	0.03	0.00	0.01	0.0	0.000
22.433	0.000	0.03	0.00	0.01	0.0	0.000
22.450	0.000	0.03	0.00	0.01	0.0	0.000

22.466	0.000	0.03	0.00	0.01	0.0	0.000
22.483	0.000	0.03	0.00	0.01	0.0	0.000
22.500	0.000	0.03	0.00	0.01	0.0	0.000
22.516	0.000	0.03	0.00	0.01	0.0	0.000
22.533	0.000	0.03	0.00	0.01	0.0	0.000
22.550	0.000	0.03	0.00	0.01	0.0	0.000
22.566	0.000	0.03	0.00	0.01	0.0	0.000
22.583	0.000	0.03	0.00	0.01	0.0	0.000
22.600	0.000	0.03	0.00	0.01	0.0	0.000
22.616	0.000	0.03	0.00	0.01	0.0	0.000
22.633	0.000	0.03	0.00	0.01	0.0	0.000
22.650	0.000	0.03	0.00	0.01	0.0	0.000
22.666	0.000	0.03	0.00	0.01	0.0	0.000
22.683	0.000	0.03	0.00	0.01	0.0	0.000
22.700	0.000	0.03	0.00	0.01	0.0	0.000
22.716	0.000	0.03	0.00	0.01	0.0	0.000
22.733	0.000	0.03	0.00	0.01	0.0	0.000
22.750	0.000	0.03	0.00	0.01	0.0	0.000
22.766	0.000	0.03	0.00	0.01	0.0	0.000
22.783	0.000	0.03	0.00	0.01	0.0	0.000
22.800	0.000	0.03	0.00	0.01	0.0	0.000
22.816	0.000	0.03	0.00	0.01	0.0	0.000
22.833	0.000	0.02	0.00	0.01	0.0	0.000
22.850	0.000	0.02	0.00	0.01	0.0	0.000
22.866	0.000	0.02	0.00	0.01	0.0	0.000
22.883	0.000	0.02	0.00	0.01	0.0	0.000
22.900	0.000	0.02	0.00	0.01	0.0	0.000
22.916	0.000	0.02	0.00	0.01	0.0	0.000
22.933	0.000	0.02	0.00	0.01	0.0	0.000
22.950	0.000	0.02	0.00	0.01	0.0	0.000
22.966	0.000	0.02	0.00	0.01	0.0	0.000
22.983	0.000	0.02	0.00	0.00	0.0	0.000
23.000	0.000	0.02	0.00	0.00	0.0	0.000
23.016	0.000	0.02	0.00	0.00	0.0	0.000
23.033	0.000	0.02	0.00	0.00	0.0	0.000
23.050	0.000	0.02	0.00	0.00	0.0	0.000
23.066	0.000	0.02	0.00	0.00	0.0	0.000
23.083	0.000	0.02	0.00	0.00	0.0	0.000
23.100	0.000	0.02	0.00	0.00	0.0	0.000
23.116	0.000	0.02	0.00	0.00	0.0	0.000
23.133	0.000	0.02	0.00	0.00	0.0	0.000
23.150	0.000	0.02	0.00	0.00	0.0	0.000
23.166	0.000	0.02	0.00	0.00	0.0	0.000
23.183	0.000	0.02	0.00	0.00	0.0	0.000
23.200	0.000	0.02	0.00	0.00	0.0	0.000
23.216	0.000	0.02	0.00	0.00	0.0	0.000
23.233	0.000	0.02	0.00	0.00	0.0	0.000
23.250	0.000	0.02	0.00	0.00	0.0	0.000
23.266	0.000	0.02	0.00	0.00	0.0	0.000
23.283	0.000	0.02	0.00	0.00	0.0	0.000

23.300	0.000	0.02	0.00	0.00	0.0	0.000
23.316	0.000	0.02	0.00	0.00	0.0	0.000
23.333	0.000	0.02	0.00	0.00	0.0	0.000
23.350	0.000	0.02	0.00	0.00	0.0	0.000
23.366	0.000	0.02	0.00	0.00	0.0	0.000
23.383	0.000	0.02	0.00	0.00	0.0	0.000
23.400	0.000	0.02	0.00	0.00	0.0	0.000
23.416	0.000	0.02	0.00	0.00	0.0	0.000
23.433	0.000	0.02	0.00	0.00	0.0	0.000
23.450	0.000	0.02	0.00	0.00	0.0	0.000
23.466	0.000	0.02	0.00	0.00	0.0	0.000
23.483	0.000	0.02	0.00	0.00	0.0	0.000
23.500	0.000	0.02	0.00	0.00	0.0	0.000
23.516	0.000	0.02	0.00	0.00	0.0	0.000
23.533	0.000	0.02	0.00	0.00	0.0	0.000
23.550	0.000	0.02	0.00	0.00	0.0	0.000
23.566	0.000	0.02	0.00	0.00	0.0	0.000
23.583	0.000	0.02	0.00	0.00	0.0	0.000
23.600	0.000	0.02	0.00	0.00	0.0	0.000
23.616	0.000	0.02	0.00	0.00	0.0	0.000
23.633	0.000	0.02	0.00	0.00	0.0	0.000
23.650	0.000	0.02	0.00	0.00	0.0	0.000
23.666	0.000	0.02	0.00	0.00	0.0	0.000
23.683	0.000	0.02	0.00	0.00	0.0	0.000
23.700	0.000	0.02	0.00	0.00	0.0	0.000
23.716	0.000	0.02	0.00	0.00	0.0	0.000
23.733	0.000	0.02	0.00	0.00	0.0	0.000
23.750	0.000	0.02	0.00	0.00	0.0	0.000
23.766	0.000	0.02	0.00	0.00	0.0	0.000
23.783	0.000	0.02	0.00	0.00	0.0	0.000
23.800	0.000	0.02	0.00	0.00	0.0	0.000
23.816	0.000	0.02	0.00	0.00	0.0	0.000
23.833	0.000	0.02	0.00	0.00	0.0	0.000
23.850	0.000	0.02	0.00	0.00	0.0	0.000
23.866	0.000	0.02	0.00	0.00	0.0	0.000
23.883	0.000	0.02	0.00	0.00	0.0	0.000
23.900	0.000	0.02	0.00	0.00	0.0	0.000
23.916	0.000	0.02	0.00	0.00	0.0	0.000
23.933	0.000	0.02	0.00	0.00	0.0	0.000
23.950	0.000	0.02	0.00	0.00	0.0	0.000
23.966	0.000	0.02	0.00	0.00	0.0	0.000
23.983	0.000	0.02	0.00	0.00	0.0	0.000
24.000	0.000	0.02	0.00	0.00	0.0	0.000
24.016	0.000	0.02	0.00	0.00	0.0	0.000
24.033	0.000	0.02	0.00	0.00	0.0	0.000
24.050	0.000	0.02	0.00	0.00	0.0	0.000
24.066	0.000	0.02	0.00	0.00	0.0	0.000
24.083	0.000	0.02	0.00	0.00	0.0	0.000
24.100	0.000	0.02	0.00	0.00	0.0	0.000
24.116	0.000	0.01	0.00	0.00	0.0	0.000

24.133	0.000	0.01	0.00	0.00	0.0	0.000
24.150	0.000	0.01	0.00	0.00	0.0	0.000
24.166	0.000	0.01	0.00	0.00	0.0	0.000
24.183	0.000	0.00	0.00	0.00	0.0	0.000
24.200	0.000	0.00	0.00	0.00	0.0	0.000
24.216	0.000	0.00	0.00	0.00	0.0	0.000
24.233	0.000	0.00	0.00	0.00	0.0	0.000
24.250	0.000	0.00	0.00	0.00	0.0	0.000
24.266	0.000	0.00	0.00	0.00	0.0	0.000
24.283	0.000	0.00	0.00	0.00	0.0	0.000
24.300	0.000	0.00	0.00	0.00	0.0	0.000
24.316	0.000	0.00	0.00	0.00	0.0	0.000
24.333	0.000	0.00	0.00	0.00	0.0	0.000
24.350	0.000	0.00	0.00	0.00	0.0	0.000
24.366	0.000	0.00	0.00	0.00	0.0	0.000
24.383	0.000	0.00	0.00	0.00	0.0	0.000
24.400	0.000	0.00	0.00	0.00	0.0	0.000
24.416	0.000	0.00	0.00	0.00	0.0	0.000
24.433	0.000	0.00	0.00	0.00	0.0	0.000
24.450	0.000	0.00	0.00	0.00	0.0	0.000
24.466	0.000	0.00	0.00	0.00	0.0	0.000
24.483	0.000	0.00	0.00	0.00	0.0	0.000
24.500	0.000	0.00	0.00	0.00	0.0	0.000
24.516	0.000	0.00	0.00	0.00	0.0	0.000
24.533	0.000	0.00	0.00	0.00	0.0	0.000
24.550	0.000	0.00	0.00	0.00	0.0	0.000
24.566	0.000	0.00	0.00	0.00	0.0	0.000
24.583	0.000	0.00	0.00	0.00	0.0	0.000
24.600	0.000	0.00	0.00	0.00	0.0	0.000
24.616	0.000	0.00	0.00	0.00	0.0	0.000
24.633	0.000	0.00	0.00	0.00	0.0	0.000
24.650	0.000	0.00	0.00	0.00	0.0	0.000
24.666	0.000	0.00	0.00	0.00	0.0	0.000
24.683	0.000	0.00	0.00	0.00	0.0	0.000
24.700	0.000	0.00	0.00	0.00	0.0	0.000
24.716	0.000	0.00	0.00	0.00	0.0	0.000
24.733	0.000	0.00	0.00	0.00	0.0	0.000
24.750	0.000	0.00	0.00	0.00	0.0	0.000
24.766	0.000	0.00	0.00	0.00	0.0	0.000
24.783	0.000	0.00	0.00	0.00	0.0	0.000
24.800	0.000	0.00	0.00	0.00	0.0	0.000
24.816	0.000	0.00	0.00	0.00	0.0	0.000
24.833	0.000	0.00	0.00	0.00	0.0	0.000
24.850	0.000	0.00	0.00	0.00	0.0	0.000
24.866	0.000	0.00	0.00	0.00	0.0	0.000
24.883	0.000	0.00	0.00	0.00	0.0	0.000
24.900	0.000	0.00	0.00	0.00	0.0	0.000
24.916	0.000	0.00	0.00	0.00	0.0	0.000
24.933	0.000	0.00	0.00	0.00	0.0	0.000
24.950	0.000	0.00	0.00	0.00	0.0	0.000

24.966	0.000	0.00	0.00	0.00	0.0	0.000
24.983	0.000	0.00	0.00	0.00	0.0	0.000
25.000	0.000	0.00	0.00	0.00	0.0	0.000
25.016	0.000	0.00	0.00	0.00	0.0	0.000
25.033	0.000	0.00	0.00	0.00	0.0	0.000
25.050	0.000	0.00	0.00	0.00	0.0	0.000
25.066	0.000	0.00	0.00	0.00	0.0	0.000
25.083	0.000	0.00	0.00	0.00	0.0	0.000
25.100	0.000	0.00	0.00	0.00	0.0	0.000
25.116	0.000	0.00	0.00	0.00	0.0	0.000
25.133	0.000	0.00	0.00	0.00	0.0	0.000
25.150	0.000	0.00	0.00	0.00	0.0	0.000
25.166	0.000	0.00	0.00	0.00	0.0	0.000
25.183	0.000	0.00	0.00	0.00	0.0	0.000
25.200	0.000	0.00	0.00	0.00	0.0	0.000
25.216	0.000	0.00	0.00	0.00	0.0	0.000
25.233	0.000	0.00	0.00	0.00	0.0	0.000
25.250	0.000	0.00	0.00	0.00	0.0	0.000
25.266	0.000	0.00	0.00	0.00	0.0	0.000
25.283	0.000	0.00	0.00	0.00	0.0	0.000
25.300	0.000	0.00	0.00	0.00	0.0	0.000
25.316	0.000	0.00	0.00	0.00	0.0	0.000
25.333	0.000	0.00	0.00	0.00	0.0	0.000
25.350	0.000	0.00	0.00	0.00	0.0	0.000
25.366	0.000	0.00	0.00	0.00	0.0	0.000
25.383	0.000	0.00	0.00	0.00	0.0	0.000
25.400	0.000	0.00	0.00	0.00	0.0	0.000
25.416	0.000	0.00	0.00	0.00	0.0	0.000
25.433	0.000	0.00	0.00	0.00	0.0	0.000
25.450	0.000	0.00	0.00	0.00	0.0	0.000
25.466	0.000	0.00	0.00	0.00	0.0	0.000
25.483	0.000	0.00	0.00	0.00	0.0	0.000
25.500	0.000	0.00	0.00	0.00	0.0	0.000
25.516	0.000	0.00	0.00	0.00	0.0	0.000
25.533	0.000	0.00	0.00	0.00	0.0	0.000
25.550	0.000	0.00	0.00	0.00	0.0	0.000
25.566	0.000	0.00	0.00	0.00	0.0	0.000
25.583	0.000	0.00	0.00	0.00	0.0	0.000
25.600	0.000	0.00	0.00	0.00	0.0	0.000
25.616	0.000	0.00	0.00	0.00	0.0	0.000
25.633	0.000	0.00	0.00	0.00	0.0	0.000
25.650	0.000	0.00	0.00	0.00	0.0	0.000
25.666	0.000	0.00	0.00	0.00	0.0	0.000
25.683	0.000	0.00	0.00	0.00	0.0	0.000
25.700	0.000	0.00	0.00	0.00	0.0	0.000
25.716	0.000	0.00	0.00	0.00	0.0	0.000
25.733	0.000	0.00	0.00	0.00	0.0	0.000
25.750	0.000	0.00	0.00	0.00	0.0	0.000
25.766	0.000	0.00	0.00	0.00	0.0	0.000
25.783	0.000	0.00	0.00	0.00	0.0	0.000

25.800	0.000	0.00	0.00	0.00	0.0	0.000
25.816	0.000	0.00	0.00	0.00	0.0	0.000
25.833	0.000	0.00	0.00	0.00	0.0	0.000
25.850	0.000	0.00	0.00	0.00	0.0	0.000
25.866	0.000	0.00	0.00	0.00	0.0	0.000
25.883	0.000	0.00	0.00	0.00	0.0	0.000
25.900	0.000	0.00	0.00	0.00	0.0	0.000
25.916	0.000	0.00	0.00	0.00	0.0	0.000
25.933	0.000	0.00	0.00	0.00	0.0	0.000
25.950	0.000	0.00	0.00	0.00	0.0	0.000
25.966	0.000	0.00	0.00	0.00	0.0	0.000
25.983	0.000	0.00	0.00	0.00	0.0	0.000
26.000	0.000	0.00	0.00	0.00	0.0	0.000
26.016	0.000	0.00	0.00	0.00	0.0	0.000
26.033	0.000	0.00	0.00	0.00	0.0	0.000
26.050	0.000	0.00	0.00	0.00	0.0	0.000
26.066	0.000	0.00	0.00	0.00	0.0	0.000
26.083	0.000	0.00	0.00	0.00	0.0	0.000
26.100	0.000	0.00	0.00	0.00	0.0	0.000
26.116	0.000	0.00	0.00	0.00	0.0	0.000
26.133	0.000	0.00	0.00	0.00	0.0	0.000
26.150	0.000	0.00	0.00	0.00	0.0	0.000
26.166	0.000	0.00	0.00	0.00	0.0	0.000
26.183	0.000	0.00	0.00	0.00	0.0	0.000
26.200	0.000	0.00	0.00	0.00	0.0	0.000
26.216	0.000	0.00	0.00	0.00	0.0	0.000
26.233	0.000	0.00	0.00	0.00	0.0	0.000
26.250	0.000	0.00	0.00	0.00	0.0	0.000
26.266	0.000	0.00	0.00	0.00	0.0	0.000
26.283	0.000	0.00	0.00	0.00	0.0	0.000
26.300	0.000	0.00	0.00	0.00	0.0	0.000
26.316	0.000	0.00	0.00	0.00	0.0	0.000
26.333	0.000	0.00	0.00	0.00	0.0	0.000
26.350	0.000	0.00	0.00	0.00	0.0	0.000
26.366	0.000	0.00	0.00	0.00	0.0	0.000
26.383	0.000	0.00	0.00	0.00	0.0	0.000
26.400	0.000	0.00	0.00	0.00	0.0	0.000
26.416	0.000	0.00	0.00	0.00	0.0	0.000
26.433	0.000	0.00	0.00	0.00	0.0	0.000
26.450	0.000	0.00	0.00	0.00	0.0	0.000
26.466	0.000	0.00	0.00	0.00	0.0	0.000
26.483	0.000	0.00	0.00	0.00	0.0	0.000
26.500	0.000	0.00	0.00	0.00	0.0	0.000
26.516	0.000	0.00	0.00	0.00	0.0	0.000
26.533	0.000	0.00	0.00	0.00	0.0	0.000
26.550	0.000	0.00	0.00	0.00	0.0	0.000
26.566	0.000	0.00	0.00	0.00	0.0	0.000
26.583	0.000	0.00	0.00	0.00	0.0	0.000
26.600	0.000	0.00	0.00	0.00	0.0	0.000
26.616	0.000	0.00	0.00	0.00	0.0	0.000

26.633	0.000	0.00	0.00	0.00	0.0	0.000
26.650	0.000	0.00	0.00	0.00	0.0	0.000
26.666	0.000	0.00	0.00	0.00	0.0	0.000
26.683	0.000	0.00	0.00	0.00	0.0	0.000
26.700	0.000	0.00	0.00	0.00	0.0	0.000
26.716	0.000	0.00	0.00	0.00	0.0	0.000
26.733	0.000	0.00	0.00	0.00	0.0	0.000
26.750	0.000	0.00	0.00	0.00	0.0	0.000
26.766	0.000	0.00	0.00	0.00	0.0	0.000
26.783	0.000	0.00	0.00	0.00	0.0	0.000
26.800	0.000	0.00	0.00	0.00	0.0	0.000
26.816	0.000	0.00	0.00	0.00	0.0	0.000
26.833	0.000	0.00	0.00	0.00	0.0	0.000
26.850	0.000	0.00	0.00	0.00	0.0	0.000
26.866	0.000	0.00	0.00	0.00	0.0	0.000
26.883	0.000	0.00	0.00	0.00	0.0	0.000
26.900	0.000	0.00	0.00	0.00	0.0	0.000
26.916	0.000	0.00	0.00	0.00	0.0	0.000
26.933	0.000	0.00	0.00	0.00	0.0	0.000
26.950	0.000	0.00	0.00	0.00	0.0	0.000
26.966	0.000	0.00	0.00	0.00	0.0	0.000
26.983	0.000	0.00	0.00	0.00	0.0	0.000
27.000	0.000	0.00	0.00	0.00	0.0	0.000
27.016	0.000	0.00	0.00	0.00	0.0	0.000
27.033	0.000	0.00	0.00	0.00	0.0	0.000
27.050	0.000	0.00	0.00	0.00	0.0	0.000
27.066	0.000	0.00	0.00	0.00	0.0	0.000
27.083	0.000	0.00	0.00	0.00	0.0	0.000
27.100	0.000	0.00	0.00	0.00	0.0	0.000
27.116	0.000	0.00	0.00	0.00	0.0	0.000
27.133	0.000	0.00	0.00	0.00	0.0	0.000
27.150	0.000	0.00	0.00	0.00	0.0	0.000
27.166	0.000	0.00	0.00	0.00	0.0	0.000
27.183	0.000	0.00	0.00	0.00	0.0	0.000
27.200	0.000	0.00	0.00	0.00	0.0	0.000
27.216	0.000	0.00	0.00	0.00	0.0	0.000
27.233	0.000	0.00	0.00	0.00	0.0	0.000
27.250	0.000	0.00	0.00	0.00	0.0	0.000
27.266	0.000	0.00	0.00	0.00	0.0	0.000
27.283	0.000	0.00	0.00	0.00	0.0	0.000
27.300	0.000	0.00	0.00	0.00	0.0	0.000
27.316	0.000	0.00	0.00	0.00	0.0	0.000
27.333	0.000	0.00	0.00	0.00	0.0	0.000
27.350	0.000	0.00	0.00	0.00	0.0	0.000
27.366	0.000	0.00	0.00	0.00	0.0	0.000
27.383	0.000	0.00	0.00	0.00	0.0	0.000
27.400	0.000	0.00	0.00	0.00	0.0	0.000
27.416	0.000	0.00	0.00	0.00	0.0	0.000
27.433	0.000	0.00	0.00	0.00	0.0	0.000
27.450	0.000	0.00	0.00	0.00	0.0	0.000

27.466	0.000	0.00	0.00	0.00	0.0	0.000
27.483	0.000	0.00	0.00	0.00	0.0	0.000
27.500	0.000	0.00	0.00	0.00	0.0	0.000
27.516	0.000	0.00	0.00	0.00	0.0	0.000
27.533	0.000	0.00	0.00	0.00	0.0	0.000
27.550	0.000	0.00	0.00	0.00	0.0	0.000
27.566	0.000	0.00	0.00	0.00	0.0	0.000
27.583	0.000	0.00	0.00	0.00	0.0	0.000
27.600	0.000	0.00	0.00	0.00	0.0	0.000
27.616	0.000	0.00	0.00	0.00	0.0	0.000
27.633	0.000	0.00	0.00	0.00	0.0	0.000
27.650	0.000	0.00	0.00	0.00	0.0	0.000
27.666	0.000	0.00	0.00	0.00	0.0	0.000
27.683	0.000	0.00	0.00	0.00	0.0	0.000
27.700	0.000	0.00	0.00	0.00	0.0	0.000
27.716	0.000	0.00	0.00	0.00	0.0	0.000
27.733	0.000	0.00	0.00	0.00	0.0	0.000
27.750	0.000	0.00	0.00	0.00	0.0	0.000
27.766	0.000	0.00	0.00	0.00	0.0	0.000
27.783	0.000	0.00	0.00	0.00	0.0	0.000
27.800	0.000	0.00	0.00	0.00	0.0	0.000
27.816	0.000	0.00	0.00	0.00	0.0	0.000
27.833	0.000	0.00	0.00	0.00	0.0	0.000
27.850	0.000	0.00	0.00	0.00	0.0	0.000
27.866	0.000	0.00	0.00	0.00	0.0	0.000
27.883	0.000	0.00	0.00	0.00	0.0	0.000
27.900	0.000	0.00	0.00	0.00	0.0	0.000
27.916	0.000	0.00	0.00	0.00	0.0	0.000
27.933	0.000	0.00	0.00	0.00	0.0	0.000
27.950	0.000	0.00	0.00	0.00	0.0	0.000
27.966	0.000	0.00	0.00	0.00	0.0	0.000
27.983	0.000	0.00	0.00	0.00	0.0	0.000
28.000	0.000	0.00	0.00	0.00	0.0	0.000
28.016	0.000	0.00	0.00	0.00	0.0	0.000
28.033	0.000	0.00	0.00	0.00	0.0	0.000
28.050	0.000	0.00	0.00	0.00	0.0	0.000
28.066	0.000	0.00	0.00	0.00	0.0	0.000
28.083	0.000	0.00	0.00	0.00	0.0	0.000
28.100	0.000	0.00	0.00	0.00	0.0	0.000
28.116	0.000	0.00	0.00	0.00	0.0	0.000
28.133	0.000	0.00	0.00	0.00	0.0	0.000
28.150	0.000	0.00	0.00	0.00	0.0	0.000
28.166	0.000	0.00	0.00	0.00	0.0	0.000
28.183	0.000	0.00	0.00	0.00	0.0	0.000
28.200	0.000	0.00	0.00	0.00	0.0	0.000
28.216	0.000	0.00	0.00	0.00	0.0	0.000
28.233	0.000	0.00	0.00	0.00	0.0	0.000
28.250	0.000	0.00	0.00	0.00	0.0	0.000
28.266	0.000	0.00	0.00	0.00	0.0	0.000
28.283	0.000	0.00	0.00	0.00	0.0	0.000

28.300	0.000	0.00	0.00	0.00	0.0	0.000
28.316	0.000	0.00	0.00	0.00	0.0	0.000
28.333	0.000	0.00	0.00	0.00	0.0	0.000
28.350	0.000	0.00	0.00	0.00	0.0	0.000
28.366	0.000	0.00	0.00	0.00	0.0	0.000
28.383	0.000	0.00	0.00	0.00	0.0	0.000
28.400	0.000	0.00	0.00	0.00	0.0	0.000
28.416	0.000	0.00	0.00	0.00	0.0	0.000
28.433	0.000	0.00	0.00	0.00	0.0	0.000
28.450	0.000	0.00	0.00	0.00	0.0	0.000
28.466	0.000	0.00	0.00	0.00	0.0	0.000
28.483	0.000	0.00	0.00	0.00	0.0	0.000
28.500	0.000	0.00	0.00	0.00	0.0	0.000
28.516	0.000	0.00	0.00	0.00	0.0	0.000
28.533	0.000	0.00	0.00	0.00	0.0	0.000
28.550	0.000	0.00	0.00	0.00	0.0	0.000
28.566	0.000	0.00	0.00	0.00	0.0	0.000
28.583	0.000	0.00	0.00	0.00	0.0	0.000
28.600	0.000	0.00	0.00	0.00	0.0	0.000
28.616	0.000	0.00	0.00	0.00	0.0	0.000
28.633	0.000	0.00	0.00	0.00	0.0	0.000
28.650	0.000	0.00	0.00	0.00	0.0	0.000
28.666	0.000	0.00	0.00	0.00	0.0	0.000
28.683	0.000	0.00	0.00	0.00	0.0	0.000
28.700	0.000	0.00	0.00	0.00	0.0	0.000
28.716	0.000	0.00	0.00	0.00	0.0	0.000
28.733	0.000	0.00	0.00	0.00	0.0	0.000
28.750	0.000	0.00	0.00	0.00	0.0	0.000
28.766	0.000	0.00	0.00	0.00	0.0	0.000
28.783	0.000	0.00	0.00	0.00	0.0	0.000
28.800	0.000	0.00	0.00	0.00	0.0	0.000
28.816	0.000	0.00	0.00	0.00	0.0	0.000
28.833	0.000	0.00	0.00	0.00	0.0	0.000
28.850	0.000	0.00	0.00	0.00	0.0	0.000
28.866	0.000	0.00	0.00	0.00	0.0	0.000
28.883	0.000	0.00	0.00	0.00	0.0	0.000
28.900	0.000	0.00	0.00	0.00	0.0	0.000
28.916	0.000	0.00	0.00	0.00	0.0	0.000
28.933	0.000	0.00	0.00	0.00	0.0	0.000
28.950	0.000	0.00	0.00	0.00	0.0	0.000
28.966	0.000	0.00	0.00	0.00	0.0	0.000
28.983	0.000	0.00	0.00	0.00	0.0	0.000
29.000	0.000	0.00	0.00	0.00	0.0	0.000
29.016	0.000	0.00	0.00	0.00	0.0	0.000
29.033	0.000	0.00	0.00	0.00	0.0	0.000
29.050	0.000	0.00	0.00	0.00	0.0	0.000
29.066	0.000	0.00	0.00	0.00	0.0	0.000
29.083	0.000	0.00	0.00	0.00	0.0	0.000
29.100	0.000	0.00	0.00	0.00	0.0	0.000
29.116	0.000	0.00	0.00	0.00	0.0	0.000

29.133	0.000	0.00	0.00	0.00	0.0	0.000
29.150	0.000	0.00	0.00	0.00	0.0	0.000
29.166	0.000	0.00	0.00	0.00	0.0	0.000
29.183	0.000	0.00	0.00	0.00	0.0	0.000
29.200	0.000	0.00	0.00	0.00	0.0	0.000
29.216	0.000	0.00	0.00	0.00	0.0	0.000
29.233	0.000	0.00	0.00	0.00	0.0	0.000
29.250	0.000	0.00	0.00	0.00	0.0	0.000
29.266	0.000	0.00	0.00	0.00	0.0	0.000
29.283	0.000	0.00	0.00	0.00	0.0	0.000
29.300	0.000	0.00	0.00	0.00	0.0	0.000
29.316	0.000	0.00	0.00	0.00	0.0	0.000
29.333	0.000	0.00	0.00	0.00	0.0	0.000
29.350	0.000	0.00	0.00	0.00	0.0	0.000
29.366	0.000	0.00	0.00	0.00	0.0	0.000
29.383	0.000	0.00	0.00	0.00	0.0	0.000
29.400	0.000	0.00	0.00	0.00	0.0	0.000
29.416	0.000	0.00	0.00	0.00	0.0	0.000
29.433	0.000	0.00	0.00	0.00	0.0	0.000
29.450	0.000	0.00	0.00	0.00	0.0	0.000
29.466	0.000	0.00	0.00	0.00	0.0	0.000
29.483	0.000	0.00	0.00	0.00	0.0	0.000
29.500	0.000	0.00	0.00	0.00	0.0	0.000
29.516	0.000	0.00	0.00	0.00	0.0	0.000
29.533	0.000	0.00	0.00	0.00	0.0	0.000
29.550	0.000	0.00	0.00	0.00	0.0	0.000
29.566	0.000	0.00	0.00	0.00	0.0	0.000
29.583	0.000	0.00	0.00	0.00	0.0	0.000
29.600	0.000	0.00	0.00	0.00	0.0	0.000
29.616	0.000	0.00	0.00	0.00	0.0	0.000
29.633	0.000	0.00	0.00	0.00	0.0	0.000
29.650	0.000	0.00	0.00	0.00	0.0	0.000
29.666	0.000	0.00	0.00	0.00	0.0	0.000
29.683	0.000	0.00	0.00	0.00	0.0	0.000
29.700	0.000	0.00	0.00	0.00	0.0	0.000
29.716	0.000	0.00	0.00	0.00	0.0	0.000
29.733	0.000	0.00	0.00	0.00	0.0	0.000
29.750	0.000	0.00	0.00	0.00	0.0	0.000
29.766	0.000	0.00	0.00	0.00	0.0	0.000
29.783	0.000	0.00	0.00	0.00	0.0	0.000
29.800	0.000	0.00	0.00	0.00	0.0	0.000
29.816	0.000	0.00	0.00	0.00	0.0	0.000
29.833	0.000	0.00	0.00	0.00	0.0	0.000
29.850	0.000	0.00	0.00	0.00	0.0	0.000
29.866	0.000	0.00	0.00	0.00	0.0	0.000
29.883	0.000	0.00	0.00	0.00	0.0	0.000
29.900	0.000	0.00	0.00	0.00	0.0	0.000
29.916	0.000	0.00	0.00	0.00	0.0	0.000
29.933	0.000	0.00	0.00	0.00	0.0	0.000
29.950	0.000	0.00	0.00	0.00	0.0	0.000

29.966	0.000	0.00	0.00	0.00	0.0	0.000
29.983	0.000	0.00	0.00	0.00	0.0	0.000
30.000	0.000	0.00	0.00	0.00	0.0	0.000
30.016	0.000	0.00	0.00	0.00	0.0	0.000
30.033	0.000	0.00	0.00	0.00	0.0	0.000
30.050	0.000	0.00	0.00	0.00	0.0	0.000
30.066	0.000	0.00	0.00	0.00	0.0	0.000
30.083	0.000	0.00	0.00	0.00	0.0	0.000
30.100	0.000	0.00	0.00	0.00	0.0	0.000
30.116	0.000	0.00	0.00	0.00	0.0	0.000
30.133	0.000	0.00	0.00	0.00	0.0	0.000
30.150	0.000	0.00	0.00	0.00	0.0	0.000
30.166	0.000	0.00	0.00	0.00	0.0	0.000
30.183	0.000	0.00	0.00	0.00	0.0	0.000
30.200	0.000	0.00	0.00	0.00	0.0	0.000
30.216	0.000	0.00	0.00	0.00	0.0	0.000
30.233	0.000	0.00	0.00	0.00	0.0	0.000
30.250	0.000	0.00	0.00	0.00	0.0	0.000
30.266	0.000	0.00	0.00	0.00	0.0	0.000
30.283	0.000	0.00	0.00	0.00	0.0	0.000
30.300	0.000	0.00	0.00	0.00	0.0	0.000
30.316	0.000	0.00	0.00	0.00	0.0	0.000
30.333	0.000	0.00	0.00	0.00	0.0	0.000
30.350	0.000	0.00	0.00	0.00	0.0	0.000
30.366	0.000	0.00	0.00	0.00	0.0	0.000
30.383	0.000	0.00	0.00	0.00	0.0	0.000
30.400	0.000	0.00	0.00	0.00	0.0	0.000
30.416	0.000	0.00	0.00	0.00	0.0	0.000
30.433	0.000	0.00	0.00	0.00	0.0	0.000
30.450	0.000	0.00	0.00	0.00	0.0	0.000
30.466	0.000	0.00	0.00	0.00	0.0	0.000
30.483	0.000	0.00	0.00	0.00	0.0	0.000
30.500	0.000	0.00	0.00	0.00	0.0	0.000
30.516	0.000	0.00	0.00	0.00	0.0	0.000
30.533	0.000	0.00	0.00	0.00	0.0	0.000
30.550	0.000	0.00	0.00	0.00	0.0	0.000
30.566	0.000	0.00	0.00	0.00	0.0	0.000
30.583	0.000	0.00	0.00	0.00	0.0	0.000
30.600	0.000	0.00	0.00	0.00	0.0	0.000
30.616	0.000	0.00	0.00	0.00	0.0	0.000
30.633	0.000	0.00	0.00	0.00	0.0	0.000
30.650	0.000	0.00	0.00	0.00	0.0	0.000
30.666	0.000	0.00	0.00	0.00	0.0	0.000
30.683	0.000	0.00	0.00	0.00	0.0	0.000
30.700	0.000	0.00	0.00	0.00	0.0	0.000
30.716	0.000	0.00	0.00	0.00	0.0	0.000
30.733	0.000	0.00	0.00	0.00	0.0	0.000
30.750	0.000	0.00	0.00	0.00	0.0	0.000
30.766	0.000	0.00	0.00	0.00	0.0	0.000
30.783	0.000	0.00	0.00	0.00	0.0	0.000

30.800	0.000	0.00	0.00	0.00	0.0	0.000
30.816	0.000	0.00	0.00	0.00	0.0	0.000
30.833	0.000	0.00	0.00	0.00	0.0	0.000
30.850	0.000	0.00	0.00	0.00	0.0	0.000
30.866	0.000	0.00	0.00	0.00	0.0	0.000
30.883	0.000	0.00	0.00	0.00	0.0	0.000
30.900	0.000	0.00	0.00	0.00	0.0	0.000
30.916	0.000	0.00	0.00	0.00	0.0	0.000
30.933	0.000	0.00	0.00	0.00	0.0	0.000
30.950	0.000	0.00	0.00	0.00	0.0	0.000
30.966	0.000	0.00	0.00	0.00	0.0	0.000
30.983	0.000	0.00	0.00	0.00	0.0	0.000
31.000	0.000	0.00	0.00	0.00	0.0	0.000
31.016	0.000	0.00	0.00	0.00	0.0	0.000
31.033	0.000	0.00	0.00	0.00	0.0	0.000
31.050	0.000	0.00	0.00	0.00	0.0	0.000
31.066	0.000	0.00	0.00	0.00	0.0	0.000
31.083	0.000	0.00	0.00	0.00	0.0	0.000
31.100	0.000	0.00	0.00	0.00	0.0	0.000
31.116	0.000	0.00	0.00	0.00	0.0	0.000
31.133	0.000	0.00	0.00	0.00	0.0	0.000
31.150	0.000	0.00	0.00	0.00	0.0	0.000
31.166	0.000	0.00	0.00	0.00	0.0	0.000
31.183	0.000	0.00	0.00	0.00	0.0	0.000
31.200	0.000	0.00	0.00	0.00	0.0	0.000
31.216	0.000	0.00	0.00	0.00	0.0	0.000
31.233	0.000	0.00	0.00	0.00	0.0	0.000
31.250	0.000	0.00	0.00	0.00	0.0	0.000
31.266	0.000	0.00	0.00	0.00	0.0	0.000
31.283	0.000	0.00	0.00	0.00	0.0	0.000
31.300	0.000	0.00	0.00	0.00	0.0	0.000
31.316	0.000	0.00	0.00	0.00	0.0	0.000
31.333	0.000	0.00	0.00	0.00	0.0	0.000
31.350	0.000	0.00	0.00	0.00	0.0	0.000
31.366	0.000	0.00	0.00	0.00	0.0	0.000
31.383	0.000	0.00	0.00	0.00	0.0	0.000
31.400	0.000	0.00	0.00	0.00	0.0	0.000
31.416	0.000	0.00	0.00	0.00	0.0	0.000
31.433	0.000	0.00	0.00	0.00	0.0	0.000
31.450	0.000	0.00	0.00	0.00	0.0	0.000
31.466	0.000	0.00	0.00	0.00	0.0	0.000
31.483	0.000	0.00	0.00	0.00	0.0	0.000
31.500	0.000	0.00	0.00	0.00	0.0	0.000
31.516	0.000	0.00	0.00	0.00	0.0	0.000
31.533	0.000	0.00	0.00	0.00	0.0	0.000
31.550	0.000	0.00	0.00	0.00	0.0	0.000
31.566	0.000	0.00	0.00	0.00	0.0	0.000
31.583	0.000	0.00	0.00	0.00	0.0	0.000
31.600	0.000	0.00	0.00	0.00	0.0	0.000
31.616	0.000	0.00	0.00	0.00	0.0	0.000

31.633	0.000	0.00	0.00	0.00	0.0	0.000
31.650	0.000	0.00	0.00	0.00	0.0	0.000
31.666	0.000	0.00	0.00	0.00	0.0	0.000
31.683	0.000	0.00	0.00	0.00	0.0	0.000
31.700	0.000	0.00	0.00	0.00	0.0	0.000
31.716	0.000	0.00	0.00	0.00	0.0	0.000
31.733	0.000	0.00	0.00	0.00	0.0	0.000
31.750	0.000	0.00	0.00	0.00	0.0	0.000
31.766	0.000	0.00	0.00	0.00	0.0	0.000
31.783	0.000	0.00	0.00	0.00	0.0	0.000
31.800	0.000	0.00	0.00	0.00	0.0	0.000
31.816	0.000	0.00	0.00	0.00	0.0	0.000
31.833	0.000	0.00	0.00	0.00	0.0	0.000
31.850	0.000	0.00	0.00	0.00	0.0	0.000
31.866	0.000	0.00	0.00	0.00	0.0	0.000
31.883	0.000	0.00	0.00	0.00	0.0	0.000
31.900	0.000	0.00	0.00	0.00	0.0	0.000
31.916	0.000	0.00	0.00	0.00	0.0	0.000
31.933	0.000	0.00	0.00	0.00	0.0	0.000
31.950	0.000	0.00	0.00	0.00	0.0	0.000
31.966	0.000	0.00	0.00	0.00	0.0	0.000
31.983	0.000	0.00	0.00	0.00	0.0	0.000
32.000	0.000	0.00	0.00	0.00	0.0	0.000
32.016	0.000	0.00	0.00	0.00	0.0	0.000
32.033	0.000	0.00	0.00	0.00	0.0	0.000
32.050	0.000	0.00	0.00	0.00	0.0	0.000
32.066	0.000	0.00	0.00	0.00	0.0	0.000
32.083	0.000	0.00	0.00	0.00	0.0	0.000
32.100	0.000	0.00	0.00	0.00	0.0	0.000
32.116	0.000	0.00	0.00	0.00	0.0	0.000
32.133	0.000	0.00	0.00	0.00	0.0	0.000
32.150	0.000	0.00	0.00	0.00	0.0	0.000
32.166	0.000	0.00	0.00	0.00	0.0	0.000
32.183	0.000	0.00	0.00	0.00	0.0	0.000
32.200	0.000	0.00	0.00	0.00	0.0	0.000
32.216	0.000	0.00	0.00	0.00	0.0	0.000
32.233	0.000	0.00	0.00	0.00	0.0	0.000
32.250	0.000	0.00	0.00	0.00	0.0	0.000
32.266	0.000	0.00	0.00	0.00	0.0	0.000
32.283	0.000	0.00	0.00	0.00	0.0	0.000
32.300	0.000	0.00	0.00	0.00	0.0	0.000
32.316	0.000	0.00	0.00	0.00	0.0	0.000
32.333	0.000	0.00	0.00	0.00	0.0	0.000
32.350	0.000	0.00	0.00	0.00	0.0	0.000
32.366	0.000	0.00	0.00	0.00	0.0	0.000
32.383	0.000	0.00	0.00	0.00	0.0	0.000
32.400	0.000	0.00	0.00	0.00	0.0	0.000
32.416	0.000	0.00	0.00	0.00	0.0	0.000
32.433	0.000	0.00	0.00	0.00	0.0	0.000
32.450	0.000	0.00	0.00	0.00	0.0	0.000

32.466	0.000	0.00	0.00	0.00	0.0	0.000
32.483	0.000	0.00	0.00	0.00	0.0	0.000
32.500	0.000	0.00	0.00	0.00	0.0	0.000
32.516	0.000	0.00	0.00	0.00	0.0	0.000
32.533	0.000	0.00	0.00	0.00	0.0	0.000
32.550	0.000	0.00	0.00	0.00	0.0	0.000
32.566	0.000	0.00	0.00	0.00	0.0	0.000
32.583	0.000	0.00	0.00	0.00	0.0	0.000
32.600	0.000	0.00	0.00	0.00	0.0	0.000
32.616	0.000	0.00	0.00	0.00	0.0	0.000
32.633	0.000	0.00	0.00	0.00	0.0	0.000
32.650	0.000	0.00	0.00	0.00	0.0	0.000
32.666	0.000	0.00	0.00	0.00	0.0	0.000
32.683	0.000	0.00	0.00	0.00	0.0	0.000
32.700	0.000	0.00	0.00	0.00	0.0	0.000
32.716	0.000	0.00	0.00	0.00	0.0	0.000
32.733	0.000	0.00	0.00	0.00	0.0	0.000
32.750	0.000	0.00	0.00	0.00	0.0	0.000
32.766	0.000	0.00	0.00	0.00	0.0	0.000
32.783	0.000	0.00	0.00	0.00	0.0	0.000
32.800	0.000	0.00	0.00	0.00	0.0	0.000
32.816	0.000	0.00	0.00	0.00	0.0	0.000
32.833	0.000	0.00	0.00	0.00	0.0	0.000
32.850	0.000	0.00	0.00	0.00	0.0	0.000
32.866	0.000	0.00	0.00	0.00	0.0	0.000
32.883	0.000	0.00	0.00	0.00	0.0	0.000
32.900	0.000	0.00	0.00	0.00	0.0	0.000
32.916	0.000	0.00	0.00	0.00	0.0	0.000
32.933	0.000	0.00	0.00	0.00	0.0	0.000
32.950	0.000	0.00	0.00	0.00	0.0	0.000
32.966	0.000	0.00	0.00	0.00	0.0	0.000
32.983	0.000	0.00	0.00	0.00	0.0	0.000
33.000	0.000	0.00	0.00	0.00	0.0	0.000
33.016	0.000	0.00	0.00	0.00	0.0	0.000
33.033	0.000	0.00	0.00	0.00	0.0	0.000
33.050	0.000	0.00	0.00	0.00	0.0	0.000
33.066	0.000	0.00	0.00	0.00	0.0	0.000
33.083	0.000	0.00	0.00	0.00	0.0	0.000
33.100	0.000	0.00	0.00	0.00	0.0	0.000
33.116	0.000	0.00	0.00	0.00	0.0	0.000
33.133	0.000	0.00	0.00	0.00	0.0	0.000
33.150	0.000	0.00	0.00	0.00	0.0	0.000
33.166	0.000	0.00	0.00	0.00	0.0	0.000
33.183	0.000	0.00	0.00	0.00	0.0	0.000
33.200	0.000	0.00	0.00	0.00	0.0	0.000
33.216	0.000	0.00	0.00	0.00	0.0	0.000
33.233	0.000	0.00	0.00	0.00	0.0	0.000
33.250	0.000	0.00	0.00	0.00	0.0	0.000
33.266	0.000	0.00	0.00	0.00	0.0	0.000
33.283	0.000	0.00	0.00	0.00	0.0	0.000

33.300	0.000	0.00	0.00	0.00	0.0	0.000
33.316	0.000	0.00	0.00	0.00	0.0	0.000
33.333	0.000	0.00	0.00	0.00	0.0	0.000
33.350	0.000	0.00	0.00	0.00	0.0	0.000
33.366	0.000	0.00	0.00	0.00	0.0	0.000
33.383	0.000	0.00	0.00	0.00	0.0	0.000
33.400	0.000	0.00	0.00	0.00	0.0	0.000
33.416	0.000	0.00	0.00	0.00	0.0	0.000
33.433	0.000	0.00	0.00	0.00	0.0	0.000
33.450	0.000	0.00	0.00	0.00	0.0	0.000
33.466	0.000	0.00	0.00	0.00	0.0	0.000
33.483	0.000	0.00	0.00	0.00	0.0	0.000
33.500	0.000	0.00	0.00	0.00	0.0	0.000
33.516	0.000	0.00	0.00	0.00	0.0	0.000
33.533	0.000	0.00	0.00	0.00	0.0	0.000
33.550	0.000	0.00	0.00	0.00	0.0	0.000
33.566	0.000	0.00	0.00	0.00	0.0	0.000
33.583	0.000	0.00	0.00	0.00	0.0	0.000
33.600	0.000	0.00	0.00	0.00	0.0	0.000
33.616	0.000	0.00	0.00	0.00	0.0	0.000
33.633	0.000	0.00	0.00	0.00	0.0	0.000
33.650	0.000	0.00	0.00	0.00	0.0	0.000
33.666	0.000	0.00	0.00	0.00	0.0	0.000
33.683	0.000	0.00	0.00	0.00	0.0	0.000
33.700	0.000	0.00	0.00	0.00	0.0	0.000
33.716	0.000	0.00	0.00	0.00	0.0	0.000
33.733	0.000	0.00	0.00	0.00	0.0	0.000
33.750	0.000	0.00	0.00	0.00	0.0	0.000
33.766	0.000	0.00	0.00	0.00	0.0	0.000
33.783	0.000	0.00	0.00	0.00	0.0	0.000
33.800	0.000	0.00	0.00	0.00	0.0	0.000
33.816	0.000	0.00	0.00	0.00	0.0	0.000
33.833	0.000	0.00	0.00	0.00	0.0	0.000
33.850	0.000	0.00	0.00	0.00	0.0	0.000
33.866	0.000	0.00	0.00	0.00	0.0	0.000
33.883	0.000	0.00	0.00	0.00	0.0	0.000
33.900	0.000	0.00	0.00	0.00	0.0	0.000
33.916	0.000	0.00	0.00	0.00	0.0	0.000
33.933	0.000	0.00	0.00	0.00	0.0	0.000
33.950	0.000	0.00	0.00	0.00	0.0	0.000
33.966	0.000	0.00	0.00	0.00	0.0	0.000
33.983	0.000	0.00	0.00	0.00	0.0	0.000
34.000	0.000	0.00	0.00	0.00	0.0	0.000
34.016	0.000	0.00	0.00	0.00	0.0	0.000
34.033	0.000	0.00	0.00	0.00	0.0	0.000
34.050	0.000	0.00	0.00	0.00	0.0	0.000
34.066	0.000	0.00	0.00	0.00	0.0	0.000
34.083	0.000	0.00	0.00	0.00	0.0	0.000
34.100	0.000	0.00	0.00	0.00	0.0	0.000
34.116	0.000	0.00	0.00	0.00	0.0	0.000

34.133	0.000	0.00	0.00	0.00	0.0	0.000
34.150	0.000	0.00	0.00	0.00	0.0	0.000
34.166	0.000	0.00	0.00	0.00	0.0	0.000
34.183	0.000	0.00	0.00	0.00	0.0	0.000
34.200	0.000	0.00	0.00	0.00	0.0	0.000
34.216	0.000	0.00	0.00	0.00	0.0	0.000
34.233	0.000	0.00	0.00	0.00	0.0	0.000
34.250	0.000	0.00	0.00	0.00	0.0	0.000
34.266	0.000	0.00	0.00	0.00	0.0	0.000
34.283	0.000	0.00	0.00	0.00	0.0	0.000
34.300	0.000	0.00	0.00	0.00	0.0	0.000
34.316	0.000	0.00	0.00	0.00	0.0	0.000
34.333	0.000	0.00	0.00	0.00	0.0	0.000
34.350	0.000	0.00	0.00	0.00	0.0	0.000
34.366	0.000	0.00	0.00	0.00	0.0	0.000
34.383	0.000	0.00	0.00	0.00	0.0	0.000
34.400	0.000	0.00	0.00	0.00	0.0	0.000
34.416	0.000	0.00	0.00	0.00	0.0	0.000
34.433	0.000	0.00	0.00	0.00	0.0	0.000
34.450	0.000	0.00	0.00	0.00	0.0	0.000
34.466	0.000	0.00	0.00	0.00	0.0	0.000
34.483	0.000	0.00	0.00	0.00	0.0	0.000
34.500	0.000	0.00	0.00	0.00	0.0	0.000
34.516	0.000	0.00	0.00	0.00	0.0	0.000
34.533	0.000	0.00	0.00	0.00	0.0	0.000
34.550	0.000	0.00	0.00	0.00	0.0	0.000
34.566	0.000	0.00	0.00	0.00	0.0	0.000
34.583	0.000	0.00	0.00	0.00	0.0	0.000
34.600	0.000	0.00	0.00	0.00	0.0	0.000
34.616	0.000	0.00	0.00	0.00	0.0	0.000
34.633	0.000	0.00	0.00	0.00	0.0	0.000
34.650	0.000	0.00	0.00	0.00	0.0	0.000
34.666	0.000	0.00	0.00	0.00	0.0	0.000
34.683	0.000	0.00	0.00	0.00	0.0	0.000
34.700	0.000	0.00	0.00	0.00	0.0	0.000
34.716	0.000	0.00	0.00	0.00	0.0	0.000
34.733	0.000	0.00	0.00	0.00	0.0	0.000
34.750	0.000	0.00	0.00	0.00	0.0	0.000
34.766	0.000	0.00	0.00	0.00	0.0	0.000
34.783	0.000	0.00	0.00	0.00	0.0	0.000
34.800	0.000	0.00	0.00	0.00	0.0	0.000
34.816	0.000	0.00	0.00	0.00	0.0	0.000
34.833	0.000	0.00	0.00	0.00	0.0	0.000
34.850	0.000	0.00	0.00	0.00	0.0	0.000
34.866	0.000	0.00	0.00	0.00	0.0	0.000
34.883	0.000	0.00	0.00	0.00	0.0	0.000
34.900	0.000	0.00	0.00	0.00	0.0	0.000
34.916	0.000	0.00	0.00	0.00	0.0	0.000
34.933	0.000	0.00	0.00	0.00	0.0	0.000
34.950	0.000	0.00	0.00	0.00	0.0	0.000

34.966	0.000	0.00	0.00	0.00	0.0	0.000
34.983	0.000	0.00	0.00	0.00	0.0	0.000
35.000	0.000	0.00	0.00	0.00	0.0	0.000
35.016	0.000	0.00	0.00	0.00	0.0	0.000
35.033	0.000	0.00	0.00	0.00	0.0	0.000
35.050	0.000	0.00	0.00	0.00	0.0	0.000
35.066	0.000	0.00	0.00	0.00	0.0	0.000
35.083	0.000	0.00	0.00	0.00	0.0	0.000
35.100	0.000	0.00	0.00	0.00	0.0	0.000
35.116	0.000	0.00	0.00	0.00	0.0	0.000
35.133	0.000	0.00	0.00	0.00	0.0	0.000
35.150	0.000	0.00	0.00	0.00	0.0	0.000
35.166	0.000	0.00	0.00	0.00	0.0	0.000
35.183	0.000	0.00	0.00	0.00	0.0	0.000
35.200	0.000	0.00	0.00	0.00	0.0	0.000
35.216	0.000	0.00	0.00	0.00	0.0	0.000
35.233	0.000	0.00	0.00	0.00	0.0	0.000
35.250	0.000	0.00	0.00	0.00	0.0	0.000
35.266	0.000	0.00	0.00	0.00	0.0	0.000
35.283	0.000	0.00	0.00	0.00	0.0	0.000
35.300	0.000	0.00	0.00	0.00	0.0	0.000
35.316	0.000	0.00	0.00	0.00	0.0	0.000
35.333	0.000	0.00	0.00	0.00	0.0	0.000
35.350	0.000	0.00	0.00	0.00	0.0	0.000
35.366	0.000	0.00	0.00	0.00	0.0	0.000
35.383	0.000	0.00	0.00	0.00	0.0	0.000
35.400	0.000	0.00	0.00	0.00	0.0	0.000
35.416	0.000	0.00	0.00	0.00	0.0	0.000
35.433	0.000	0.00	0.00	0.00	0.0	0.000
35.450	0.000	0.00	0.00	0.00	0.0	0.000
35.466	0.000	0.00	0.00	0.00	0.0	0.000
35.483	0.000	0.00	0.00	0.00	0.0	0.000
35.500	0.000	0.00	0.00	0.00	0.0	0.000
35.516	0.000	0.00	0.00	0.00	0.0	0.000
35.533	0.000	0.00	0.00	0.00	0.0	0.000
35.550	0.000	0.00	0.00	0.00	0.0	0.000
35.566	0.000	0.00	0.00	0.00	0.0	0.000
35.583	0.000	0.00	0.00	0.00	0.0	0.000
35.600	0.000	0.00	0.00	0.00	0.0	0.000
35.616	0.000	0.00	0.00	0.00	0.0	0.000
35.633	0.000	0.00	0.00	0.00	0.0	0.000
35.650	0.000	0.00	0.00	0.00	0.0	0.000
35.666	0.000	0.00	0.00	0.00	0.0	0.000
35.683	0.000	0.00	0.00	0.00	0.0	0.000
35.700	0.000	0.00	0.00	0.00	0.0	0.000
35.716	0.000	0.00	0.00	0.00	0.0	0.000
35.733	0.000	0.00	0.00	0.00	0.0	0.000
35.750	0.000	0.00	0.00	0.00	0.0	0.000
35.766	0.000	0.00	0.00	0.00	0.0	0.000
35.783	0.000	0.00	0.00	0.00	0.0	0.000

35.800	0.000	0.00	0.00	0.00	0.0	0.000
35.816	0.000	0.00	0.00	0.00	0.0	0.000
35.833	0.000	0.00	0.00	0.00	0.0	0.000
35.850	0.000	0.00	0.00	0.00	0.0	0.000
35.866	0.000	0.00	0.00	0.00	0.0	0.000
35.883	0.000	0.00	0.00	0.00	0.0	0.000
35.900	0.000	0.00	0.00	0.00	0.0	0.000
35.916	0.000	0.00	0.00	0.00	0.0	0.000
35.933	0.000	0.00	0.00	0.00	0.0	0.000
35.950	0.000	0.00	0.00	0.00	0.0	0.000
35.966	0.000	0.00	0.00	0.00	0.0	0.000
35.983	0.000	0.00	0.00	0.00	0.0	0.000
36.000	0.000	0.00	0.00	0.00	0.0	0.000
36.016	0.000	0.00	0.00	0.00	0.0	0.000
36.033	0.000	0.00	0.00	0.00	0.0	0.000
36.050	0.000	0.00	0.00	0.00	0.0	0.000
36.066	0.000	0.00	0.00	0.00	0.0	0.000
36.083	0.000	0.00	0.00	0.00	0.0	0.000
36.100	0.000	0.00	0.00	0.00	0.0	0.000
36.116	0.000	0.00	0.00	0.00	0.0	0.000
36.133	0.000	0.00	0.00	0.00	0.0	0.000
36.150	0.000	0.00	0.00	0.00	0.0	0.000
36.166	0.000	0.00	0.00	0.00	0.0	0.000
36.183	0.000	0.00	0.00	0.00	0.0	0.000
36.200	0.000	0.00	0.00	0.00	0.0	0.000
36.216	0.000	0.00	0.00	0.00	0.0	0.000
36.233	0.000	0.00	0.00	0.00	0.0	0.000
36.250	0.000	0.00	0.00	0.00	0.0	0.000
36.266	0.000	0.00	0.00	0.00	0.0	0.000
36.283	0.000	0.00	0.00	0.00	0.0	0.000
36.300	0.000	0.00	0.00	0.00	0.0	0.000
36.316	0.000	0.00	0.00	0.00	0.0	0.000
36.333	0.000	0.00	0.00	0.00	0.0	0.000
36.350	0.000	0.00	0.00	0.00	0.0	0.000
36.366	0.000	0.00	0.00	0.00	0.0	0.000
36.383	0.000	0.00	0.00	0.00	0.0	0.000
36.400	0.000	0.00	0.00	0.00	0.0	0.000
36.416	0.000	0.00	0.00	0.00	0.0	0.000
36.433	0.000	0.00	0.00	0.00	0.0	0.000
36.450	0.000	0.00	0.00	0.00	0.0	0.000
36.466	0.000	0.00	0.00	0.00	0.0	0.000
36.483	0.000	0.00	0.00	0.00	0.0	0.000
36.500	0.000	0.00	0.00	0.00	0.0	0.000
36.516	0.000	0.00	0.00	0.00	0.0	0.000
36.533	0.000	0.00	0.00	0.00	0.0	0.000
36.550	0.000	0.00	0.00	0.00	0.0	0.000
36.566	0.000	0.00	0.00	0.00	0.0	0.000
36.583	0.000	0.00	0.00	0.00	0.0	0.000
36.600	0.000	0.00	0.00	0.00	0.0	0.000
36.616	0.000	0.00	0.00	0.00	0.0	0.000

36.633	0.000	0.00	0.00	0.00	0.0	0.000
36.650	0.000	0.00	0.00	0.00	0.0	0.000
36.666	0.000	0.00	0.00	0.00	0.0	0.000
36.683	0.000	0.00	0.00	0.00	0.0	0.000
36.700	0.000	0.00	0.00	0.00	0.0	0.000
36.716	0.000	0.00	0.00	0.00	0.0	0.000
36.733	0.000	0.00	0.00	0.00	0.0	0.000
36.750	0.000	0.00	0.00	0.00	0.0	0.000
36.766	0.000	0.00	0.00	0.00	0.0	0.000
36.783	0.000	0.00	0.00	0.00	0.0	0.000
36.800	0.000	0.00	0.00	0.00	0.0	0.000
36.816	0.000	0.00	0.00	0.00	0.0	0.000
36.833	0.000	0.00	0.00	0.00	0.0	0.000
36.850	0.000	0.00	0.00	0.00	0.0	0.000
36.866	0.000	0.00	0.00	0.00	0.0	0.000
36.883	0.000	0.00	0.00	0.00	0.0	0.000
36.900	0.000	0.00	0.00	0.00	0.0	0.000
36.916	0.000	0.00	0.00	0.00	0.0	0.000
36.933	0.000	0.00	0.00	0.00	0.0	0.000
36.950	0.000	0.00	0.00	0.00	0.0	0.000
36.966	0.000	0.00	0.00	0.00	0.0	0.000
36.983	0.000	0.00	0.00	0.00	0.0	0.000
37.000	0.000	0.00	0.00	0.00	0.0	0.000
37.016	0.000	0.00	0.00	0.00	0.0	0.000
37.033	0.000	0.00	0.00	0.00	0.0	0.000
37.050	0.000	0.00	0.00	0.00	0.0	0.000
37.066	0.000	0.00	0.00	0.00	0.0	0.000
37.083	0.000	0.00	0.00	0.00	0.0	0.000
37.100	0.000	0.00	0.00	0.00	0.0	0.000
37.116	0.000	0.00	0.00	0.00	0.0	0.000
37.133	0.000	0.00	0.00	0.00	0.0	0.000
37.150	0.000	0.00	0.00	0.00	0.0	0.000
37.166	0.000	0.00	0.00	0.00	0.0	0.000
37.183	0.000	0.00	0.00	0.00	0.0	0.000
37.200	0.000	0.00	0.00	0.00	0.0	0.000
37.216	0.000	0.00	0.00	0.00	0.0	0.000
37.233	0.000	0.00	0.00	0.00	0.0	0.000
37.250	0.000	0.00	0.00	0.00	0.0	0.000
37.266	0.000	0.00	0.00	0.00	0.0	0.000
37.283	0.000	0.00	0.00	0.00	0.0	0.000
37.300	0.000	0.00	0.00	0.00	0.0	0.000
37.316	0.000	0.00	0.00	0.00	0.0	0.000
37.333	0.000	0.00	0.00	0.00	0.0	0.000
37.350	0.000	0.00	0.00	0.00	0.0	0.000
37.366	0.000	0.00	0.00	0.00	0.0	0.000
37.383	0.000	0.00	0.00	0.00	0.0	0.000
37.400	0.000	0.00	0.00	0.00	0.0	0.000
37.416	0.000	0.00	0.00	0.00	0.0	0.000
37.433	0.000	0.00	0.00	0.00	0.0	0.000
37.450	0.000	0.00	0.00	0.00	0.0	0.000

37.466	0.000	0.00	0.00	0.00	0.0	0.000
37.483	0.000	0.00	0.00	0.00	0.0	0.000
37.500	0.000	0.00	0.00	0.00	0.0	0.000
37.516	0.000	0.00	0.00	0.00	0.0	0.000
37.533	0.000	0.00	0.00	0.00	0.0	0.000
37.550	0.000	0.00	0.00	0.00	0.0	0.000
37.566	0.000	0.00	0.00	0.00	0.0	0.000
37.583	0.000	0.00	0.00	0.00	0.0	0.000
37.600	0.000	0.00	0.00	0.00	0.0	0.000
37.616	0.000	0.00	0.00	0.00	0.0	0.000
37.633	0.000	0.00	0.00	0.00	0.0	0.000
37.650	0.000	0.00	0.00	0.00	0.0	0.000
37.666	0.000	0.00	0.00	0.00	0.0	0.000
37.683	0.000	0.00	0.00	0.00	0.0	0.000
37.700	0.000	0.00	0.00	0.00	0.0	0.000
37.716	0.000	0.00	0.00	0.00	0.0	0.000
37.733	0.000	0.00	0.00	0.00	0.0	0.000
37.750	0.000	0.00	0.00	0.00	0.0	0.000
37.766	0.000	0.00	0.00	0.00	0.0	0.000
37.783	0.000	0.00	0.00	0.00	0.0	0.000
37.800	0.000	0.00	0.00	0.00	0.0	0.000
37.816	0.000	0.00	0.00	0.00	0.0	0.000
37.833	0.000	0.00	0.00	0.00	0.0	0.000
37.850	0.000	0.00	0.00	0.00	0.0	0.000
37.866	0.000	0.00	0.00	0.00	0.0	0.000
37.883	0.000	0.00	0.00	0.00	0.0	0.000
37.900	0.000	0.00	0.00	0.00	0.0	0.000
37.916	0.000	0.00	0.00	0.00	0.0	0.000
37.933	0.000	0.00	0.00	0.00	0.0	0.000
37.950	0.000	0.00	0.00	0.00	0.0	0.000
37.966	0.000	0.00	0.00	0.00	0.0	0.000
37.983	0.000	0.00	0.00	0.00	0.0	0.000
38.000	0.000	0.00	0.00	0.00	0.0	0.000
38.016	0.000	0.00	0.00	0.00	0.0	0.000
38.033	0.000	0.00	0.00	0.00	0.0	0.000
38.050	0.000	0.00	0.00	0.00	0.0	0.000
38.066	0.000	0.00	0.00	0.00	0.0	0.000
38.083	0.000	0.00	0.00	0.00	0.0	0.000
38.100	0.000	0.00	0.00	0.00	0.0	0.000
38.116	0.000	0.00	0.00	0.00	0.0	0.000
38.133	0.000	0.00	0.00	0.00	0.0	0.000
38.150	0.000	0.00	0.00	0.00	0.0	0.000
38.166	0.000	0.00	0.00	0.00	0.0	0.000
38.183	0.000	0.00	0.00	0.00	0.0	0.000
38.200	0.000	0.00	0.00	0.00	0.0	0.000
38.216	0.000	0.00	0.00	0.00	0.0	0.000
38.233	0.000	0.00	0.00	0.00	0.0	0.000
38.250	0.000	0.00	0.00	0.00	0.0	0.000
38.266	0.000	0.00	0.00	0.00	0.0	0.000
38.283	0.000	0.00	0.00	0.00	0.0	0.000

38.300	0.000	0.00	0.00	0.00	0.0	0.000
38.316	0.000	0.00	0.00	0.00	0.0	0.000
38.333	0.000	0.00	0.00	0.00	0.0	0.000
38.350	0.000	0.00	0.00	0.00	0.0	0.000
38.366	0.000	0.00	0.00	0.00	0.0	0.000
38.383	0.000	0.00	0.00	0.00	0.0	0.000
38.400	0.000	0.00	0.00	0.00	0.0	0.000
38.416	0.000	0.00	0.00	0.00	0.0	0.000
38.433	0.000	0.00	0.00	0.00	0.0	0.000
38.450	0.000	0.00	0.00	0.00	0.0	0.000
38.466	0.000	0.00	0.00	0.00	0.0	0.000
38.483	0.000	0.00	0.00	0.00	0.0	0.000
38.500	0.000	0.00	0.00	0.00	0.0	0.000
38.516	0.000	0.00	0.00	0.00	0.0	0.000
38.533	0.000	0.00	0.00	0.00	0.0	0.000
38.550	0.000	0.00	0.00	0.00	0.0	0.000
38.566	0.000	0.00	0.00	0.00	0.0	0.000
38.583	0.000	0.00	0.00	0.00	0.0	0.000
38.600	0.000	0.00	0.00	0.00	0.0	0.000
38.616	0.000	0.00	0.00	0.00	0.0	0.000
38.633	0.000	0.00	0.00	0.00	0.0	0.000
38.650	0.000	0.00	0.00	0.00	0.0	0.000
38.666	0.000	0.00	0.00	0.00	0.0	0.000
38.683	0.000	0.00	0.00	0.00	0.0	0.000
38.700	0.000	0.00	0.00	0.00	0.0	0.000
38.716	0.000	0.00	0.00	0.00	0.0	0.000
38.733	0.000	0.00	0.00	0.00	0.0	0.000
38.750	0.000	0.00	0.00	0.00	0.0	0.000
38.766	0.000	0.00	0.00	0.00	0.0	0.000
38.783	0.000	0.00	0.00	0.00	0.0	0.000
38.800	0.000	0.00	0.00	0.00	0.0	0.000
38.816	0.000	0.00	0.00	0.00	0.0	0.000
38.833	0.000	0.00	0.00	0.00	0.0	0.000
38.850	0.000	0.00	0.00	0.00	0.0	0.000
38.866	0.000	0.00	0.00	0.00	0.0	0.000
38.883	0.000	0.00	0.00	0.00	0.0	0.000
38.900	0.000	0.00	0.00	0.00	0.0	0.000
38.916	0.000	0.00	0.00	0.00	0.0	0.000
38.933	0.000	0.00	0.00	0.00	0.0	0.000
38.950	0.000	0.00	0.00	0.00	0.0	0.000
38.966	0.000	0.00	0.00	0.00	0.0	0.000
38.983	0.000	0.00	0.00	0.00	0.0	0.000
39.000	0.000	0.00	0.00	0.00	0.0	0.000
39.016	0.000	0.00	0.00	0.00	0.0	0.000
39.033	0.000	0.00	0.00	0.00	0.0	0.000
39.050	0.000	0.00	0.00	0.00	0.0	0.000
39.066	0.000	0.00	0.00	0.00	0.0	0.000
39.083	0.000	0.00	0.00	0.00	0.0	0.000
39.100	0.000	0.00	0.00	0.00	0.0	0.000
39.116	0.000	0.00	0.00	0.00	0.0	0.000

39.133	0.000	0.00	0.00	0.00	0.0	0.000
39.150	0.000	0.00	0.00	0.00	0.0	0.000
39.166	0.000	0.00	0.00	0.00	0.0	0.000
39.183	0.000	0.00	0.00	0.00	0.0	0.000
39.200	0.000	0.00	0.00	0.00	0.0	0.000
39.216	0.000	0.00	0.00	0.00	0.0	0.000
39.233	0.000	0.00	0.00	0.00	0.0	0.000
39.250	0.000	0.00	0.00	0.00	0.0	0.000
39.266	0.000	0.00	0.00	0.00	0.0	0.000
39.283	0.000	0.00	0.00	0.00	0.0	0.000
39.300	0.000	0.00	0.00	0.00	0.0	0.000
39.316	0.000	0.00	0.00	0.00	0.0	0.000
39.333	0.000	0.00	0.00	0.00	0.0	0.000
39.350	0.000	0.00	0.00	0.00	0.0	0.000
39.366	0.000	0.00	0.00	0.00	0.0	0.000
39.383	0.000	0.00	0.00	0.00	0.0	0.000
39.400	0.000	0.00	0.00	0.00	0.0	0.000
39.416	0.000	0.00	0.00	0.00	0.0	0.000
39.433	0.000	0.00	0.00	0.00	0.0	0.000
39.450	0.000	0.00	0.00	0.00	0.0	0.000
39.466	0.000	0.00	0.00	0.00	0.0	0.000
39.483	0.000	0.00	0.00	0.00	0.0	0.000
39.500	0.000	0.00	0.00	0.00	0.0	0.000
39.516	0.000	0.00	0.00	0.00	0.0	0.000
39.533	0.000	0.00	0.00	0.00	0.0	0.000
39.550	0.000	0.00	0.00	0.00	0.0	0.000
39.566	0.000	0.00	0.00	0.00	0.0	0.000
39.583	0.000	0.00	0.00	0.00	0.0	0.000
39.600	0.000	0.00	0.00	0.00	0.0	0.000
39.616	0.000	0.00	0.00	0.00	0.0	0.000
39.633	0.000	0.00	0.00	0.00	0.0	0.000
39.650	0.000	0.00	0.00	0.00	0.0	0.000
39.666	0.000	0.00	0.00	0.00	0.0	0.000
39.683	0.000	0.00	0.00	0.00	0.0	0.000
39.700	0.000	0.00	0.00	0.00	0.0	0.000
39.716	0.000	0.00	0.00	0.00	0.0	0.000
39.733	0.000	0.00	0.00	0.00	0.0	0.000
39.750	0.000	0.00	0.00	0.00	0.0	0.000
39.766	0.000	0.00	0.00	0.00	0.0	0.000
39.783	0.000	0.00	0.00	0.00	0.0	0.000
39.800	0.000	0.00	0.00	0.00	0.0	0.000
39.816	0.000	0.00	0.00	0.00	0.0	0.000
39.833	0.000	0.00	0.00	0.00	0.0	0.000
39.850	0.000	0.00	0.00	0.00	0.0	0.000
39.866	0.000	0.00	0.00	0.00	0.0	0.000
39.883	0.000	0.00	0.00	0.00	0.0	0.000
39.900	0.000	0.00	0.00	0.00	0.0	0.000
39.916	0.000	0.00	0.00	0.00	0.0	0.000
39.933	0.000	0.00	0.00	0.00	0.0	0.000
39.950	0.000	0.00	0.00	0.00	0.0	0.000

39.966	0.000	0.00	0.00	0.00	0.0	0.000
39.983	0.000	0.00	0.00	0.00	0.0	0.000
40.000	0.000	0.00	0.00	0.00	0.0	0.000
40.016	0.000	0.00	0.00	0.00	0.0	0.000
40.033	0.000	0.00	0.00	0.00	0.0	0.000
40.050	0.000	0.00	0.00	0.00	0.0	0.000
40.066	0.000	0.00	0.00	0.00	0.0	0.000
40.083	0.000	0.00	0.00	0.00	0.0	0.000
40.100	0.000	0.00	0.00	0.00	0.0	0.000
40.116	0.000	0.00	0.00	0.00	0.0	0.000
40.133	0.000	0.00	0.00	0.00	0.0	0.000
40.150	0.000	0.00	0.00	0.00	0.0	0.000
40.166	0.000	0.00	0.00	0.00	0.0	0.000
40.183	0.000	0.00	0.00	0.00	0.0	0.000
40.200	0.000	0.00	0.00	0.00	0.0	0.000
40.216	0.000	0.00	0.00	0.00	0.0	0.000
40.233	0.000	0.00	0.00	0.00	0.0	0.000
40.250	0.000	0.00	0.00	0.00	0.0	0.000
40.266	0.000	0.00	0.00	0.00	0.0	0.000
40.283	0.000	0.00	0.00	0.00	0.0	0.000
40.300	0.000	0.00	0.00	0.00	0.0	0.000
40.316	0.000	0.00	0.00	0.00	0.0	0.000
40.333	0.000	0.00	0.00	0.00	0.0	0.000
40.350	0.000	0.00	0.00	0.00	0.0	0.000
40.366	0.000	0.00	0.00	0.00	0.0	0.000
40.383	0.000	0.00	0.00	0.00	0.0	0.000
40.400	0.000	0.00	0.00	0.00	0.0	0.000
40.416	0.000	0.00	0.00	0.00	0.0	0.000
40.433	0.000	0.00	0.00	0.00	0.0	0.000
40.450	0.000	0.00	0.00	0.00	0.0	0.000
40.466	0.000	0.00	0.00	0.00	0.0	0.000
40.483	0.000	0.00	0.00	0.00	0.0	0.000
40.500	0.000	0.00	0.00	0.00	0.0	0.000
40.516	0.000	0.00	0.00	0.00	0.0	0.000
40.533	0.000	0.00	0.00	0.00	0.0	0.000
40.550	0.000	0.00	0.00	0.00	0.0	0.000
40.566	0.000	0.00	0.00	0.00	0.0	0.000
40.583	0.000	0.00	0.00	0.00	0.0	0.000
40.600	0.000	0.00	0.00	0.00	0.0	0.000
40.616	0.000	0.00	0.00	0.00	0.0	0.000
40.633	0.000	0.00	0.00	0.00	0.0	0.000
40.650	0.000	0.00	0.00	0.00	0.0	0.000
40.666	0.000	0.00	0.00	0.00	0.0	0.000
40.683	0.000	0.00	0.00	0.00	0.0	0.000
40.700	0.000	0.00	0.00	0.00	0.0	0.000
40.716	0.000	0.00	0.00	0.00	0.0	0.000
40.733	0.000	0.00	0.00	0.00	0.0	0.000
40.750	0.000	0.00	0.00	0.00	0.0	0.000
40.766	0.000	0.00	0.00	0.00	0.0	0.000
40.783	0.000	0.00	0.00	0.00	0.0	0.000

40.800	0.000	0.00	0.00	0.00	0.0	0.000
40.816	0.000	0.00	0.00	0.00	0.0	0.000
40.833	0.000	0.00	0.00	0.00	0.0	0.000
40.850	0.000	0.00	0.00	0.00	0.0	0.000
40.866	0.000	0.00	0.00	0.00	0.0	0.000
40.883	0.000	0.00	0.00	0.00	0.0	0.000
40.900	0.000	0.00	0.00	0.00	0.0	0.000
40.916	0.000	0.00	0.00	0.00	0.0	0.000
40.933	0.000	0.00	0.00	0.00	0.0	0.000
40.950	0.000	0.00	0.00	0.00	0.0	0.000
40.966	0.000	0.00	0.00	0.00	0.0	0.000
40.983	0.000	0.00	0.00	0.00	0.0	0.000
41.000	0.000	0.00	0.00	0.00	0.0	0.000
41.016	0.000	0.00	0.00	0.00	0.0	0.000
41.033	0.000	0.00	0.00	0.00	0.0	0.000
41.050	0.000	0.00	0.00	0.00	0.0	0.000
41.066	0.000	0.00	0.00	0.00	0.0	0.000
41.083	0.000	0.00	0.00	0.00	0.0	0.000
41.100	0.000	0.00	0.00	0.00	0.0	0.000
41.116	0.000	0.00	0.00	0.00	0.0	0.000
41.133	0.000	0.00	0.00	0.00	0.0	0.000
41.150	0.000	0.00	0.00	0.00	0.0	0.000
41.166	0.000	0.00	0.00	0.00	0.0	0.000
41.183	0.000	0.00	0.00	0.00	0.0	0.000
41.200	0.000	0.00	0.00	0.00	0.0	0.000
41.216	0.000	0.00	0.00	0.00	0.0	0.000
41.233	0.000	0.00	0.00	0.00	0.0	0.000
41.250	0.000	0.00	0.00	0.00	0.0	0.000
41.266	0.000	0.00	0.00	0.00	0.0	0.000
41.283	0.000	0.00	0.00	0.00	0.0	0.000
41.300	0.000	0.00	0.00	0.00	0.0	0.000
41.316	0.000	0.00	0.00	0.00	0.0	0.000
41.333	0.000	0.00	0.00	0.00	0.0	0.000
41.350	0.000	0.00	0.00	0.00	0.0	0.000
41.366	0.000	0.00	0.00	0.00	0.0	0.000
41.383	0.000	0.00	0.00	0.00	0.0	0.000
41.400	0.000	0.00	0.00	0.00	0.0	0.000
41.416	0.000	0.00	0.00	0.00	0.0	0.000
41.433	0.000	0.00	0.00	0.00	0.0	0.000
41.450	0.000	0.00	0.00	0.00	0.0	0.000
41.466	0.000	0.00	0.00	0.00	0.0	0.000
41.483	0.000	0.00	0.00	0.00	0.0	0.000
41.500	0.000	0.00	0.00	0.00	0.0	0.000
41.516	0.000	0.00	0.00	0.00	0.0	0.000
41.533	0.000	0.00	0.00	0.00	0.0	0.000
41.550	0.000	0.00	0.00	0.00	0.0	0.000
41.566	0.000	0.00	0.00	0.00	0.0	0.000
41.583	0.000	0.00	0.00	0.00	0.0	0.000
41.600	0.000	0.00	0.00	0.00	0.0	0.000
41.616	0.000	0.00	0.00	0.00	0.0	0.000

41.633	0.000	0.00	0.00	0.00	0.0	0.000
41.650	0.000	0.00	0.00	0.00	0.0	0.000
41.666	0.000	0.00	0.00	0.00	0.0	0.000
41.683	0.000	0.00	0.00	0.00	0.0	0.000
41.700	0.000	0.00	0.00	0.00	0.0	0.000
41.716	0.000	0.00	0.00	0.00	0.0	0.000
41.733	0.000	0.00	0.00	0.00	0.0	0.000
41.750	0.000	0.00	0.00	0.00	0.0	0.000
41.766	0.000	0.00	0.00	0.00	0.0	0.000
41.783	0.000	0.00	0.00	0.00	0.0	0.000
41.800	0.000	0.00	0.00	0.00	0.0	0.000
41.816	0.000	0.00	0.00	0.00	0.0	0.000
41.833	0.000	0.00	0.00	0.00	0.0	0.000
41.850	0.000	0.00	0.00	0.00	0.0	0.000
41.866	0.000	0.00	0.00	0.00	0.0	0.000
41.883	0.000	0.00	0.00	0.00	0.0	0.000
41.900	0.000	0.00	0.00	0.00	0.0	0.000
41.916	0.000	0.00	0.00	0.00	0.0	0.000
41.933	0.000	0.00	0.00	0.00	0.0	0.000
41.950	0.000	0.00	0.00	0.00	0.0	0.000
41.966	0.000	0.00	0.00	0.00	0.0	0.000
41.983	0.000	0.00	0.00	0.00	0.0	0.000
42.000	0.000	0.00	0.00	0.00	0.0	0.000
42.016	0.000	0.00	0.00	0.00	0.0	0.000
42.033	0.000	0.00	0.00	0.00	0.0	0.000
42.050	0.000	0.00	0.00	0.00	0.0	0.000
42.066	0.000	0.00	0.00	0.00	0.0	0.000
42.083	0.000	0.00	0.00	0.00	0.0	0.000
42.100	0.000	0.00	0.00	0.00	0.0	0.000
42.116	0.000	0.00	0.00	0.00	0.0	0.000
42.133	0.000	0.00	0.00	0.00	0.0	0.000
42.150	0.000	0.00	0.00	0.00	0.0	0.000
42.166	0.000	0.00	0.00	0.00	0.0	0.000
42.183	0.000	0.00	0.00	0.00	0.0	0.000
42.200	0.000	0.00	0.00	0.00	0.0	0.000
42.216	0.000	0.00	0.00	0.00	0.0	0.000
42.233	0.000	0.00	0.00	0.00	0.0	0.000
42.250	0.000	0.00	0.00	0.00	0.0	0.000
42.266	0.000	0.00	0.00	0.00	0.0	0.000
42.283	0.000	0.00	0.00	0.00	0.0	0.000
42.300	0.000	0.00	0.00	0.00	0.0	0.000
42.316	0.000	0.00	0.00	0.00	0.0	0.000
42.333	0.000	0.00	0.00	0.00	0.0	0.000
42.350	0.000	0.00	0.00	0.00	0.0	0.000
42.366	0.000	0.00	0.00	0.00	0.0	0.000
42.383	0.000	0.00	0.00	0.00	0.0	0.000
42.400	0.000	0.00	0.00	0.00	0.0	0.000
42.416	0.000	0.00	0.00	0.00	0.0	0.000
42.433	0.000	0.00	0.00	0.00	0.0	0.000
42.450	0.000	0.00	0.00	0.00	0.0	0.000

42.466	0.000	0.00	0.00	0.00	0.0	0.000
42.483	0.000	0.00	0.00	0.00	0.0	0.000
42.500	0.000	0.00	0.00	0.00	0.0	0.000
42.516	0.000	0.00	0.00	0.00	0.0	0.000
42.533	0.000	0.00	0.00	0.00	0.0	0.000
42.550	0.000	0.00	0.00	0.00	0.0	0.000
42.566	0.000	0.00	0.00	0.00	0.0	0.000
42.583	0.000	0.00	0.00	0.00	0.0	0.000
42.600	0.000	0.00	0.00	0.00	0.0	0.000
42.616	0.000	0.00	0.00	0.00	0.0	0.000
42.633	0.000	0.00	0.00	0.00	0.0	0.000
42.650	0.000	0.00	0.00	0.00	0.0	0.000
42.666	0.000	0.00	0.00	0.00	0.0	0.000
42.683	0.000	0.00	0.00	0.00	0.0	0.000
42.700	0.000	0.00	0.00	0.00	0.0	0.000
42.716	0.000	0.00	0.00	0.00	0.0	0.000
42.733	0.000	0.00	0.00	0.00	0.0	0.000
42.750	0.000	0.00	0.00	0.00	0.0	0.000
42.766	0.000	0.00	0.00	0.00	0.0	0.000
42.783	0.000	0.00	0.00	0.00	0.0	0.000
42.800	0.000	0.00	0.00	0.00	0.0	0.000
42.816	0.000	0.00	0.00	0.00	0.0	0.000
42.833	0.000	0.00	0.00	0.00	0.0	0.000
42.850	0.000	0.00	0.00	0.00	0.0	0.000
42.866	0.000	0.00	0.00	0.00	0.0	0.000
42.883	0.000	0.00	0.00	0.00	0.0	0.000
42.900	0.000	0.00	0.00	0.00	0.0	0.000
42.916	0.000	0.00	0.00	0.00	0.0	0.000
42.933	0.000	0.00	0.00	0.00	0.0	0.000
42.950	0.000	0.00	0.00	0.00	0.0	0.000
42.966	0.000	0.00	0.00	0.00	0.0	0.000
42.983	0.000	0.00	0.00	0.00	0.0	0.000
43.000	0.000	0.00	0.00	0.00	0.0	0.000
43.016	0.000	0.00	0.00	0.00	0.0	0.000
43.033	0.000	0.00	0.00	0.00	0.0	0.000
43.050	0.000	0.00	0.00	0.00	0.0	0.000
43.066	0.000	0.00	0.00	0.00	0.0	0.000
43.083	0.000	0.00	0.00	0.00	0.0	0.000
43.100	0.000	0.00	0.00	0.00	0.0	0.000
43.116	0.000	0.00	0.00	0.00	0.0	0.000
43.133	0.000	0.00	0.00	0.00	0.0	0.000
43.150	0.000	0.00	0.00	0.00	0.0	0.000
43.166	0.000	0.00	0.00	0.00	0.0	0.000
43.183	0.000	0.00	0.00	0.00	0.0	0.000
43.200	0.000	0.00	0.00	0.00	0.0	0.000
43.216	0.000	0.00	0.00	0.00	0.0	0.000
43.233	0.000	0.00	0.00	0.00	0.0	0.000
43.250	0.000	0.00	0.00	0.00	0.0	0.000
43.266	0.000	0.00	0.00	0.00	0.0	0.000
43.283	0.000	0.00	0.00	0.00	0.0	0.000

43.300	0.000	0.00	0.00	0.00	0.0	0.000
43.316	0.000	0.00	0.00	0.00	0.0	0.000
43.333	0.000	0.00	0.00	0.00	0.0	0.000
43.350	0.000	0.00	0.00	0.00	0.0	0.000
43.366	0.000	0.00	0.00	0.00	0.0	0.000
43.383	0.000	0.00	0.00	0.00	0.0	0.000
43.400	0.000	0.00	0.00	0.00	0.0	0.000
43.416	0.000	0.00	0.00	0.00	0.0	0.000
43.433	0.000	0.00	0.00	0.00	0.0	0.000
43.450	0.000	0.00	0.00	0.00	0.0	0.000
43.466	0.000	0.00	0.00	0.00	0.0	0.000
43.483	0.000	0.00	0.00	0.00	0.0	0.000
43.500	0.000	0.00	0.00	0.00	0.0	0.000
43.516	0.000	0.00	0.00	0.00	0.0	0.000
43.533	0.000	0.00	0.00	0.00	0.0	0.000
43.550	0.000	0.00	0.00	0.00	0.0	0.000
43.566	0.000	0.00	0.00	0.00	0.0	0.000
43.583	0.000	0.00	0.00	0.00	0.0	0.000
43.600	0.000	0.00	0.00	0.00	0.0	0.000
43.616	0.000	0.00	0.00	0.00	0.0	0.000
43.633	0.000	0.00	0.00	0.00	0.0	0.000
43.650	0.000	0.00	0.00	0.00	0.0	0.000
43.666	0.000	0.00	0.00	0.00	0.0	0.000
43.683	0.000	0.00	0.00	0.00	0.0	0.000
43.700	0.000	0.00	0.00	0.00	0.0	0.000
43.716	0.000	0.00	0.00	0.00	0.0	0.000
43.733	0.000	0.00	0.00	0.00	0.0	0.000
43.750	0.000	0.00	0.00	0.00	0.0	0.000
43.766	0.000	0.00	0.00	0.00	0.0	0.000
43.783	0.000	0.00	0.00	0.00	0.0	0.000
43.800	0.000	0.00	0.00	0.00	0.0	0.000
43.816	0.000	0.00	0.00	0.00	0.0	0.000
43.833	0.000	0.00	0.00	0.00	0.0	0.000
43.850	0.000	0.00	0.00	0.00	0.0	0.000
43.866	0.000	0.00	0.00	0.00	0.0	0.000
43.883	0.000	0.00	0.00	0.00	0.0	0.000
43.900	0.000	0.00	0.00	0.00	0.0	0.000
43.916	0.000	0.00	0.00	0.00	0.0	0.000
43.933	0.000	0.00	0.00	0.00	0.0	0.000
43.950	0.000	0.00	0.00	0.00	0.0	0.000
43.966	0.000	0.00	0.00	0.00	0.0	0.000
43.983	0.000	0.00	0.00	0.00	0.0	0.000
44.000	0.000	0.00	0.00	0.00	0.0	0.000
44.016	0.000	0.00	0.00	0.00	0.0	0.000
44.033	0.000	0.00	0.00	0.00	0.0	0.000
44.049	0.000	0.00	0.00	0.00	0.0	0.000
44.066	0.000	0.00	0.00	0.00	0.0	0.000
44.083	0.000	0.00	0.00	0.00	0.0	0.000
44.099	0.000	0.00	0.00	0.00	0.0	0.000
44.116	0.000	0.00	0.00	0.00	0.0	0.000

44.133	0.000	0.00	0.00	0.00	0.0	0.000
44.149	0.000	0.00	0.00	0.00	0.0	0.000
44.166	0.000	0.00	0.00	0.00	0.0	0.000
44.183	0.000	0.00	0.00	0.00	0.0	0.000
44.199	0.000	0.00	0.00	0.00	0.0	0.000
44.216	0.000	0.00	0.00	0.00	0.0	0.000
44.233	0.000	0.00	0.00	0.00	0.0	0.000
44.249	0.000	0.00	0.00	0.00	0.0	0.000
44.266	0.000	0.00	0.00	0.00	0.0	0.000
44.283	0.000	0.00	0.00	0.00	0.0	0.000
44.299	0.000	0.00	0.00	0.00	0.0	0.000
44.316	0.000	0.00	0.00	0.00	0.0	0.000
44.333	0.000	0.00	0.00	0.00	0.0	0.000
44.349	0.000	0.00	0.00	0.00	0.0	0.000
44.366	0.000	0.00	0.00	0.00	0.0	0.000
44.383	0.000	0.00	0.00	0.00	0.0	0.000
44.399	0.000	0.00	0.00	0.00	0.0	0.000
44.416	0.000	0.00	0.00	0.00	0.0	0.000
44.433	0.000	0.00	0.00	0.00	0.0	0.000
44.449	0.000	0.00	0.00	0.00	0.0	0.000
44.466	0.000	0.00	0.00	0.00	0.0	0.000
44.483	0.000	0.00	0.00	0.00	0.0	0.000
44.499	0.000	0.00	0.00	0.00	0.0	0.000
44.516	0.000	0.00	0.00	0.00	0.0	0.000
44.533	0.000	0.00	0.00	0.00	0.0	0.000
44.549	0.000	0.00	0.00	0.00	0.0	0.000
44.566	0.000	0.00	0.00	0.00	0.0	0.000
44.583	0.000	0.00	0.00	0.00	0.0	0.000
44.599	0.000	0.00	0.00	0.00	0.0	0.000
44.616	0.000	0.00	0.00	0.00	0.0	0.000
44.633	0.000	0.00	0.00	0.00	0.0	0.000
44.649	0.000	0.00	0.00	0.00	0.0	0.000
44.666	0.000	0.00	0.00	0.00	0.0	0.000
44.683	0.000	0.00	0.00	0.00	0.0	0.000
44.699	0.000	0.00	0.00	0.00	0.0	0.000
44.716	0.000	0.00	0.00	0.00	0.0	0.000
44.733	0.000	0.00	0.00	0.00	0.0	0.000
44.749	0.000	0.00	0.00	0.00	0.0	0.000
44.766	0.000	0.00	0.00	0.00	0.0	0.000
44.783	0.000	0.00	0.00	0.00	0.0	0.000
44.799	0.000	0.00	0.00	0.00	0.0	0.000
44.816	0.000	0.00	0.00	0.00	0.0	0.000
44.833	0.000	0.00	0.00	0.00	0.0	0.000
44.849	0.000	0.00	0.00	0.00	0.0	0.000
44.866	0.000	0.00	0.00	0.00	0.0	0.000
44.883	0.000	0.00	0.00	0.00	0.0	0.000
44.899	0.000	0.00	0.00	0.00	0.0	0.000
44.916	0.000	0.00	0.00	0.00	0.0	0.000
44.933	0.000	0.00	0.00	0.00	0.0	0.000
44.949	0.000	0.00	0.00	0.00	0.0	0.000

44.966	0.000	0.00	0.00	0.00	0.0	0.000
44.983	0.000	0.00	0.00	0.00	0.0	0.000
44.999	0.000	0.00	0.00	0.00	0.0	0.000
45.016	0.000	0.00	0.00	0.00	0.0	0.000
45.033	0.000	0.00	0.00	0.00	0.0	0.000
45.049	0.000	0.00	0.00	0.00	0.0	0.000
45.066	0.000	0.00	0.00	0.00	0.0	0.000
45.083	0.000	0.00	0.00	0.00	0.0	0.000
45.099	0.000	0.00	0.00	0.00	0.0	0.000
45.116	0.000	0.00	0.00	0.00	0.0	0.000
45.133	0.000	0.00	0.00	0.00	0.0	0.000
45.149	0.000	0.00	0.00	0.00	0.0	0.000
45.166	0.000	0.00	0.00	0.00	0.0	0.000
45.183	0.000	0.00	0.00	0.00	0.0	0.000
45.199	0.000	0.00	0.00	0.00	0.0	0.000
45.216	0.000	0.00	0.00	0.00	0.0	0.000
45.233	0.000	0.00	0.00	0.00	0.0	0.000
45.249	0.000	0.00	0.00	0.00	0.0	0.000
45.266	0.000	0.00	0.00	0.00	0.0	0.000
45.283	0.000	0.00	0.00	0.00	0.0	0.000
45.299	0.000	0.00	0.00	0.00	0.0	0.000
45.316	0.000	0.00	0.00	0.00	0.0	0.000
45.333	0.000	0.00	0.00	0.00	0.0	0.000
45.349	0.000	0.00	0.00	0.00	0.0	0.000
45.366	0.000	0.00	0.00	0.00	0.0	0.000
45.383	0.000	0.00	0.00	0.00	0.0	0.000
45.399	0.000	0.00	0.00	0.00	0.0	0.000
45.416	0.000	0.00	0.00	0.00	0.0	0.000
45.433	0.000	0.00	0.00	0.00	0.0	0.000
45.449	0.000	0.00	0.00	0.00	0.0	0.000
45.466	0.000	0.00	0.00	0.00	0.0	0.000
45.483	0.000	0.00	0.00	0.00	0.0	0.000
45.499	0.000	0.00	0.00	0.00	0.0	0.000
45.516	0.000	0.00	0.00	0.00	0.0	0.000
45.533	0.000	0.00	0.00	0.00	0.0	0.000
45.549	0.000	0.00	0.00	0.00	0.0	0.000
45.566	0.000	0.00	0.00	0.00	0.0	0.000
45.583	0.000	0.00	0.00	0.00	0.0	0.000
45.599	0.000	0.00	0.00	0.00	0.0	0.000
45.616	0.000	0.00	0.00	0.00	0.0	0.000
45.633	0.000	0.00	0.00	0.00	0.0	0.000
45.649	0.000	0.00	0.00	0.00	0.0	0.000
45.666	0.000	0.00	0.00	0.00	0.0	0.000
45.683	0.000	0.00	0.00	0.00	0.0	0.000
45.699	0.000	0.00	0.00	0.00	0.0	0.000
45.716	0.000	0.00	0.00	0.00	0.0	0.000
45.733	0.000	0.00	0.00	0.00	0.0	0.000
45.749	0.000	0.00	0.00	0.00	0.0	0.000
45.766	0.000	0.00	0.00	0.00	0.0	0.000
45.783	0.000	0.00	0.00	0.00	0.0	0.000

45.799	0.000	0.00	0.00	0.00	0.0	0.000
45.816	0.000	0.00	0.00	0.00	0.0	0.000
45.833	0.000	0.00	0.00	0.00	0.0	0.000
45.849	0.000	0.00	0.00	0.00	0.0	0.000
45.866	0.000	0.00	0.00	0.00	0.0	0.000
45.883	0.000	0.00	0.00	0.00	0.0	0.000
45.899	0.000	0.00	0.00	0.00	0.0	0.000
45.916	0.000	0.00	0.00	0.00	0.0	0.000
45.933	0.000	0.00	0.00	0.00	0.0	0.000
45.949	0.000	0.00	0.00	0.00	0.0	0.000
45.966	0.000	0.00	0.00	0.00	0.0	0.000
45.983	0.000	0.00	0.00	0.00	0.0	0.000
45.999	0.000	0.00	0.00	0.00	0.0	0.000
46.016	0.000	0.00	0.00	0.00	0.0	0.000
46.033	0.000	0.00	0.00	0.00	0.0	0.000
46.049	0.000	0.00	0.00	0.00	0.0	0.000
46.066	0.000	0.00	0.00	0.00	0.0	0.000
46.083	0.000	0.00	0.00	0.00	0.0	0.000
46.099	0.000	0.00	0.00	0.00	0.0	0.000
46.116	0.000	0.00	0.00	0.00	0.0	0.000
46.133	0.000	0.00	0.00	0.00	0.0	0.000
46.149	0.000	0.00	0.00	0.00	0.0	0.000
46.166	0.000	0.00	0.00	0.00	0.0	0.000
46.183	0.000	0.00	0.00	0.00	0.0	0.000
46.199	0.000	0.00	0.00	0.00	0.0	0.000
46.216	0.000	0.00	0.00	0.00	0.0	0.000
46.233	0.000	0.00	0.00	0.00	0.0	0.000
46.249	0.000	0.00	0.00	0.00	0.0	0.000
46.266	0.000	0.00	0.00	0.00	0.0	0.000
46.283	0.000	0.00	0.00	0.00	0.0	0.000
46.299	0.000	0.00	0.00	0.00	0.0	0.000
46.316	0.000	0.00	0.00	0.00	0.0	0.000
46.333	0.000	0.00	0.00	0.00	0.0	0.000
46.349	0.000	0.00	0.00	0.00	0.0	0.000
46.366	0.000	0.00	0.00	0.00	0.0	0.000
46.383	0.000	0.00	0.00	0.00	0.0	0.000
46.399	0.000	0.00	0.00	0.00	0.0	0.000
46.416	0.000	0.00	0.00	0.00	0.0	0.000
46.433	0.000	0.00	0.00	0.00	0.0	0.000
46.449	0.000	0.00	0.00	0.00	0.0	0.000
46.466	0.000	0.00	0.00	0.00	0.0	0.000
46.483	0.000	0.00	0.00	0.00	0.0	0.000
46.499	0.000	0.00	0.00	0.00	0.0	0.000
46.516	0.000	0.00	0.00	0.00	0.0	0.000
46.533	0.000	0.00	0.00	0.00	0.0	0.000
46.549	0.000	0.00	0.00	0.00	0.0	0.000
46.566	0.000	0.00	0.00	0.00	0.0	0.000
46.583	0.000	0.00	0.00	0.00	0.0	0.000
46.599	0.000	0.00	0.00	0.00	0.0	0.000
46.616	0.000	0.00	0.00	0.00	0.0	0.000

46.633	0.000	0.00	0.00	0.00	0.0	0.000
46.649	0.000	0.00	0.00	0.00	0.0	0.000
46.666	0.000	0.00	0.00	0.00	0.0	0.000
46.683	0.000	0.00	0.00	0.00	0.0	0.000
46.699	0.000	0.00	0.00	0.00	0.0	0.000
46.716	0.000	0.00	0.00	0.00	0.0	0.000
46.733	0.000	0.00	0.00	0.00	0.0	0.000
46.749	0.000	0.00	0.00	0.00	0.0	0.000
46.766	0.000	0.00	0.00	0.00	0.0	0.000
46.783	0.000	0.00	0.00	0.00	0.0	0.000
46.799	0.000	0.00	0.00	0.00	0.0	0.000
46.816	0.000	0.00	0.00	0.00	0.0	0.000
46.833	0.000	0.00	0.00	0.00	0.0	0.000
46.849	0.000	0.00	0.00	0.00	0.0	0.000
46.866	0.000	0.00	0.00	0.00	0.0	0.000
46.883	0.000	0.00	0.00	0.00	0.0	0.000
46.899	0.000	0.00	0.00	0.00	0.0	0.000
46.916	0.000	0.00	0.00	0.00	0.0	0.000
46.933	0.000	0.00	0.00	0.00	0.0	0.000
46.949	0.000	0.00	0.00	0.00	0.0	0.000
46.966	0.000	0.00	0.00	0.00	0.0	0.000
46.983	0.000	0.00	0.00	0.00	0.0	0.000
46.999	0.000	0.00	0.00	0.00	0.0	0.000
47.016	0.000	0.00	0.00	0.00	0.0	0.000
47.033	0.000	0.00	0.00	0.00	0.0	0.000
47.049	0.000	0.00	0.00	0.00	0.0	0.000
47.066	0.000	0.00	0.00	0.00	0.0	0.000
47.083	0.000	0.00	0.00	0.00	0.0	0.000
47.099	0.000	0.00	0.00	0.00	0.0	0.000
47.116	0.000	0.00	0.00	0.00	0.0	0.000
47.133	0.000	0.00	0.00	0.00	0.0	0.000
47.149	0.000	0.00	0.00	0.00	0.0	0.000
47.166	0.000	0.00	0.00	0.00	0.0	0.000
47.183	0.000	0.00	0.00	0.00	0.0	0.000
47.199	0.000	0.00	0.00	0.00	0.0	0.000
47.216	0.000	0.00	0.00	0.00	0.0	0.000
47.233	0.000	0.00	0.00	0.00	0.0	0.000
47.249	0.000	0.00	0.00	0.00	0.0	0.000
47.266	0.000	0.00	0.00	0.00	0.0	0.000
47.283	0.000	0.00	0.00	0.00	0.0	0.000
47.299	0.000	0.00	0.00	0.00	0.0	0.000
47.316	0.000	0.00	0.00	0.00	0.0	0.000
47.333	0.000	0.00	0.00	0.00	0.0	0.000
47.349	0.000	0.00	0.00	0.00	0.0	0.000
47.366	0.000	0.00	0.00	0.00	0.0	0.000
47.383	0.000	0.00	0.00	0.00	0.0	0.000
47.399	0.000	0.00	0.00	0.00	0.0	0.000
47.416	0.000	0.00	0.00	0.00	0.0	0.000
47.433	0.000	0.00	0.00	0.00	0.0	0.000
47.449	0.000	0.00	0.00	0.00	0.0	0.000

47.466	0.000	0.00	0.00	0.00	0.0	0.000
47.483	0.000	0.00	0.00	0.00	0.0	0.000
47.499	0.000	0.00	0.00	0.00	0.0	0.000
47.516	0.000	0.00	0.00	0.00	0.0	0.000
47.533	0.000	0.00	0.00	0.00	0.0	0.000
47.549	0.000	0.00	0.00	0.00	0.0	0.000
47.566	0.000	0.00	0.00	0.00	0.0	0.000
47.583	0.000	0.00	0.00	0.00	0.0	0.000
47.599	0.000	0.00	0.00	0.00	0.0	0.000
47.616	0.000	0.00	0.00	0.00	0.0	0.000
47.633	0.000	0.00	0.00	0.00	0.0	0.000
47.649	0.000	0.00	0.00	0.00	0.0	0.000
47.666	0.000	0.00	0.00	0.00	0.0	0.000
47.683	0.000	0.00	0.00	0.00	0.0	0.000
47.699	0.000	0.00	0.00	0.00	0.0	0.000
47.716	0.000	0.00	0.00	0.00	0.0	0.000
47.733	0.000	0.00	0.00	0.00	0.0	0.000
47.749	0.000	0.00	0.00	0.00	0.0	0.000
47.766	0.000	0.00	0.00	0.00	0.0	0.000
47.783	0.000	0.00	0.00	0.00	0.0	0.000
47.799	0.000	0.00	0.00	0.00	0.0	0.000
47.816	0.000	0.00	0.00	0.00	0.0	0.000
47.833	0.000	0.00	0.00	0.00	0.0	0.000
47.849	0.000	0.00	0.00	0.00	0.0	0.000
47.866	0.000	0.00	0.00	0.00	0.0	0.000
47.883	0.000	0.00	0.00	0.00	0.0	0.000
47.899	0.000	0.00	0.00	0.00	0.0	0.000
47.916	0.000	0.00	0.00	0.00	0.0	0.000
47.933	0.000	0.00	0.00	0.00	0.0	0.000
47.949	0.000	0.00	0.00	0.00	0.0	0.000
47.966	0.000	0.00	0.00	0.00	0.0	0.000
47.983	0.000	0.00	0.00	0.00	0.0	0.000
47.999	0.000	0.00	0.00	0.00	0.0	0.000

PROCESS SUMMARY OF STORAGE:

INFLOW VOLUME = 0.141 AF

BASIN STORAGE = 0.000 AF (WITH 0.000 AF INITIALLY FILLED)

OUTFLOW VOLUME = 0.141 AF

LOSS VOLUME = 0.000 AF

****

FLOW PROCESS FROM NODE 405.00 TO NODE 104.00 IS CODE = 4

>>>>>MODEL PIPEFLOW ROUTING OF STREAM #1<<<<<

==========

MODEL PIPEFLOW ROUTING OF STREAM 1 WHERE

STORAGE EFFECTS ARE NEGLECTED WITHIN THE PIPE, FLOW

VELOCITIES ARE ESTIMATED BY ASSUMING STEADY FLOW FOR
EACH UNIT INTERVAL(NORMAL DEPTH, Dn), AND FLOWS IN EXCESS
OF (.82)(DIAMETER) ARE PONDED AT THE UPSTREAM INLET:
UNIT INTERVAL FLOW VELOCITY COMPUTED USING Dn UP TO
(0.938)(DIAMETER):

PIPELENGTH(FT) = 114.00 MANNINGS FACTOR = 0.011
UPSTREAM ELEVATION(FT) = 614.00
DOWNSTREAM ELEVATION(FT) = 613.00
PIPE DIAMETER(FT) = 2.00

NORMAL DEPTH VELOCITY PIPE ROUTING RESULTS:

TIME (HRS)	INFLOW (CFS)	VELOCITY (FPS)	OUTFLOW (CFS)	UPSTREAM PONDING(AF)
0.017	0.00	0.00	0.00	0.000
0.033	0.00	0.00	0.00	0.000
0.050	0.00	0.00	0.00	0.000
0.067	0.00	0.00	0.00	0.000
0.083	0.00	0.50	0.00	0.000
0.100	0.00	0.50	0.00	0.000
0.117	0.00	0.50	0.00	0.000
0.133	0.00	0.50	0.00	0.000
0.150	0.00	0.50	0.00	0.000
0.167	0.00	0.50	0.00	0.000
0.183	0.01	0.50	0.00	0.000
0.200	0.01	0.50	0.00	0.000
0.217	0.01	0.50	0.00	0.000
0.233	0.01	0.50	0.01	0.000
0.250	0.01	0.50	0.01	0.000
0.267	0.01	0.50	0.01	0.000
0.283	0.01	0.50	0.01	0.000
0.300	0.01	0.50	0.01	0.000
0.317	0.01	0.50	0.01	0.000
0.333	0.01	0.50	0.01	0.000
0.350	0.02	0.50	0.01	0.000
0.367	0.02	0.50	0.01	0.000
0.383	0.02	0.50	0.01	0.000
0.400	0.02	0.50	0.01	0.000
0.417	0.02	0.50	0.02	0.000
0.433	0.02	0.50	0.02	0.000
0.450	0.02	0.50	0.02	0.000
0.467	0.02	0.50	0.02	0.000
0.483	0.02	0.50	0.02	0.000
0.500	0.02	0.50	0.02	0.000
0.517	0.02	0.50	0.02	0.000
0.533	0.02	0.50	0.02	0.000

0.550	0.02	0.50	0.02	0.000
0.567	0.02	0.50	0.02	0.000
0.583	0.02	0.50	0.02	0.000
0.600	0.02	0.50	0.02	0.000
0.617	0.02	0.50	0.02	0.000
0.633	0.02	0.50	0.02	0.000
0.650	0.02	0.50	0.02	0.000
0.667	0.02	0.50	0.02	0.000
0.683	0.02	0.50	0.02	0.000
0.700	0.02	0.50	0.02	0.000
0.717	0.02	0.50	0.02	0.000
0.733	0.02	0.50	0.02	0.000
0.750	0.02	0.50	0.02	0.000
0.767	0.02	0.50	0.02	0.000
0.783	0.02	0.50	0.02	0.000
0.800	0.02	0.50	0.02	0.000
0.817	0.02	0.50	0.02	0.000
0.833	0.02	0.50	0.02	0.000
0.850	0.02	0.50	0.02	0.000
0.867	0.02	0.50	0.02	0.000
0.883	0.02	0.50	0.02	0.000
0.900	0.02	0.50	0.02	0.000
0.917	0.02	0.50	0.02	0.000
0.933	0.02	0.50	0.02	0.000
0.950	0.02	0.50	0.02	0.000
0.967	0.02	0.50	0.02	0.000
0.983	0.02	0.50	0.02	0.000
1.000	0.02	0.50	0.02	0.000
1.017	0.02	0.50	0.02	0.000
1.033	0.02	0.50	0.02	0.000
1.050	0.02	0.50	0.02	0.000
1.067	0.02	0.50	0.02	0.000
1.083	0.02	0.50	0.02	0.000
1.100	0.02	0.50	0.02	0.000
1.117	0.02	0.50	0.02	0.000
1.133	0.02	0.50	0.02	0.000
1.150	0.02	0.50	0.02	0.000
1.167	0.02	0.50	0.02	0.000
1.183	0.02	0.50	0.02	0.000
1.200	0.02	0.50	0.02	0.000
1.217	0.02	0.50	0.02	0.000
1.233	0.02	0.50	0.02	0.000
1.250	0.02	0.50	0.02	0.000
1.267	0.02	0.50	0.02	0.000
1.283	0.02	0.50	0.02	0.000
1.300	0.02	0.50	0.02	0.000
1.317	0.02	0.50	0.02	0.000
1.333	0.02	0.50	0.02	0.000
1.350	0.02	0.50	0.02	0.000
1.367	0.02	0.50	0.02	0.000

1.383	0.02	0.50	0.02	0.000
1.400	0.02	0.50	0.02	0.000
1.417	0.02	0.50	0.02	0.000
1.433	0.02	0.50	0.02	0.000
1.450	0.02	0.50	0.02	0.000
1.467	0.02	0.50	0.02	0.000
1.483	0.02	0.50	0.02	0.000
1.500	0.02	0.50	0.02	0.000
1.517	0.02	0.50	0.02	0.000
1.533	0.02	0.50	0.02	0.000
1.550	0.02	0.50	0.02	0.000
1.567	0.02	0.50	0.02	0.000
1.583	0.02	0.50	0.02	0.000
1.600	0.02	0.50	0.02	0.000
1.617	0.02	0.50	0.02	0.000
1.633	0.02	0.50	0.02	0.000
1.650	0.02	0.50	0.02	0.000
1.667	0.02	0.50	0.02	0.000
1.683	0.02	0.50	0.02	0.000
1.700	0.02	0.50	0.02	0.000
1.717	0.02	0.50	0.02	0.000
1.733	0.02	0.50	0.02	0.000
1.750	0.02	0.50	0.02	0.000
1.767	0.02	0.50	0.02	0.000
1.783	0.02	0.50	0.02	0.000
1.800	0.02	0.50	0.02	0.000
1.817	0.02	0.50	0.02	0.000
1.833	0.02	0.50	0.02	0.000
1.850	0.02	0.50	0.02	0.000
1.867	0.02	0.50	0.02	0.000
1.883	0.02	0.50	0.02	0.000
1.900	0.02	0.50	0.02	0.000
1.917	0.02	0.50	0.02	0.000
1.933	0.02	0.50	0.02	0.000
1.950	0.02	0.50	0.02	0.000
1.967	0.02	0.50	0.02	0.000
1.983	0.02	0.50	0.02	0.000
2.000	0.02	0.50	0.02	0.000
2.017	0.02	0.50	0.02	0.000
2.033	0.02	0.50	0.02	0.000
2.050	0.02	0.50	0.02	0.000
2.067	0.02	0.50	0.02	0.000
2.083	0.02	0.50	0.02	0.000
2.100	0.02	0.50	0.02	0.000
2.117	0.02	0.50	0.02	0.000
2.133	0.02	0.50	0.02	0.000
2.150	0.02	0.50	0.02	0.000
2.167	0.02	0.50	0.02	0.000
2.183	0.02	0.50	0.02	0.000
2.200	0.02	0.50	0.02	0.000

2.217	0.02	0.50	0.02	0.000
2.233	0.02	0.50	0.02	0.000
2.250	0.02	0.50	0.02	0.000
2.267	0.02	0.50	0.02	0.000
2.283	0.02	0.50	0.02	0.000
2.300	0.02	0.50	0.02	0.000
2.317	0.02	0.50	0.02	0.000
2.333	0.02	0.50	0.02	0.000
2.350	0.02	0.50	0.02	0.000
2.367	0.02	0.50	0.02	0.000
2.383	0.02	0.50	0.02	0.000
2.400	0.02	0.50	0.02	0.000
2.417	0.02	0.50	0.02	0.000
2.433	0.02	0.50	0.02	0.000
2.450	0.02	0.50	0.02	0.000
2.467	0.02	0.50	0.02	0.000
2.483	0.02	0.50	0.02	0.000
2.500	0.02	0.50	0.02	0.000
2.517	0.02	0.50	0.02	0.000
2.533	0.02	0.50	0.02	0.000
2.550	0.02	0.50	0.02	0.000
2.567	0.02	0.50	0.02	0.000
2.583	0.02	0.50	0.02	0.000
2.600	0.02	0.50	0.02	0.000
2.617	0.02	0.50	0.02	0.000
2.633	0.02	0.50	0.02	0.000
2.650	0.02	0.50	0.02	0.000
2.667	0.02	0.50	0.02	0.000
2.683	0.02	0.50	0.02	0.000
2.700	0.02	0.50	0.02	0.000
2.717	0.02	0.50	0.02	0.000
2.733	0.02	0.50	0.02	0.000
2.750	0.02	0.50	0.02	0.000
2.767	0.02	0.50	0.02	0.000
2.783	0.02	0.50	0.02	0.000
2.800	0.02	0.50	0.02	0.000
2.817	0.02	0.50	0.02	0.000
2.833	0.02	0.50	0.02	0.000
2.850	0.02	0.50	0.02	0.000
2.867	0.02	0.50	0.02	0.000
2.883	0.02	0.50	0.02	0.000
2.900	0.02	0.50	0.02	0.000
2.917	0.02	0.50	0.02	0.000
2.933	0.02	0.50	0.02	0.000
2.950	0.02	0.50	0.02	0.000
2.967	0.03	0.50	0.02	0.000
2.983	0.03	0.50	0.02	0.000
3.000	0.03	0.50	0.02	0.000
3.017	0.03	0.50	0.02	0.000
3.033	0.03	0.50	0.03	0.000

3.050	0.03	0.50	0.03	0.000
3.067	0.03	0.50	0.03	0.000
3.083	0.03	0.50	0.03	0.000
3.100	0.03	0.50	0.03	0.000
3.117	0.03	0.50	0.03	0.000
3.133	0.03	0.50	0.03	0.000
3.150	0.03	0.50	0.03	0.000
3.167	0.03	0.50	0.03	0.000
3.183	0.03	0.50	0.03	0.000
3.200	0.03	0.50	0.03	0.000
3.217	0.03	0.50	0.03	0.000
3.233	0.03	0.50	0.03	0.000
3.250	0.03	0.50	0.03	0.000
3.267	0.03	0.50	0.03	0.000
3.283	0.03	0.50	0.03	0.000
3.300	0.03	0.50	0.03	0.000
3.317	0.03	0.50	0.03	0.000
3.333	0.03	0.50	0.03	0.000
3.350	0.03	0.50	0.03	0.000
3.367	0.03	0.50	0.03	0.000
3.383	0.03	0.50	0.03	0.000
3.400	0.03	0.50	0.03	0.000
3.417	0.03	0.50	0.03	0.000
3.433	0.03	0.50	0.03	0.000
3.450	0.03	0.50	0.03	0.000
3.467	0.03	0.50	0.03	0.000
3.483	0.03	0.50	0.03	0.000
3.500	0.03	0.50	0.03	0.000
3.517	0.03	0.50	0.03	0.000
3.533	0.03	0.50	0.03	0.000
3.550	0.03	0.50	0.03	0.000
3.567	0.03	0.50	0.03	0.000
3.583	0.03	0.50	0.03	0.000
3.600	0.03	0.50	0.03	0.000
3.617	0.03	0.50	0.03	0.000
3.633	0.03	0.50	0.03	0.000
3.650	0.03	0.50	0.03	0.000
3.667	0.03	0.50	0.03	0.000
3.683	0.03	0.50	0.03	0.000
3.700	0.03	0.50	0.03	0.000
3.717	0.03	0.50	0.03	0.000
3.733	0.03	0.50	0.03	0.000
3.750	0.03	0.50	0.03	0.000
3.767	0.03	0.50	0.03	0.000
3.783	0.03	0.50	0.03	0.000
3.800	0.03	0.50	0.03	0.000
3.817	0.03	0.50	0.03	0.000
3.833	0.03	0.50	0.03	0.000
3.850	0.03	0.50	0.03	0.000
3.867	0.03	0.50	0.03	0.000

3.883	0.03	0.50	0.03	0.000
3.900	0.03	0.50	0.03	0.000
3.917	0.03	0.50	0.03	0.000
3.933	0.03	0.50	0.03	0.000
3.950	0.03	0.50	0.03	0.000
3.967	0.03	0.50	0.03	0.000
3.983	0.03	0.50	0.03	0.000
4.000	0.03	0.50	0.03	0.000
4.017	0.03	0.50	0.03	0.000
4.033	0.03	0.50	0.03	0.000
4.050	0.03	0.50	0.03	0.000
4.067	0.03	0.50	0.03	0.000
4.083	0.03	0.50	0.03	0.000
4.100	0.03	0.50	0.03	0.000
4.117	0.03	0.50	0.03	0.000
4.133	0.03	0.50	0.03	0.000
4.150	0.03	0.50	0.03	0.000
4.167	0.03	0.50	0.03	0.000
4.183	0.03	0.50	0.03	0.000
4.200	0.03	0.50	0.03	0.000
4.217	0.03	0.50	0.03	0.000
4.233	0.03	0.50	0.03	0.000
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4.300	0.03	0.50	0.03	0.000
4.317	0.03	0.50	0.03	0.000
4.333	0.03	0.50	0.03	0.000
4.350	0.03	0.50	0.03	0.000
4.367	0.03	0.50	0.03	0.000
4.383	0.03	0.50	0.03	0.000
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4.417	0.03	0.50	0.03	0.000
4.433	0.03	0.50	0.03	0.000
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4.717	0.03	0.50	0.03	0.000
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4.750	0.03	0.50	0.03	0.000
4.767	0.03	0.50	0.03	0.000
4.783	0.03	0.50	0.03	0.000
4.800	0.03	0.50	0.03	0.000
4.817	0.03	0.50	0.03	0.000
4.833	0.03	0.50	0.03	0.000
4.850	0.03	0.50	0.03	0.000
4.867	0.03	0.50	0.03	0.000
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4.983	0.03	0.50	0.03	0.000
5.000	0.03	0.50	0.03	0.000
5.017	0.03	0.50	0.03	0.000
5.033	0.03	0.50	0.03	0.000
5.050	0.03	0.50	0.03	0.000
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5.317	0.03	0.50	0.03	0.000
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5.367	0.03	0.50	0.03	0.000
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5.600	0.03	0.50	0.03	0.000
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5.633	0.03	0.50	0.03	0.000
5.650	0.03	0.50	0.03	0.000
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5.683	0.03	0.50	0.03	0.000
5.700	0.03	0.50	0.03	0.000
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5.783	0.03	0.50	0.03	0.000
5.800	0.03	0.50	0.03	0.000
5.817	0.03	0.50	0.03	0.000
5.833	0.03	0.50	0.03	0.000
5.850	0.03	0.50	0.03	0.000
5.867	0.03	0.50	0.03	0.000
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6.017	0.03	0.50	0.03	0.000
6.033	0.03	0.50	0.03	0.000
6.050	0.03	0.50	0.03	0.000
6.067	0.03	0.50	0.03	0.000
6.083	0.03	0.50	0.03	0.000
6.100	0.03	0.50	0.03	0.000
6.117	0.03	0.50	0.03	0.000
6.133	0.03	0.50	0.03	0.000
6.150	0.03	0.50	0.03	0.000
6.167	0.03	0.50	0.03	0.000
6.183	0.03	0.50	0.03	0.000
6.200	0.03	0.50	0.03	0.000
6.217	0.03	0.50	0.03	0.000
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6.267	0.03	0.50	0.03	0.000
6.283	0.03	0.50	0.03	0.000
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6.317	0.03	0.50	0.03	0.000
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6.433	0.03	0.50	0.03	0.000
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6.483	0.03	0.50	0.03	0.000
6.500	0.03	0.50	0.03	0.000
6.517	0.03	0.50	0.03	0.000
6.533	0.03	0.50	0.03	0.000
6.550	0.03	0.50	0.03	0.000
6.567	0.03	0.50	0.03	0.000
6.583	0.03	0.50	0.03	0.000
6.600	0.03	0.50	0.03	0.000
6.617	0.03	0.50	0.03	0.000
6.633	0.03	0.50	0.03	0.000
6.650	0.03	0.50	0.03	0.000
6.667	0.03	0.50	0.03	0.000
6.683	0.03	0.50	0.03	0.000
6.700	0.03	0.50	0.03	0.000
6.717	0.03	0.50	0.03	0.000
6.733	0.03	0.50	0.03	0.000
6.750	0.03	0.50	0.03	0.000
6.767	0.03	0.50	0.03	0.000
6.783	0.03	0.50	0.03	0.000
6.800	0.03	0.50	0.03	0.000
6.817	0.03	0.50	0.03	0.000
6.833	0.03	0.50	0.03	0.000
6.850	0.03	0.50	0.03	0.000
6.867	0.03	0.50	0.03	0.000
6.883	0.03	0.50	0.03	0.000
6.900	0.03	0.50	0.03	0.000
6.917	0.03	0.50	0.03	0.000
6.933	0.03	0.50	0.03	0.000
6.950	0.03	0.50	0.03	0.000
6.967	0.03	0.50	0.03	0.000
6.983	0.03	0.50	0.03	0.000
7.000	0.03	0.50	0.03	0.000
7.017	0.03	0.50	0.03	0.000
7.033	0.03	0.50	0.03	0.000
7.050	0.03	0.50	0.03	0.000
7.067	0.03	0.50	0.03	0.000
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7.100	0.03	0.50	0.03	0.000
7.117	0.03	0.50	0.03	0.000
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8.767	0.04	0.50	0.04	0.000
8.783	0.04	0.50	0.04	0.000
8.800	0.04	0.50	0.04	0.000
8.817	0.04	0.50	0.04	0.000
8.833	0.04	0.50	0.04	0.000
8.850	0.04	0.50	0.04	0.000
8.867	0.04	0.50	0.04	0.000

8.883	0.04	0.50	0.04	0.000
8.900	0.04	0.50	0.04	0.000
8.917	0.04	0.50	0.04	0.000
8.933	0.04	0.50	0.04	0.000
8.950	0.04	0.50	0.04	0.000
8.967	0.04	0.50	0.04	0.000
8.983	0.04	0.50	0.04	0.000
9.000	0.04	0.50	0.04	0.000
9.017	0.04	0.50	0.04	0.000
9.033	0.04	0.50	0.04	0.000
9.050	0.04	0.50	0.04	0.000
9.067	0.04	0.50	0.04	0.000
9.083	0.04	0.50	0.04	0.000
9.100	0.04	0.50	0.04	0.000
9.117	0.04	0.50	0.04	0.000
9.133	0.04	0.50	0.04	0.000
9.150	0.04	0.50	0.04	0.000
9.167	0.04	0.50	0.04	0.000
9.183	0.04	0.50	0.04	0.000
9.200	0.04	0.50	0.04	0.000
9.217	0.04	0.50	0.04	0.000
9.233	0.04	0.50	0.04	0.000
9.250	0.04	0.50	0.04	0.000
9.267	0.04	0.50	0.04	0.000
9.283	0.04	0.50	0.04	0.000
9.300	0.04	0.50	0.04	0.000
9.317	0.04	0.50	0.04	0.000
9.333	0.04	0.50	0.04	0.000
9.350	0.04	0.50	0.04	0.000
9.367	0.04	0.50	0.04	0.000
9.383	0.04	0.50	0.04	0.000
9.400	0.04	0.50	0.04	0.000
9.417	0.04	0.50	0.04	0.000
9.433	0.04	0.50	0.04	0.000
9.450	0.04	0.50	0.04	0.000
9.467	0.04	0.50	0.04	0.000
9.483	0.04	0.50	0.04	0.000
9.500	0.04	0.50	0.04	0.000
9.517	0.04	0.50	0.04	0.000
9.533	0.04	0.50	0.04	0.000
9.550	0.04	0.50	0.04	0.000
9.567	0.04	0.50	0.04	0.000
9.583	0.04	0.50	0.04	0.000
9.600	0.04	0.50	0.04	0.000
9.617	0.04	0.50	0.04	0.000
9.633	0.04	0.50	0.04	0.000
9.650	0.04	0.50	0.04	0.000
9.667	0.04	0.50	0.04	0.000
9.683	0.04	0.50	0.04	0.000
9.700	0.04	0.50	0.04	0.000

9.717	0.04	0.50	0.04	0.000
9.733	0.04	0.50	0.04	0.000
9.750	0.04	0.50	0.04	0.000
9.767	0.04	0.50	0.04	0.000
9.783	0.04	0.50	0.04	0.000
9.800	0.04	0.50	0.04	0.000
9.817	0.04	0.50	0.04	0.000
9.833	0.04	0.50	0.04	0.000
9.850	0.04	0.50	0.04	0.000
9.867	0.04	0.50	0.04	0.000
9.883	0.04	0.50	0.04	0.000
9.900	0.04	0.50	0.04	0.000
9.917	0.04	0.50	0.04	0.000
9.933	0.04	0.50	0.04	0.000
9.950	0.04	0.50	0.04	0.000
9.967	0.04	0.50	0.04	0.000
9.983	0.04	0.50	0.04	0.000
10.000	0.04	0.50	0.04	0.000
10.017	0.04	0.50	0.04	0.000
10.033	0.04	0.50	0.04	0.000
10.050	0.04	0.50	0.04	0.000
10.067	0.04	0.50	0.04	0.000
10.083	0.04	0.50	0.04	0.000
10.100	0.04	0.50	0.04	0.000
10.117	0.04	0.50	0.04	0.000
10.133	0.04	0.50	0.04	0.000
10.150	0.04	0.50	0.04	0.000
10.167	0.04	0.50	0.04	0.000
10.183	0.04	0.50	0.04	0.000
10.200	0.04	0.50	0.04	0.000
10.217	0.04	0.50	0.04	0.000
10.233	0.04	0.50	0.04	0.000
10.250	0.04	0.50	0.04	0.000
10.267	0.04	0.50	0.04	0.000
10.283	0.04	0.50	0.04	0.000
10.300	0.04	0.50	0.04	0.000
10.317	0.04	0.50	0.04	0.000
10.333	0.04	0.50	0.04	0.000
10.350	0.04	0.50	0.04	0.000
10.367	0.04	0.50	0.04	0.000
10.383	0.04	0.50	0.04	0.000
10.400	0.04	0.50	0.04	0.000
10.417	0.04	0.50	0.04	0.000
10.433	0.04	0.50	0.04	0.000
10.450	0.04	0.50	0.04	0.000
10.467	0.04	0.50	0.04	0.000
10.483	0.04	0.50	0.04	0.000
10.500	0.04	0.50	0.04	0.000
10.517	0.04	0.50	0.04	0.000
10.533	0.04	0.50	0.04	0.000

10.550	0.04	0.50	0.04	0.000
10.567	0.04	0.50	0.04	0.000
10.583	0.04	0.50	0.04	0.000
10.600	0.04	0.50	0.04	0.000
10.617	0.04	0.50	0.04	0.000
10.633	0.04	0.50	0.04	0.000
10.650	0.04	0.50	0.04	0.000
10.667	0.04	0.50	0.04	0.000
10.683	0.04	0.50	0.04	0.000
10.700	0.04	0.50	0.04	0.000
10.717	0.04	0.50	0.04	0.000
10.733	0.04	0.50	0.04	0.000
10.750	0.04	0.50	0.04	0.000
10.767	0.04	0.50	0.04	0.000
10.783	0.04	0.50	0.04	0.000
10.800	0.04	0.50	0.04	0.000
10.817	0.04	0.50	0.04	0.000
10.833	0.04	0.50	0.04	0.000
10.850	0.04	0.50	0.04	0.000
10.867	0.04	0.50	0.04	0.000
10.883	0.04	0.50	0.04	0.000
10.900	0.04	0.50	0.04	0.000
10.917	0.04	0.50	0.04	0.000
10.933	0.04	0.50	0.04	0.000
10.950	0.04	0.50	0.04	0.000
10.967	0.04	0.50	0.04	0.000
10.983	0.04	0.50	0.04	0.000
11.000	0.04	0.50	0.04	0.000
11.017	0.04	0.50	0.04	0.000
11.033	0.04	0.50	0.04	0.000
11.050	0.04	0.50	0.04	0.000
11.067	0.04	0.50	0.04	0.000
11.083	0.04	0.50	0.04	0.000
11.100	0.05	0.50	0.04	0.000
11.117	0.05	0.50	0.04	0.000
11.133	0.05	0.50	0.04	0.000
11.150	0.05	0.50	0.04	0.000
11.167	0.05	0.50	0.05	0.000
11.183	0.05	0.50	0.05	0.000
11.200	0.05	0.50	0.05	0.000
11.217	0.05	0.50	0.05	0.000
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11.267	0.05	0.50	0.05	0.000
11.283	0.05	0.50	0.05	0.000
11.300	0.05	0.50	0.05	0.000
11.317	0.05	0.50	0.05	0.000
11.333	0.05	0.50	0.05	0.000
11.350	0.05	0.50	0.05	0.000
11.367	0.05	0.50	0.05	0.000

11.383	0.05	0.50	0.05	0.000
11.400	0.05	0.50	0.05	0.000
11.417	0.05	0.50	0.05	0.000
11.433	0.05	0.50	0.05	0.000
11.450	0.05	0.50	0.05	0.000
11.467	0.05	0.50	0.05	0.000
11.483	0.05	0.50	0.05	0.000
11.500	0.05	0.50	0.05	0.000
11.517	0.05	0.50	0.05	0.000
11.533	0.05	0.50	0.05	0.000
11.550	0.05	0.50	0.05	0.000
11.567	0.05	0.50	0.05	0.000
11.583	0.05	0.50	0.05	0.000
11.600	0.05	0.50	0.05	0.000
11.617	0.05	0.50	0.05	0.000
11.633	0.05	0.50	0.05	0.000
11.650	0.05	0.50	0.05	0.000
11.667	0.05	0.50	0.05	0.000
11.683	0.05	0.50	0.05	0.000
11.700	0.05	0.50	0.05	0.000
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11.767	0.05	0.50	0.05	0.000
11.783	0.05	0.50	0.05	0.000
11.800	0.05	0.50	0.05	0.000
11.817	0.05	0.50	0.05	0.000
11.833	0.05	0.50	0.05	0.000
11.850	0.05	0.50	0.05	0.000
11.867	0.05	0.50	0.05	0.000
11.883	0.05	0.50	0.05	0.000
11.900	0.05	0.50	0.05	0.000
11.917	0.05	0.50	0.05	0.000
11.933	0.05	0.50	0.05	0.000
11.950	0.05	0.50	0.05	0.000
11.967	0.05	0.50	0.05	0.000
11.983	0.05	0.50	0.05	0.000
12.000	0.05	0.50	0.05	0.000
12.017	0.05	0.50	0.05	0.000
12.033	0.05	0.50	0.05	0.000
12.050	0.05	0.50	0.05	0.000
12.067	0.05	0.50	0.05	0.000
12.083	0.05	0.50	0.05	0.000
12.100	0.05	0.50	0.05	0.000
12.117	0.05	0.50	0.05	0.000
12.133	0.05	0.50	0.05	0.000
12.150	0.05	0.50	0.05	0.000
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12.183	0.05	0.50	0.05	0.000
12.200	0.06	0.50	0.05	0.000

12.217	0.06	0.50	0.05	0.000
12.233	0.06	0.50	0.05	0.000
12.250	0.06	0.50	0.05	0.000
12.267	0.06	0.50	0.06	0.000
12.283	0.06	0.50	0.06	0.000
12.300	0.06	0.50	0.06	0.000
12.317	0.06	0.50	0.06	0.000
12.333	0.06	0.50	0.06	0.000
12.350	0.06	0.50	0.06	0.000
12.367	0.06	0.50	0.06	0.000
12.383	0.06	0.50	0.06	0.000
12.400	0.06	0.50	0.06	0.000
12.417	0.06	0.50	0.06	0.000
12.433	0.06	0.50	0.06	0.000
12.450	0.06	0.50	0.06	0.000
12.467	0.06	0.50	0.06	0.000
12.483	0.06	0.50	0.06	0.000
12.500	0.06	0.50	0.06	0.000
12.517	0.06	0.50	0.06	0.000
12.533	0.07	0.50	0.06	0.000
12.550	0.07	0.50	0.06	0.000
12.567	0.07	0.50	0.06	0.000
12.583	0.07	0.50	0.06	0.000
12.600	0.07	0.50	0.07	0.000
12.617	0.07	0.50	0.07	0.000
12.633	0.07	0.50	0.07	0.000
12.650	0.07	0.50	0.07	0.000
12.667	0.07	0.50	0.07	0.000
12.683	0.07	0.50	0.07	0.000
12.700	0.07	0.50	0.07	0.000
12.717	0.07	0.50	0.07	0.000
12.733	0.07	0.50	0.07	0.000
12.750	0.07	0.50	0.07	0.000
12.767	0.07	0.50	0.07	0.000
12.783	0.07	0.50	0.07	0.000
12.800	0.07	0.50	0.07	0.000
12.817	0.07	0.50	0.07	0.000
12.833	0.07	0.50	0.07	0.000
12.850	0.07	0.50	0.07	0.000
12.867	0.07	0.50	0.07	0.000
12.883	0.07	0.50	0.07	0.000
12.900	0.07	0.50	0.07	0.000
12.917	0.07	0.50	0.07	0.000
12.933	0.07	0.50	0.07	0.000
12.950	0.07	0.50	0.07	0.000
12.967	0.07	0.50	0.07	0.000
12.983	0.07	0.50	0.07	0.000
13.000	0.07	0.50	0.07	0.000
13.017	0.07	0.50	0.07	0.000
13.033	0.07	0.50	0.07	0.000

13.050	0.07	0.50	0.07	0.000
13.067	0.07	0.50	0.07	0.000
13.083	0.07	0.50	0.07	0.000
13.100	0.07	0.50	0.07	0.000
13.117	0.07	0.50	0.07	0.000
13.133	0.07	0.50	0.07	0.000
13.150	0.07	0.50	0.07	0.000
13.167	0.07	0.50	0.07	0.000
13.183	0.07	0.50	0.07	0.000
13.200	0.07	0.50	0.07	0.000
13.217	0.07	0.50	0.07	0.000
13.233	0.07	0.50	0.07	0.000
13.250	0.07	0.50	0.07	0.000
13.267	0.07	0.50	0.07	0.000
13.283	0.08	0.50	0.07	0.000
13.300	0.08	0.50	0.07	0.000
13.317	0.08	0.50	0.07	0.000
13.333	0.08	0.50	0.07	0.000
13.350	0.08	0.50	0.08	0.000
13.367	0.08	0.50	0.08	0.000
13.383	0.08	0.50	0.08	0.000
13.400	0.08	0.50	0.08	0.000
13.417	0.08	0.50	0.08	0.000
13.433	0.08	0.50	0.08	0.000
13.450	0.08	0.50	0.08	0.000
13.467	0.08	0.50	0.08	0.000
13.483	0.08	0.50	0.08	0.000
13.500	0.08	0.50	0.08	0.000
13.517	0.08	0.50	0.08	0.000
13.533	0.08	0.50	0.08	0.000
13.550	0.08	0.50	0.08	0.000
13.567	0.08	0.50	0.08	0.000
13.583	0.08	0.50	0.08	0.000
13.600	0.08	0.50	0.08	0.000
13.617	0.08	0.50	0.08	0.000
13.633	0.08	0.50	0.08	0.000
13.650	0.08	0.50	0.08	0.000
13.667	0.08	0.50	0.08	0.000
13.683	0.08	0.50	0.08	0.000
13.700	0.08	0.50	0.08	0.000
13.717	0.08	0.50	0.08	0.000
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13.767	0.08	0.50	0.08	0.000
13.783	0.08	0.50	0.08	0.000
13.800	0.08	0.50	0.08	0.000
13.817	0.08	0.50	0.08	0.000
13.833	0.08	0.50	0.08	0.000
13.850	0.08	0.50	0.08	0.000
13.867	0.08	0.50	0.08	0.000

13.883	0.08	0.50	0.08	0.000
13.900	0.09	0.50	0.08	0.000
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13.950	0.09	0.50	0.08	0.000
13.967	0.09	0.50	0.09	0.000
13.983	0.09	0.50	0.09	0.000
14.000	0.09	0.50	0.09	0.000
14.017	0.09	0.50	0.09	0.000
14.033	0.09	0.50	0.09	0.000
14.050	0.09	0.50	0.09	0.000
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14.233	0.09	0.50	0.09	0.000
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14.267	0.09	0.50	0.09	0.000
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14.333	0.10	0.50	0.09	0.000
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14.417	0.10	0.50	0.10	0.000
14.433	0.10	0.50	0.10	0.000
14.450	0.10	0.50	0.10	0.000
14.467	0.10	0.50	0.10	0.000
14.483	0.10	0.50	0.10	0.000
14.500	0.10	0.50	0.10	0.000
14.517	0.10	0.50	0.10	0.000
14.533	0.10	0.50	0.10	0.000
14.550	0.10	0.50	0.10	0.000
14.567	0.10	0.50	0.10	0.000
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14.600	0.11	0.50	0.10	0.000
14.617	0.11	0.50	0.10	0.000
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14.683	0.11	0.50	0.11	0.000
14.700	0.11	0.50	0.11	0.000

14.717	0.11	0.50	0.11	0.000
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14.767	0.11	0.50	0.11	0.000
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14.800	0.11	0.50	0.11	0.000
14.817	0.11	0.50	0.11	0.000
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14.867	0.12	0.50	0.11	0.000
14.883	0.12	0.50	0.11	0.000
14.900	0.12	0.50	0.11	0.000
14.917	0.12	0.50	0.12	0.000
14.933	0.12	0.50	0.12	0.000
14.950	0.12	0.50	0.12	0.000
14.967	0.12	0.50	0.12	0.000
14.983	0.12	0.50	0.12	0.000
15.000	0.12	0.50	0.12	0.000
15.017	0.12	0.50	0.12	0.000
15.033	0.12	0.50	0.12	0.000
15.050	0.12	0.50	0.12	0.000
15.067	0.13	0.50	0.12	0.000
15.083	0.13	0.50	0.12	0.000
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15.167	0.13	0.50	0.13	0.000
15.183	0.13	0.50	0.13	0.000
15.200	0.13	0.50	0.13	0.000
15.217	0.14	0.50	0.13	0.000
15.233	0.14	0.50	0.13	0.000
15.250	0.14	0.50	0.13	0.000
15.267	0.14	0.50	0.13	0.000
15.283	0.14	0.50	0.14	0.000
15.300	0.14	0.50	0.14	0.000
15.317	0.14	0.50	0.14	0.000
15.333	0.14	0.50	0.14	0.000
15.350	0.15	0.50	0.14	0.000
15.367	0.15	0.50	0.14	0.000
15.383	0.15	0.50	0.14	0.000
15.400	0.15	0.50	0.14	0.000
15.417	0.15	0.50	0.15	0.000
15.433	0.15	0.50	0.15	0.000
15.450	0.15	0.50	0.15	0.000
15.467	0.15	0.50	0.15	0.000
15.483	0.15	0.51	0.15	0.000
15.500	0.15	0.51	0.15	0.000
15.517	0.15	0.51	0.16	0.000
15.533	0.16	0.51	0.16	0.000

15.550	0.16	0.52	0.16	0.000
15.567	0.16	0.52	0.16	0.000
15.583	0.16	0.52	0.16	0.000
15.600	0.16	0.53	0.16	0.000
15.617	0.16	0.53	0.16	0.000
15.633	0.16	0.54	0.16	0.000
15.650	0.16	0.54	0.16	0.000
15.667	0.16	0.55	0.16	0.000
15.683	0.17	0.55	0.17	0.000
15.700	0.17	0.56	0.17	0.000
15.717	0.17	0.57	0.17	0.000
15.733	0.18	0.58	0.17	0.000
15.750	0.18	0.60	0.17	0.000
15.767	0.19	0.62	0.18	0.000
15.783	0.19	0.65	0.19	0.000
15.800	0.20	0.67	0.20	0.000
15.817	0.21	0.70	0.22	0.000
15.833	0.22	0.74	0.23	0.000
15.850	0.23	0.78	0.23	0.000
15.867	0.25	0.81	0.24	0.000
15.883	0.26	0.86	0.26	0.000
15.900	0.27	0.91	0.27	0.000
15.917	0.29	0.96	0.29	0.000
15.933	0.31	1.01	0.31	0.000
15.950	0.32	1.07	0.35	0.000
15.967	0.34	1.13	0.34	0.000
15.983	0.36	1.19	0.36	0.000
16.000	0.38	1.25	0.38	0.000
16.017	0.40	1.33	0.40	0.000
16.033	0.44	1.45	0.43	0.000
16.050	0.49	1.61	0.47	0.000
16.067	0.55	1.82	0.54	0.000
16.083	0.62	2.06	0.66	0.000
16.100	0.71	2.34	0.73	0.000
16.117	0.80	2.66	0.80	0.000
16.133	0.91	3.00	0.91	0.000
16.150	1.02	3.37	1.02	0.000
16.167	1.14	3.76	1.14	0.000
16.183	1.24	4.11	1.24	0.000
16.200	1.32	4.19	1.29	0.000
16.217	1.37	4.23	1.35	0.000
16.233	1.39	4.24	1.38	0.000
16.250	1.39	4.24	1.39	0.000
16.267	1.37	4.23	1.38	0.000
16.283	1.33	4.20	1.35	0.000
16.300	1.28	4.16	1.30	0.000
16.317	1.21	4.00	1.22	0.000
16.333	1.13	3.73	1.13	0.000
16.350	1.05	3.47	1.05	0.000
16.367	0.98	3.23	0.98	0.000

16.383	0.91	3.01	0.91	0.000
16.400	0.85	2.81	0.85	0.000
16.417	0.79	2.62	0.79	0.000
16.433	0.74	2.45	0.74	0.000
16.450	0.69	2.29	0.69	0.000
16.467	0.65	2.14	0.65	0.000
16.483	0.61	2.01	0.61	0.000
16.500	0.57	1.88	0.57	0.000
16.517	0.53	1.76	0.56	0.000
16.533	0.50	1.66	0.50	0.000
16.550	0.47	1.56	0.47	0.000
16.567	0.44	1.47	0.44	0.000
16.583	0.42	1.39	0.42	0.000
16.600	0.40	1.31	0.39	0.000
16.617	0.37	1.24	0.37	0.000
16.633	0.35	1.17	0.35	0.000
16.650	0.34	1.11	0.33	0.000
16.667	0.32	1.06	0.32	0.000
16.683	0.30	1.00	0.30	0.000
16.700	0.29	0.96	0.29	0.000
16.717	0.28	0.91	0.27	0.000
16.733	0.26	0.87	0.29	0.000
16.750	0.25	0.83	0.25	0.000
16.767	0.24	0.80	0.24	0.000
16.783	0.23	0.76	0.23	0.000
16.800	0.22	0.73	0.22	0.000
16.817	0.21	0.70	0.21	0.000
16.833	0.20	0.68	0.20	0.000
16.850	0.20	0.65	0.20	0.000
16.867	0.19	0.63	0.19	0.000
16.883	0.18	0.61	0.18	0.000
16.900	0.18	0.59	0.18	0.000
16.917	0.17	0.57	0.19	0.000
16.933	0.17	0.55	0.16	0.000
16.950	0.16	0.54	0.16	0.000
16.967	0.16	0.52	0.16	0.000
16.983	0.15	0.51	0.15	0.000
17.000	0.15	0.50	0.15	0.000
17.017	0.15	0.50	0.14	0.000
17.033	0.14	0.50	0.14	0.000
17.050	0.14	0.50	0.14	0.000
17.067	0.14	0.50	0.15	0.000
17.083	0.13	0.50	0.14	0.000
17.100	0.13	0.50	0.14	0.000
17.117	0.13	0.50	0.14	0.000
17.133	0.12	0.50	0.14	0.000
17.150	0.12	0.50	0.13	0.000
17.167	0.12	0.50	0.13	0.000
17.183	0.12	0.50	0.13	0.000
17.200	0.12	0.50	0.12	0.000

17.217	0.11	0.50	0.12	0.000
17.233	0.11	0.50	0.12	0.000
17.250	0.11	0.50	0.12	0.000
17.267	0.11	0.50	0.12	0.000
17.283	0.11	0.50	0.11	0.000
17.300	0.10	0.50	0.11	0.000
17.317	0.10	0.50	0.11	0.000
17.333	0.10	0.50	0.11	0.000
17.350	0.10	0.50	0.11	0.000
17.367	0.10	0.50	0.10	0.000
17.383	0.10	0.50	0.10	0.000
17.400	0.10	0.50	0.10	0.000
17.417	0.10	0.50	0.10	0.000
17.433	0.09	0.50	0.10	0.000
17.450	0.09	0.50	0.10	0.000
17.467	0.09	0.50	0.10	0.000
17.483	0.09	0.50	0.10	0.000
17.500	0.09	0.50	0.09	0.000
17.517	0.09	0.50	0.09	0.000
17.533	0.09	0.50	0.09	0.000
17.550	0.09	0.50	0.09	0.000
17.567	0.09	0.50	0.09	0.000
17.583	0.09	0.50	0.09	0.000
17.600	0.09	0.50	0.09	0.000
17.617	0.08	0.50	0.09	0.000
17.633	0.08	0.50	0.09	0.000
17.650	0.08	0.50	0.09	0.000
17.667	0.08	0.50	0.09	0.000
17.683	0.08	0.50	0.08	0.000
17.700	0.08	0.50	0.08	0.000
17.717	0.08	0.50	0.08	0.000
17.733	0.08	0.50	0.08	0.000
17.750	0.08	0.50	0.08	0.000
17.767	0.08	0.50	0.08	0.000
17.783	0.08	0.50	0.08	0.000
17.800	0.08	0.50	0.08	0.000
17.817	0.08	0.50	0.08	0.000
17.833	0.08	0.50	0.08	0.000
17.850	0.08	0.50	0.08	0.000
17.867	0.08	0.50	0.08	0.000
17.883	0.08	0.50	0.08	0.000
17.900	0.07	0.50	0.08	0.000
17.917	0.07	0.50	0.08	0.000
17.933	0.07	0.50	0.08	0.000
17.950	0.07	0.50	0.07	0.000
17.967	0.07	0.50	0.07	0.000
17.983	0.07	0.50	0.07	0.000
18.000	0.07	0.50	0.07	0.000
18.017	0.07	0.50	0.07	0.000
18.033	0.07	0.50	0.07	0.000

18.050	0.07	0.50	0.07	0.000
18.067	0.07	0.50	0.07	0.000
18.083	0.07	0.50	0.07	0.000
18.100	0.07	0.50	0.07	0.000
18.117	0.07	0.50	0.07	0.000
18.133	0.07	0.50	0.07	0.000
18.150	0.07	0.50	0.07	0.000
18.167	0.07	0.50	0.07	0.000
18.183	0.07	0.50	0.07	0.000
18.200	0.06	0.50	0.07	0.000
18.217	0.06	0.50	0.07	0.000
18.233	0.06	0.50	0.07	0.000
18.250	0.06	0.50	0.07	0.000
18.267	0.06	0.50	0.06	0.000
18.283	0.06	0.50	0.06	0.000
18.300	0.06	0.50	0.06	0.000
18.317	0.06	0.50	0.06	0.000
18.333	0.06	0.50	0.06	0.000
18.350	0.06	0.50	0.06	0.000
18.367	0.06	0.50	0.06	0.000
18.383	0.06	0.50	0.06	0.000
18.400	0.06	0.50	0.06	0.000
18.417	0.05	0.50	0.06	0.000
18.433	0.05	0.50	0.06	0.000
18.450	0.05	0.50	0.06	0.000
18.467	0.05	0.50	0.06	0.000
18.483	0.05	0.50	0.05	0.000
18.500	0.05	0.50	0.05	0.000
18.517	0.05	0.50	0.05	0.000
18.533	0.05	0.50	0.05	0.000
18.550	0.05	0.50	0.05	0.000
18.567	0.05	0.50	0.05	0.000
18.583	0.05	0.50	0.05	0.000
18.600	0.05	0.50	0.05	0.000
18.617	0.05	0.50	0.05	0.000
18.633	0.05	0.50	0.05	0.000
18.650	0.05	0.50	0.05	0.000
18.667	0.05	0.50	0.05	0.000
18.683	0.05	0.50	0.05	0.000
18.700	0.05	0.50	0.05	0.000
18.717	0.05	0.50	0.05	0.000
18.733	0.05	0.50	0.05	0.000
18.750	0.05	0.50	0.05	0.000
18.767	0.05	0.50	0.05	0.000
18.783	0.05	0.50	0.05	0.000
18.800	0.05	0.50	0.05	0.000
18.817	0.05	0.50	0.05	0.000
18.833	0.05	0.50	0.05	0.000
18.850	0.05	0.50	0.05	0.000
18.867	0.05	0.50	0.05	0.000

18.883	0.05	0.50	0.05	0.000
18.900	0.05	0.50	0.05	0.000
18.917	0.05	0.50	0.05	0.000
18.933	0.05	0.50	0.05	0.000
18.950	0.05	0.50	0.05	0.000
18.967	0.04	0.50	0.05	0.000
18.983	0.04	0.50	0.05	0.000
19.000	0.04	0.50	0.05	0.000
19.017	0.04	0.50	0.05	0.000
19.033	0.04	0.50	0.04	0.000
19.050	0.04	0.50	0.04	0.000
19.067	0.04	0.50	0.04	0.000
19.083	0.04	0.50	0.04	0.000
19.100	0.04	0.50	0.04	0.000
19.117	0.04	0.50	0.04	0.000
19.133	0.04	0.50	0.04	0.000
19.150	0.04	0.50	0.04	0.000
19.167	0.04	0.50	0.04	0.000
19.183	0.04	0.50	0.04	0.000
19.200	0.04	0.50	0.04	0.000
19.217	0.04	0.50	0.04	0.000
19.233	0.04	0.50	0.04	0.000
19.250	0.04	0.50	0.04	0.000
19.267	0.04	0.50	0.04	0.000
19.283	0.04	0.50	0.04	0.000
19.300	0.04	0.50	0.04	0.000
19.317	0.04	0.50	0.04	0.000
19.333	0.04	0.50	0.04	0.000
19.350	0.04	0.50	0.04	0.000
19.367	0.04	0.50	0.04	0.000
19.383	0.04	0.50	0.04	0.000
19.400	0.04	0.50	0.04	0.000
19.417	0.04	0.50	0.04	0.000
19.433	0.04	0.50	0.04	0.000
19.450	0.04	0.50	0.04	0.000
19.467	0.04	0.50	0.04	0.000
19.483	0.04	0.50	0.04	0.000
19.500	0.04	0.50	0.04	0.000
19.517	0.04	0.50	0.04	0.000
19.533	0.04	0.50	0.04	0.000
19.550	0.04	0.50	0.04	0.000
19.567	0.04	0.50	0.04	0.000
19.583	0.04	0.50	0.04	0.000
19.600	0.04	0.50	0.04	0.000
19.617	0.04	0.50	0.04	0.000
19.633	0.04	0.50	0.04	0.000
19.650	0.04	0.50	0.04	0.000
19.667	0.04	0.50	0.04	0.000
19.683	0.04	0.50	0.04	0.000
19.700	0.04	0.50	0.04	0.000

19.717	0.04	0.50	0.04	0.000
19.733	0.04	0.50	0.04	0.000
19.750	0.04	0.50	0.04	0.000
19.767	0.04	0.50	0.04	0.000
19.783	0.04	0.50	0.04	0.000
19.800	0.04	0.50	0.04	0.000
19.817	0.04	0.50	0.04	0.000
19.833	0.04	0.50	0.04	0.000
19.850	0.04	0.50	0.04	0.000
19.867	0.04	0.50	0.04	0.000
19.883	0.04	0.50	0.04	0.000
19.900	0.04	0.50	0.04	0.000
19.917	0.04	0.50	0.04	0.000
19.933	0.04	0.50	0.04	0.000
19.950	0.04	0.50	0.04	0.000
19.967	0.04	0.50	0.04	0.000
19.983	0.04	0.50	0.04	0.000
20.000	0.04	0.50	0.04	0.000
20.017	0.04	0.50	0.04	0.000
20.033	0.04	0.50	0.04	0.000
20.050	0.04	0.50	0.04	0.000
20.067	0.04	0.50	0.04	0.000
20.083	0.04	0.50	0.04	0.000
20.100	0.04	0.50	0.04	0.000
20.117	0.04	0.50	0.04	0.000
20.133	0.04	0.50	0.04	0.000
20.150	0.04	0.50	0.04	0.000
20.167	0.04	0.50	0.04	0.000
20.183	0.04	0.50	0.04	0.000
20.200	0.04	0.50	0.04	0.000
20.217	0.04	0.50	0.04	0.000
20.233	0.04	0.50	0.04	0.000
20.250	0.03	0.50	0.04	0.000
20.267	0.03	0.50	0.04	0.000
20.283	0.03	0.50	0.04	0.000
20.300	0.03	0.50	0.03	0.000
20.317	0.03	0.50	0.03	0.000
20.333	0.03	0.50	0.03	0.000
20.350	0.03	0.50	0.03	0.000
20.367	0.03	0.50	0.03	0.000
20.383	0.03	0.50	0.03	0.000
20.400	0.03	0.50	0.03	0.000
20.417	0.03	0.50	0.03	0.000
20.433	0.03	0.50	0.03	0.000
20.450	0.03	0.50	0.03	0.000
20.467	0.03	0.50	0.03	0.000
20.483	0.03	0.50	0.03	0.000
20.500	0.03	0.50	0.03	0.000
20.517	0.03	0.50	0.03	0.000
20.533	0.03	0.50	0.03	0.000

20.550	0.03	0.50	0.03	0.000
20.567	0.03	0.50	0.03	0.000
20.583	0.03	0.50	0.03	0.000
20.600	0.03	0.50	0.03	0.000
20.617	0.03	0.50	0.03	0.000
20.633	0.03	0.50	0.03	0.000
20.650	0.03	0.50	0.03	0.000
20.667	0.03	0.50	0.03	0.000
20.683	0.03	0.50	0.03	0.000
20.700	0.03	0.50	0.03	0.000
20.717	0.03	0.50	0.03	0.000
20.733	0.03	0.50	0.03	0.000
20.750	0.03	0.50	0.03	0.000
20.767	0.03	0.50	0.03	0.000
20.783	0.03	0.50	0.03	0.000
20.800	0.03	0.50	0.03	0.000
20.817	0.03	0.50	0.03	0.000
20.833	0.03	0.50	0.03	0.000
20.850	0.03	0.50	0.03	0.000
20.867	0.03	0.50	0.03	0.000
20.883	0.03	0.50	0.03	0.000
20.900	0.03	0.50	0.03	0.000
20.917	0.03	0.50	0.03	0.000
20.933	0.03	0.50	0.03	0.000
20.950	0.03	0.50	0.03	0.000
20.967	0.03	0.50	0.03	0.000
20.983	0.03	0.50	0.03	0.000
21.000	0.03	0.50	0.03	0.000
21.017	0.03	0.50	0.03	0.000
21.033	0.03	0.50	0.03	0.000
21.050	0.03	0.50	0.03	0.000
21.067	0.03	0.50	0.03	0.000
21.083	0.03	0.50	0.03	0.000
21.100	0.03	0.50	0.03	0.000
21.117	0.03	0.50	0.03	0.000
21.133	0.03	0.50	0.03	0.000
21.150	0.03	0.50	0.03	0.000
21.167	0.03	0.50	0.03	0.000
21.183	0.03	0.50	0.03	0.000
21.200	0.03	0.50	0.03	0.000
21.217	0.03	0.50	0.03	0.000
21.233	0.03	0.50	0.03	0.000
21.250	0.03	0.50	0.03	0.000
21.267	0.03	0.50	0.03	0.000
21.283	0.03	0.50	0.03	0.000
21.300	0.03	0.50	0.03	0.000
21.317	0.03	0.50	0.03	0.000
21.333	0.03	0.50	0.03	0.000
21.350	0.03	0.50	0.03	0.000
21.367	0.03	0.50	0.03	0.000

21.383	0.03	0.50	0.03	0.000
21.400	0.03	0.50	0.03	0.000
21.417	0.03	0.50	0.03	0.000
21.433	0.03	0.50	0.03	0.000
21.450	0.03	0.50	0.03	0.000
21.467	0.03	0.50	0.03	0.000
21.483	0.03	0.50	0.03	0.000
21.500	0.03	0.50	0.03	0.000
21.517	0.03	0.50	0.03	0.000
21.533	0.03	0.50	0.03	0.000
21.550	0.03	0.50	0.03	0.000
21.567	0.03	0.50	0.03	0.000
21.583	0.03	0.50	0.03	0.000
21.600	0.03	0.50	0.03	0.000
21.617	0.03	0.50	0.03	0.000
21.633	0.03	0.50	0.03	0.000
21.650	0.03	0.50	0.03	0.000
21.667	0.03	0.50	0.03	0.000
21.683	0.03	0.50	0.03	0.000
21.700	0.03	0.50	0.03	0.000
21.717	0.03	0.50	0.03	0.000
21.733	0.03	0.50	0.03	0.000
21.750	0.03	0.50	0.03	0.000
21.767	0.03	0.50	0.03	0.000
21.783	0.03	0.50	0.03	0.000
21.800	0.03	0.50	0.03	0.000
21.817	0.03	0.50	0.03	0.000
21.833	0.03	0.50	0.03	0.000
21.850	0.03	0.50	0.03	0.000
21.867	0.03	0.50	0.03	0.000
21.883	0.03	0.50	0.03	0.000
21.900	0.03	0.50	0.03	0.000
21.917	0.03	0.50	0.03	0.000
21.933	0.03	0.50	0.03	0.000
21.950	0.03	0.50	0.03	0.000
21.967	0.03	0.50	0.03	0.000
21.983	0.03	0.50	0.03	0.000
22.000	0.03	0.50	0.03	0.000
22.017	0.03	0.50	0.03	0.000
22.033	0.03	0.50	0.03	0.000
22.050	0.03	0.50	0.03	0.000
22.067	0.03	0.50	0.03	0.000
22.083	0.03	0.50	0.03	0.000
22.100	0.03	0.50	0.03	0.000
22.117	0.03	0.50	0.03	0.000
22.133	0.03	0.50	0.03	0.000
22.150	0.03	0.50	0.03	0.000
22.167	0.03	0.50	0.03	0.000
22.183	0.03	0.50	0.03	0.000
22.200	0.03	0.50	0.03	0.000

22.217	0.03	0.50	0.03	0.000
22.233	0.03	0.50	0.03	0.000
22.250	0.03	0.50	0.03	0.000
22.267	0.03	0.50	0.03	0.000
22.283	0.03	0.50	0.03	0.000
22.300	0.03	0.50	0.03	0.000
22.317	0.03	0.50	0.03	0.000
22.333	0.03	0.50	0.03	0.000
22.350	0.03	0.50	0.03	0.000
22.367	0.03	0.50	0.03	0.000
22.383	0.03	0.50	0.03	0.000
22.400	0.03	0.50	0.03	0.000
22.417	0.03	0.50	0.03	0.000
22.433	0.03	0.50	0.03	0.000
22.450	0.03	0.50	0.03	0.000
22.467	0.03	0.50	0.03	0.000
22.483	0.03	0.50	0.03	0.000
22.500	0.03	0.50	0.03	0.000
22.517	0.03	0.50	0.03	0.000
22.533	0.03	0.50	0.03	0.000
22.550	0.03	0.50	0.03	0.000
22.567	0.03	0.50	0.03	0.000
22.583	0.03	0.50	0.03	0.000
22.600	0.03	0.50	0.03	0.000
22.617	0.03	0.50	0.03	0.000
22.633	0.03	0.50	0.03	0.000
22.650	0.03	0.50	0.03	0.000
22.667	0.03	0.50	0.03	0.000
22.683	0.03	0.50	0.03	0.000
22.700	0.03	0.50	0.03	0.000
22.717	0.03	0.50	0.03	0.000
22.733	0.03	0.50	0.03	0.000
22.750	0.03	0.50	0.03	0.000
22.767	0.03	0.50	0.03	0.000
22.783	0.03	0.50	0.03	0.000
22.800	0.03	0.50	0.03	0.000
22.817	0.03	0.50	0.03	0.000
22.833	0.03	0.50	0.03	0.000
22.850	0.03	0.50	0.03	0.000
22.867	0.03	0.50	0.03	0.000
22.883	0.03	0.50	0.03	0.000
22.900	0.03	0.50	0.03	0.000
22.917	0.03	0.50	0.03	0.000
22.933	0.03	0.50	0.03	0.000
22.950	0.03	0.50	0.03	0.000
22.967	0.03	0.50	0.03	0.000
22.983	0.03	0.50	0.03	0.000
23.000	0.03	0.50	0.03	0.000
23.017	0.02	0.50	0.03	0.000
23.033	0.02	0.50	0.03	0.000

23.050	0.02	0.50	0.03	0.000
23.067	0.02	0.50	0.03	0.000
23.083	0.02	0.50	0.02	0.000
23.100	0.02	0.50	0.02	0.000
23.117	0.02	0.50	0.02	0.000
23.133	0.02	0.50	0.02	0.000
23.150	0.02	0.50	0.02	0.000
23.167	0.02	0.50	0.02	0.000
23.183	0.02	0.50	0.02	0.000
23.200	0.02	0.50	0.02	0.000
23.217	0.02	0.50	0.02	0.000
23.233	0.02	0.50	0.02	0.000
23.250	0.02	0.50	0.02	0.000
23.267	0.02	0.50	0.02	0.000
23.283	0.02	0.50	0.02	0.000
23.300	0.02	0.50	0.02	0.000
23.317	0.02	0.50	0.02	0.000
23.333	0.02	0.50	0.02	0.000
23.350	0.02	0.50	0.02	0.000
23.367	0.02	0.50	0.02	0.000
23.383	0.02	0.50	0.02	0.000
23.400	0.02	0.50	0.02	0.000
23.417	0.02	0.50	0.02	0.000
23.433	0.02	0.50	0.02	0.000
23.450	0.02	0.50	0.02	0.000
23.467	0.02	0.50	0.02	0.000
23.483	0.02	0.50	0.02	0.000
23.500	0.02	0.50	0.02	0.000
23.517	0.02	0.50	0.02	0.000
23.533	0.02	0.50	0.02	0.000
23.550	0.02	0.50	0.02	0.000
23.567	0.02	0.50	0.02	0.000
23.583	0.02	0.50	0.02	0.000
23.600	0.02	0.50	0.02	0.000
23.617	0.02	0.50	0.02	0.000
23.633	0.02	0.50	0.02	0.000
23.650	0.02	0.50	0.02	0.000
23.667	0.02	0.50	0.02	0.000
23.683	0.02	0.50	0.02	0.000
23.700	0.02	0.50	0.02	0.000
23.717	0.02	0.50	0.02	0.000
23.733	0.02	0.50	0.02	0.000
23.750	0.02	0.50	0.02	0.000
23.767	0.02	0.50	0.02	0.000
23.783	0.02	0.50	0.02	0.000
23.800	0.02	0.50	0.02	0.000
23.817	0.02	0.50	0.02	0.000
23.833	0.02	0.50	0.02	0.000
23.850	0.02	0.50	0.02	0.000
23.867	0.02	0.50	0.02	0.000

23.883	0.02	0.50	0.02	0.000
23.900	0.02	0.50	0.02	0.000
23.917	0.02	0.50	0.02	0.000
23.933	0.02	0.50	0.02	0.000
23.950	0.02	0.50	0.02	0.000
23.967	0.02	0.50	0.02	0.000
23.983	0.02	0.50	0.02	0.000
24.000	0.02	0.50	0.02	0.000
24.017	0.02	0.50	0.02	0.000
24.033	0.02	0.50	0.02	0.000
24.050	0.02	0.50	0.02	0.000
24.067	0.02	0.50	0.02	0.000
24.083	0.02	0.50	0.02	0.000
24.100	0.02	0.50	0.02	0.000
24.117	0.02	0.50	0.02	0.000
24.133	0.02	0.50	0.02	0.000
24.150	0.02	0.50	0.02	0.000
24.167	0.02	0.50	0.02	0.000
24.183	0.02	0.50	0.02	0.000
24.200	0.02	0.50	0.02	0.000
24.217	0.01	0.50	0.02	0.000
24.233	0.01	0.50	0.02	0.000
24.250	0.01	0.50	0.02	0.000
24.267	0.01	0.50	0.02	0.000
24.283	0.01	0.50	0.01	0.000
24.300	0.01	0.50	0.01	0.000
24.317	0.01	0.50	0.01	0.000
24.333	0.01	0.50	0.01	0.000
24.350	0.01	0.50	0.01	0.000
24.367	0.01	0.50	0.01	0.000
24.383	0.01	0.50	0.01	0.000
24.400	0.01	0.50	0.01	0.000
24.417	0.00	0.50	0.01	0.000
24.433	0.00	0.50	0.01	0.000
24.450	0.00	0.50	0.01	0.000
24.467	0.00	0.50	0.01	0.000
24.483	0.00	0.50	0.00	0.000
24.500	0.00	0.50	0.00	0.000
24.517	0.00	0.50	0.00	0.000
24.533	0.00	0.50	0.00	0.000
24.550	0.00	0.50	0.00	0.000
24.567	0.00	0.50	0.00	0.000
24.583	0.00	0.50	0.00	0.000
24.600	0.00	0.50	0.00	0.000
24.617	0.00	0.50	0.00	0.000
24.633	0.00	0.50	0.00	0.000
24.650	0.00	0.50	0.00	0.000
24.667	0.00	0.50	0.00	0.000
24.683	0.00	0.50	0.00	0.000
24.700	0.00	0.50	0.00	0.000

24.717	0.00	0.00	0.00	0.000
24.733	0.00	0.00	0.00	0.000
24.750	0.00	0.00	0.00	0.000
24.767	0.00	0.00	0.00	0.000
24.783	0.00	0.00	0.00	0.000
24.800	0.00	0.00	0.00	0.000
24.817	0.00	0.00	0.00	0.000
24.833	0.00	0.00	0.00	0.000
24.850	0.00	0.00	0.00	0.000
24.867	0.00	0.00	0.00	0.000
24.883	0.00	0.00	0.00	0.000
24.900	0.00	0.00	0.00	0.000
24.917	0.00	0.00	0.00	0.000
24.933	0.00	0.00	0.00	0.000
24.950	0.00	0.00	0.00	0.000
24.967	0.00	0.00	0.00	0.000
24.983	0.00	0.00	0.00	0.000
25.000	0.00	0.00	0.00	0.000
25.017	0.00	0.00	0.00	0.000
25.033	0.00	0.00	0.00	0.000
25.050	0.00	0.00	0.00	0.000
25.067	0.00	0.00	0.00	0.000
25.083	0.00	0.00	0.00	0.000
25.100	0.00	0.00	0.00	0.000
25.117	0.00	0.00	0.00	0.000
25.133	0.00	0.00	0.00	0.000
25.150	0.00	0.00	0.00	0.000
25.167	0.00	0.00	0.00	0.000
25.183	0.00	0.00	0.00	0.000
25.200	0.00	0.00	0.00	0.000
25.217	0.00	0.00	0.00	0.000
25.233	0.00	0.00	0.00	0.000
25.250	0.00	0.00	0.00	0.000
25.267	0.00	0.00	0.00	0.000
25.283	0.00	0.00	0.00	0.000
25.300	0.00	0.00	0.00	0.000
25.317	0.00	0.00	0.00	0.000
25.333	0.00	0.00	0.00	0.000
25.350	0.00	0.00	0.00	0.000
25.367	0.00	0.00	0.00	0.000
25.383	0.00	0.00	0.00	0.000
25.400	0.00	0.00	0.00	0.000
25.417	0.00	0.00	0.00	0.000
25.433	0.00	0.00	0.00	0.000
25.450	0.00	0.00	0.00	0.000
25.467	0.00	0.00	0.00	0.000
25.483	0.00	0.00	0.00	0.000
25.500	0.00	0.00	0.00	0.000
25.517	0.00	0.00	0.00	0.000
25.533	0.00	0.00	0.00	0.000

25.550	0.00	0.00	0.00	0.000
25.567	0.00	0.00	0.00	0.000
25.583	0.00	0.00	0.00	0.000
25.600	0.00	0.00	0.00	0.000
25.617	0.00	0.00	0.00	0.000
25.633	0.00	0.00	0.00	0.000
25.650	0.00	0.00	0.00	0.000
25.667	0.00	0.00	0.00	0.000
25.683	0.00	0.00	0.00	0.000
25.700	0.00	0.00	0.00	0.000
25.717	0.00	0.00	0.00	0.000
25.733	0.00	0.00	0.00	0.000
25.750	0.00	0.00	0.00	0.000
25.767	0.00	0.00	0.00	0.000
25.783	0.00	0.00	0.00	0.000
25.800	0.00	0.00	0.00	0.000
25.817	0.00	0.00	0.00	0.000
25.833	0.00	0.00	0.00	0.000
25.850	0.00	0.00	0.00	0.000
25.867	0.00	0.00	0.00	0.000
25.883	0.00	0.00	0.00	0.000
25.900	0.00	0.00	0.00	0.000
25.917	0.00	0.00	0.00	0.000
25.933	0.00	0.00	0.00	0.000
25.950	0.00	0.00	0.00	0.000
25.967	0.00	0.00	0.00	0.000
25.983	0.00	0.00	0.00	0.000
26.000	0.00	0.00	0.00	0.000
26.017	0.00	0.00	0.00	0.000
26.033	0.00	0.00	0.00	0.000
26.050	0.00	0.00	0.00	0.000
26.067	0.00	0.00	0.00	0.000
26.083	0.00	0.00	0.00	0.000
26.100	0.00	0.00	0.00	0.000
26.117	0.00	0.00	0.00	0.000
26.133	0.00	0.00	0.00	0.000
26.150	0.00	0.00	0.00	0.000
26.167	0.00	0.00	0.00	0.000
26.183	0.00	0.00	0.00	0.000
26.200	0.00	0.00	0.00	0.000
26.217	0.00	0.00	0.00	0.000
26.233	0.00	0.00	0.00	0.000
26.250	0.00	0.00	0.00	0.000
26.267	0.00	0.00	0.00	0.000
26.283	0.00	0.00	0.00	0.000
26.300	0.00	0.00	0.00	0.000
26.317	0.00	0.00	0.00	0.000
26.333	0.00	0.00	0.00	0.000
26.350	0.00	0.00	0.00	0.000
26.367	0.00	0.00	0.00	0.000

26.383	0.00	0.00	0.00	0.000
26.400	0.00	0.00	0.00	0.000
26.417	0.00	0.00	0.00	0.000
26.433	0.00	0.00	0.00	0.000
26.450	0.00	0.00	0.00	0.000
26.467	0.00	0.00	0.00	0.000
26.483	0.00	0.00	0.00	0.000
26.500	0.00	0.00	0.00	0.000
26.517	0.00	0.00	0.00	0.000
26.533	0.00	0.00	0.00	0.000
26.550	0.00	0.00	0.00	0.000
26.567	0.00	0.00	0.00	0.000
26.583	0.00	0.00	0.00	0.000
26.600	0.00	0.00	0.00	0.000
26.617	0.00	0.00	0.00	0.000
26.633	0.00	0.00	0.00	0.000
26.650	0.00	0.00	0.00	0.000
26.667	0.00	0.00	0.00	0.000
26.683	0.00	0.00	0.00	0.000
26.700	0.00	0.00	0.00	0.000
26.717	0.00	0.00	0.00	0.000
26.733	0.00	0.00	0.00	0.000
26.750	0.00	0.00	0.00	0.000
26.767	0.00	0.00	0.00	0.000
26.783	0.00	0.00	0.00	0.000
26.800	0.00	0.00	0.00	0.000
26.817	0.00	0.00	0.00	0.000
26.833	0.00	0.00	0.00	0.000
26.850	0.00	0.00	0.00	0.000
26.867	0.00	0.00	0.00	0.000
26.883	0.00	0.00	0.00	0.000
26.900	0.00	0.00	0.00	0.000
26.917	0.00	0.00	0.00	0.000
26.933	0.00	0.00	0.00	0.000
26.950	0.00	0.00	0.00	0.000
26.967	0.00	0.00	0.00	0.000
26.983	0.00	0.00	0.00	0.000
27.000	0.00	0.00	0.00	0.000
27.017	0.00	0.00	0.00	0.000
27.033	0.00	0.00	0.00	0.000
27.050	0.00	0.00	0.00	0.000
27.067	0.00	0.00	0.00	0.000
27.083	0.00	0.00	0.00	0.000
27.100	0.00	0.00	0.00	0.000
27.117	0.00	0.00	0.00	0.000
27.133	0.00	0.00	0.00	0.000
27.150	0.00	0.00	0.00	0.000
27.167	0.00	0.00	0.00	0.000
27.183	0.00	0.00	0.00	0.000
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27.217	0.00	0.00	0.00	0.000
27.233	0.00	0.00	0.00	0.000
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27.267	0.00	0.00	0.00	0.000
27.283	0.00	0.00	0.00	0.000
27.300	0.00	0.00	0.00	0.000
27.317	0.00	0.00	0.00	0.000
27.333	0.00	0.00	0.00	0.000
27.350	0.00	0.00	0.00	0.000
27.367	0.00	0.00	0.00	0.000
27.383	0.00	0.00	0.00	0.000
27.400	0.00	0.00	0.00	0.000
27.417	0.00	0.00	0.00	0.000
27.433	0.00	0.00	0.00	0.000
27.450	0.00	0.00	0.00	0.000
27.467	0.00	0.00	0.00	0.000
27.483	0.00	0.00	0.00	0.000
27.500	0.00	0.00	0.00	0.000
27.517	0.00	0.00	0.00	0.000
27.533	0.00	0.00	0.00	0.000
27.550	0.00	0.00	0.00	0.000
27.567	0.00	0.00	0.00	0.000
27.583	0.00	0.00	0.00	0.000
27.600	0.00	0.00	0.00	0.000
27.617	0.00	0.00	0.00	0.000
27.633	0.00	0.00	0.00	0.000
27.650	0.00	0.00	0.00	0.000
27.667	0.00	0.00	0.00	0.000
27.683	0.00	0.00	0.00	0.000
27.700	0.00	0.00	0.00	0.000
27.717	0.00	0.00	0.00	0.000
27.733	0.00	0.00	0.00	0.000
27.750	0.00	0.00	0.00	0.000
27.767	0.00	0.00	0.00	0.000
27.783	0.00	0.00	0.00	0.000
27.800	0.00	0.00	0.00	0.000
27.817	0.00	0.00	0.00	0.000
27.833	0.00	0.00	0.00	0.000
27.850	0.00	0.00	0.00	0.000
27.867	0.00	0.00	0.00	0.000
27.883	0.00	0.00	0.00	0.000
27.900	0.00	0.00	0.00	0.000
27.917	0.00	0.00	0.00	0.000
27.933	0.00	0.00	0.00	0.000
27.950	0.00	0.00	0.00	0.000
27.967	0.00	0.00	0.00	0.000
27.983	0.00	0.00	0.00	0.000
28.000	0.00	0.00	0.00	0.000
28.017	0.00	0.00	0.00	0.000
28.033	0.00	0.00	0.00	0.000

28.050	0.00	0.00	0.00	0.000
28.067	0.00	0.00	0.00	0.000
28.083	0.00	0.00	0.00	0.000
28.100	0.00	0.00	0.00	0.000
28.117	0.00	0.00	0.00	0.000
28.133	0.00	0.00	0.00	0.000
28.150	0.00	0.00	0.00	0.000
28.167	0.00	0.00	0.00	0.000
28.183	0.00	0.00	0.00	0.000
28.200	0.00	0.00	0.00	0.000
28.217	0.00	0.00	0.00	0.000
28.233	0.00	0.00	0.00	0.000
28.250	0.00	0.00	0.00	0.000
28.267	0.00	0.00	0.00	0.000
28.283	0.00	0.00	0.00	0.000
28.300	0.00	0.00	0.00	0.000
28.317	0.00	0.00	0.00	0.000
28.333	0.00	0.00	0.00	0.000
28.350	0.00	0.00	0.00	0.000
28.367	0.00	0.00	0.00	0.000
28.383	0.00	0.00	0.00	0.000
28.400	0.00	0.00	0.00	0.000
28.417	0.00	0.00	0.00	0.000
28.433	0.00	0.00	0.00	0.000
28.450	0.00	0.00	0.00	0.000
28.467	0.00	0.00	0.00	0.000
28.483	0.00	0.00	0.00	0.000
28.500	0.00	0.00	0.00	0.000
28.517	0.00	0.00	0.00	0.000
28.533	0.00	0.00	0.00	0.000
28.550	0.00	0.00	0.00	0.000
28.567	0.00	0.00	0.00	0.000
28.583	0.00	0.00	0.00	0.000
28.600	0.00	0.00	0.00	0.000
28.617	0.00	0.00	0.00	0.000
28.633	0.00	0.00	0.00	0.000
28.650	0.00	0.00	0.00	0.000
28.667	0.00	0.00	0.00	0.000
28.683	0.00	0.00	0.00	0.000
28.700	0.00	0.00	0.00	0.000
28.717	0.00	0.00	0.00	0.000
28.733	0.00	0.00	0.00	0.000
28.750	0.00	0.00	0.00	0.000
28.767	0.00	0.00	0.00	0.000
28.783	0.00	0.00	0.00	0.000
28.800	0.00	0.00	0.00	0.000
28.817	0.00	0.00	0.00	0.000
28.833	0.00	0.00	0.00	0.000
28.850	0.00	0.00	0.00	0.000
28.867	0.00	0.00	0.00	0.000

28.883	0.00	0.00	0.00	0.000
28.900	0.00	0.00	0.00	0.000
28.917	0.00	0.00	0.00	0.000
28.933	0.00	0.00	0.00	0.000
28.950	0.00	0.00	0.00	0.000
28.967	0.00	0.00	0.00	0.000
28.983	0.00	0.00	0.00	0.000
29.000	0.00	0.00	0.00	0.000
29.017	0.00	0.00	0.00	0.000
29.033	0.00	0.00	0.00	0.000
29.050	0.00	0.00	0.00	0.000
29.067	0.00	0.00	0.00	0.000
29.083	0.00	0.00	0.00	0.000
29.100	0.00	0.00	0.00	0.000
29.117	0.00	0.00	0.00	0.000
29.133	0.00	0.00	0.00	0.000
29.150	0.00	0.00	0.00	0.000
29.167	0.00	0.00	0.00	0.000
29.183	0.00	0.00	0.00	0.000
29.200	0.00	0.00	0.00	0.000
29.217	0.00	0.00	0.00	0.000
29.233	0.00	0.00	0.00	0.000
29.250	0.00	0.00	0.00	0.000
29.267	0.00	0.00	0.00	0.000
29.283	0.00	0.00	0.00	0.000
29.300	0.00	0.00	0.00	0.000
29.317	0.00	0.00	0.00	0.000
29.333	0.00	0.00	0.00	0.000
29.350	0.00	0.00	0.00	0.000
29.367	0.00	0.00	0.00	0.000
29.383	0.00	0.00	0.00	0.000
29.400	0.00	0.00	0.00	0.000
29.417	0.00	0.00	0.00	0.000
29.433	0.00	0.00	0.00	0.000
29.450	0.00	0.00	0.00	0.000
29.467	0.00	0.00	0.00	0.000
29.483	0.00	0.00	0.00	0.000
29.500	0.00	0.00	0.00	0.000
29.517	0.00	0.00	0.00	0.000
29.533	0.00	0.00	0.00	0.000
29.550	0.00	0.00	0.00	0.000
29.567	0.00	0.00	0.00	0.000
29.583	0.00	0.00	0.00	0.000
29.600	0.00	0.00	0.00	0.000
29.617	0.00	0.00	0.00	0.000
29.633	0.00	0.00	0.00	0.000
29.650	0.00	0.00	0.00	0.000
29.667	0.00	0.00	0.00	0.000
29.683	0.00	0.00	0.00	0.000
29.700	0.00	0.00	0.00	0.000

29.717	0.00	0.00	0.00	0.000
29.733	0.00	0.00	0.00	0.000
29.750	0.00	0.00	0.00	0.000
29.767	0.00	0.00	0.00	0.000
29.783	0.00	0.00	0.00	0.000
29.800	0.00	0.00	0.00	0.000
29.817	0.00	0.00	0.00	0.000
29.833	0.00	0.00	0.00	0.000
29.850	0.00	0.00	0.00	0.000
29.867	0.00	0.00	0.00	0.000
29.883	0.00	0.00	0.00	0.000
29.900	0.00	0.00	0.00	0.000
29.917	0.00	0.00	0.00	0.000
29.933	0.00	0.00	0.00	0.000
29.950	0.00	0.00	0.00	0.000
29.967	0.00	0.00	0.00	0.000
29.983	0.00	0.00	0.00	0.000
30.000	0.00	0.00	0.00	0.000
30.017	0.00	0.00	0.00	0.000
30.033	0.00	0.00	0.00	0.000
30.050	0.00	0.00	0.00	0.000
30.067	0.00	0.00	0.00	0.000
30.083	0.00	0.00	0.00	0.000
30.100	0.00	0.00	0.00	0.000
30.117	0.00	0.00	0.00	0.000
30.133	0.00	0.00	0.00	0.000
30.150	0.00	0.00	0.00	0.000
30.167	0.00	0.00	0.00	0.000
30.183	0.00	0.00	0.00	0.000
30.200	0.00	0.00	0.00	0.000
30.217	0.00	0.00	0.00	0.000
30.233	0.00	0.00	0.00	0.000
30.250	0.00	0.00	0.00	0.000
30.267	0.00	0.00	0.00	0.000
30.283	0.00	0.00	0.00	0.000
30.300	0.00	0.00	0.00	0.000
30.317	0.00	0.00	0.00	0.000
30.333	0.00	0.00	0.00	0.000
30.350	0.00	0.00	0.00	0.000
30.367	0.00	0.00	0.00	0.000
30.383	0.00	0.00	0.00	0.000
30.400	0.00	0.00	0.00	0.000
30.417	0.00	0.00	0.00	0.000
30.433	0.00	0.00	0.00	0.000
30.450	0.00	0.00	0.00	0.000
30.467	0.00	0.00	0.00	0.000
30.483	0.00	0.00	0.00	0.000
30.500	0.00	0.00	0.00	0.000
30.517	0.00	0.00	0.00	0.000
30.533	0.00	0.00	0.00	0.000

30.550	0.00	0.00	0.00	0.000
30.567	0.00	0.00	0.00	0.000
30.583	0.00	0.00	0.00	0.000
30.600	0.00	0.00	0.00	0.000
30.617	0.00	0.00	0.00	0.000
30.633	0.00	0.00	0.00	0.000
30.650	0.00	0.00	0.00	0.000
30.667	0.00	0.00	0.00	0.000
30.683	0.00	0.00	0.00	0.000
30.700	0.00	0.00	0.00	0.000
30.717	0.00	0.00	0.00	0.000
30.733	0.00	0.00	0.00	0.000
30.750	0.00	0.00	0.00	0.000
30.767	0.00	0.00	0.00	0.000
30.783	0.00	0.00	0.00	0.000
30.800	0.00	0.00	0.00	0.000
30.817	0.00	0.00	0.00	0.000
30.833	0.00	0.00	0.00	0.000
30.850	0.00	0.00	0.00	0.000
30.867	0.00	0.00	0.00	0.000
30.883	0.00	0.00	0.00	0.000
30.900	0.00	0.00	0.00	0.000
30.917	0.00	0.00	0.00	0.000
30.933	0.00	0.00	0.00	0.000
30.950	0.00	0.00	0.00	0.000
30.967	0.00	0.00	0.00	0.000
30.983	0.00	0.00	0.00	0.000
31.000	0.00	0.00	0.00	0.000
31.017	0.00	0.00	0.00	0.000
31.033	0.00	0.00	0.00	0.000
31.050	0.00	0.00	0.00	0.000
31.067	0.00	0.00	0.00	0.000
31.083	0.00	0.00	0.00	0.000
31.100	0.00	0.00	0.00	0.000
31.117	0.00	0.00	0.00	0.000
31.133	0.00	0.00	0.00	0.000
31.150	0.00	0.00	0.00	0.000
31.167	0.00	0.00	0.00	0.000
31.183	0.00	0.00	0.00	0.000
31.200	0.00	0.00	0.00	0.000
31.217	0.00	0.00	0.00	0.000
31.233	0.00	0.00	0.00	0.000
31.250	0.00	0.00	0.00	0.000
31.267	0.00	0.00	0.00	0.000
31.283	0.00	0.00	0.00	0.000
31.300	0.00	0.00	0.00	0.000
31.317	0.00	0.00	0.00	0.000
31.333	0.00	0.00	0.00	0.000
31.350	0.00	0.00	0.00	0.000
31.367	0.00	0.00	0.00	0.000

31.383	0.00	0.00	0.00	0.000
31.400	0.00	0.00	0.00	0.000
31.417	0.00	0.00	0.00	0.000
31.433	0.00	0.00	0.00	0.000
31.450	0.00	0.00	0.00	0.000
31.467	0.00	0.00	0.00	0.000
31.483	0.00	0.00	0.00	0.000
31.500	0.00	0.00	0.00	0.000
31.517	0.00	0.00	0.00	0.000
31.533	0.00	0.00	0.00	0.000
31.550	0.00	0.00	0.00	0.000
31.567	0.00	0.00	0.00	0.000
31.583	0.00	0.00	0.00	0.000
31.600	0.00	0.00	0.00	0.000
31.617	0.00	0.00	0.00	0.000
31.633	0.00	0.00	0.00	0.000
31.650	0.00	0.00	0.00	0.000
31.667	0.00	0.00	0.00	0.000
31.683	0.00	0.00	0.00	0.000
31.700	0.00	0.00	0.00	0.000
31.717	0.00	0.00	0.00	0.000
31.733	0.00	0.00	0.00	0.000
31.750	0.00	0.00	0.00	0.000
31.767	0.00	0.00	0.00	0.000
31.783	0.00	0.00	0.00	0.000
31.800	0.00	0.00	0.00	0.000
31.817	0.00	0.00	0.00	0.000
31.833	0.00	0.00	0.00	0.000
31.850	0.00	0.00	0.00	0.000
31.867	0.00	0.00	0.00	0.000
31.883	0.00	0.00	0.00	0.000
31.900	0.00	0.00	0.00	0.000
31.917	0.00	0.00	0.00	0.000
31.933	0.00	0.00	0.00	0.000
31.950	0.00	0.00	0.00	0.000
31.967	0.00	0.00	0.00	0.000
31.983	0.00	0.00	0.00	0.000
32.000	0.00	0.00	0.00	0.000
32.017	0.00	0.00	0.00	0.000
32.033	0.00	0.00	0.00	0.000
32.050	0.00	0.00	0.00	0.000
32.067	0.00	0.00	0.00	0.000
32.083	0.00	0.00	0.00	0.000
32.100	0.00	0.00	0.00	0.000
32.117	0.00	0.00	0.00	0.000
32.133	0.00	0.00	0.00	0.000
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32.317	0.00	0.00	0.00	0.000
32.333	0.00	0.00	0.00	0.000
32.350	0.00	0.00	0.00	0.000
32.367	0.00	0.00	0.00	0.000
32.383	0.00	0.00	0.00	0.000
32.400	0.00	0.00	0.00	0.000
32.417	0.00	0.00	0.00	0.000
32.433	0.00	0.00	0.00	0.000
32.450	0.00	0.00	0.00	0.000
32.467	0.00	0.00	0.00	0.000
32.483	0.00	0.00	0.00	0.000
32.500	0.00	0.00	0.00	0.000
32.517	0.00	0.00	0.00	0.000
32.533	0.00	0.00	0.00	0.000
32.550	0.00	0.00	0.00	0.000
32.567	0.00	0.00	0.00	0.000
32.583	0.00	0.00	0.00	0.000
32.600	0.00	0.00	0.00	0.000
32.617	0.00	0.00	0.00	0.000
32.633	0.00	0.00	0.00	0.000
32.650	0.00	0.00	0.00	0.000
32.667	0.00	0.00	0.00	0.000
32.683	0.00	0.00	0.00	0.000
32.700	0.00	0.00	0.00	0.000
32.717	0.00	0.00	0.00	0.000
32.733	0.00	0.00	0.00	0.000
32.750	0.00	0.00	0.00	0.000
32.767	0.00	0.00	0.00	0.000
32.783	0.00	0.00	0.00	0.000
32.800	0.00	0.00	0.00	0.000
32.817	0.00	0.00	0.00	0.000
32.833	0.00	0.00	0.00	0.000
32.850	0.00	0.00	0.00	0.000
32.867	0.00	0.00	0.00	0.000
32.883	0.00	0.00	0.00	0.000
32.900	0.00	0.00	0.00	0.000
32.917	0.00	0.00	0.00	0.000
32.933	0.00	0.00	0.00	0.000
32.950	0.00	0.00	0.00	0.000
32.967	0.00	0.00	0.00	0.000
32.983	0.00	0.00	0.00	0.000
33.000	0.00	0.00	0.00	0.000
33.017	0.00	0.00	0.00	0.000
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33.117	0.00	0.00	0.00	0.000
33.133	0.00	0.00	0.00	0.000
33.150	0.00	0.00	0.00	0.000
33.167	0.00	0.00	0.00	0.000
33.183	0.00	0.00	0.00	0.000
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33.383	0.00	0.00	0.00	0.000
33.400	0.00	0.00	0.00	0.000
33.417	0.00	0.00	0.00	0.000
33.433	0.00	0.00	0.00	0.000
33.450	0.00	0.00	0.00	0.000
33.467	0.00	0.00	0.00	0.000
33.483	0.00	0.00	0.00	0.000
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33.533	0.00	0.00	0.00	0.000
33.550	0.00	0.00	0.00	0.000
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33.600	0.00	0.00	0.00	0.000
33.617	0.00	0.00	0.00	0.000
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33.650	0.00	0.00	0.00	0.000
33.667	0.00	0.00	0.00	0.000
33.683	0.00	0.00	0.00	0.000
33.700	0.00	0.00	0.00	0.000
33.717	0.00	0.00	0.00	0.000
33.733	0.00	0.00	0.00	0.000
33.750	0.00	0.00	0.00	0.000
33.767	0.00	0.00	0.00	0.000
33.783	0.00	0.00	0.00	0.000
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33.817	0.00	0.00	0.00	0.000
33.833	0.00	0.00	0.00	0.000
33.850	0.00	0.00	0.00	0.000
33.867	0.00	0.00	0.00	0.000

33.883	0.00	0.00	0.00	0.000
33.900	0.00	0.00	0.00	0.000
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33.933	0.00	0.00	0.00	0.000
33.950	0.00	0.00	0.00	0.000
33.967	0.00	0.00	0.00	0.000
33.983	0.00	0.00	0.00	0.000
34.000	0.00	0.00	0.00	0.000
34.017	0.00	0.00	0.00	0.000
34.033	0.00	0.00	0.00	0.000
34.050	0.00	0.00	0.00	0.000
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34.500	0.00	0.00	0.00	0.000
34.517	0.00	0.00	0.00	0.000
34.533	0.00	0.00	0.00	0.000
34.550	0.00	0.00	0.00	0.000
34.567	0.00	0.00	0.00	0.000
34.583	0.00	0.00	0.00	0.000
34.600	0.00	0.00	0.00	0.000
34.617	0.00	0.00	0.00	0.000
34.633	0.00	0.00	0.00	0.000
34.650	0.00	0.00	0.00	0.000
34.667	0.00	0.00	0.00	0.000
34.683	0.00	0.00	0.00	0.000
34.700	0.00	0.00	0.00	0.000

34.717	0.00	0.00	0.00	0.000
34.733	0.00	0.00	0.00	0.000
34.750	0.00	0.00	0.00	0.000
34.767	0.00	0.00	0.00	0.000
34.783	0.00	0.00	0.00	0.000
34.800	0.00	0.00	0.00	0.000
34.817	0.00	0.00	0.00	0.000
34.833	0.00	0.00	0.00	0.000
34.850	0.00	0.00	0.00	0.000
34.867	0.00	0.00	0.00	0.000
34.883	0.00	0.00	0.00	0.000
34.900	0.00	0.00	0.00	0.000
34.917	0.00	0.00	0.00	0.000
34.933	0.00	0.00	0.00	0.000
34.950	0.00	0.00	0.00	0.000
34.967	0.00	0.00	0.00	0.000
34.983	0.00	0.00	0.00	0.000
35.000	0.00	0.00	0.00	0.000
35.017	0.00	0.00	0.00	0.000
35.033	0.00	0.00	0.00	0.000
35.050	0.00	0.00	0.00	0.000
35.067	0.00	0.00	0.00	0.000
35.083	0.00	0.00	0.00	0.000
35.100	0.00	0.00	0.00	0.000
35.117	0.00	0.00	0.00	0.000
35.133	0.00	0.00	0.00	0.000
35.150	0.00	0.00	0.00	0.000
35.167	0.00	0.00	0.00	0.000
35.183	0.00	0.00	0.00	0.000
35.200	0.00	0.00	0.00	0.000
35.217	0.00	0.00	0.00	0.000
35.233	0.00	0.00	0.00	0.000
35.250	0.00	0.00	0.00	0.000
35.267	0.00	0.00	0.00	0.000
35.283	0.00	0.00	0.00	0.000
35.300	0.00	0.00	0.00	0.000
35.317	0.00	0.00	0.00	0.000
35.333	0.00	0.00	0.00	0.000
35.350	0.00	0.00	0.00	0.000
35.367	0.00	0.00	0.00	0.000
35.383	0.00	0.00	0.00	0.000
35.400	0.00	0.00	0.00	0.000
35.417	0.00	0.00	0.00	0.000
35.433	0.00	0.00	0.00	0.000
35.450	0.00	0.00	0.00	0.000
35.467	0.00	0.00	0.00	0.000
35.483	0.00	0.00	0.00	0.000
35.500	0.00	0.00	0.00	0.000
35.517	0.00	0.00	0.00	0.000
35.533	0.00	0.00	0.00	0.000

35.550	0.00	0.00	0.00	0.000
35.567	0.00	0.00	0.00	0.000
35.583	0.00	0.00	0.00	0.000
35.600	0.00	0.00	0.00	0.000
35.617	0.00	0.00	0.00	0.000
35.633	0.00	0.00	0.00	0.000
35.650	0.00	0.00	0.00	0.000
35.667	0.00	0.00	0.00	0.000
35.683	0.00	0.00	0.00	0.000
35.700	0.00	0.00	0.00	0.000
35.717	0.00	0.00	0.00	0.000
35.733	0.00	0.00	0.00	0.000
35.750	0.00	0.00	0.00	0.000
35.767	0.00	0.00	0.00	0.000
35.783	0.00	0.00	0.00	0.000
35.800	0.00	0.00	0.00	0.000
35.817	0.00	0.00	0.00	0.000
35.833	0.00	0.00	0.00	0.000
35.850	0.00	0.00	0.00	0.000
35.867	0.00	0.00	0.00	0.000
35.883	0.00	0.00	0.00	0.000
35.900	0.00	0.00	0.00	0.000
35.917	0.00	0.00	0.00	0.000
35.933	0.00	0.00	0.00	0.000
35.950	0.00	0.00	0.00	0.000
35.967	0.00	0.00	0.00	0.000
35.983	0.00	0.00	0.00	0.000
36.000	0.00	0.00	0.00	0.000
36.017	0.00	0.00	0.00	0.000
36.033	0.00	0.00	0.00	0.000
36.050	0.00	0.00	0.00	0.000
36.067	0.00	0.00	0.00	0.000
36.083	0.00	0.00	0.00	0.000
36.100	0.00	0.00	0.00	0.000
36.117	0.00	0.00	0.00	0.000
36.133	0.00	0.00	0.00	0.000
36.150	0.00	0.00	0.00	0.000
36.167	0.00	0.00	0.00	0.000
36.183	0.00	0.00	0.00	0.000
36.200	0.00	0.00	0.00	0.000
36.217	0.00	0.00	0.00	0.000
36.233	0.00	0.00	0.00	0.000
36.250	0.00	0.00	0.00	0.000
36.267	0.00	0.00	0.00	0.000
36.283	0.00	0.00	0.00	0.000
36.300	0.00	0.00	0.00	0.000
36.317	0.00	0.00	0.00	0.000
36.333	0.00	0.00	0.00	0.000
36.350	0.00	0.00	0.00	0.000
36.367	0.00	0.00	0.00	0.000

36.383	0.00	0.00	0.00	0.000
36.400	0.00	0.00	0.00	0.000
36.417	0.00	0.00	0.00	0.000
36.433	0.00	0.00	0.00	0.000
36.450	0.00	0.00	0.00	0.000
36.467	0.00	0.00	0.00	0.000
36.483	0.00	0.00	0.00	0.000
36.500	0.00	0.00	0.00	0.000
36.517	0.00	0.00	0.00	0.000
36.533	0.00	0.00	0.00	0.000
36.550	0.00	0.00	0.00	0.000
36.567	0.00	0.00	0.00	0.000
36.583	0.00	0.00	0.00	0.000
36.600	0.00	0.00	0.00	0.000
36.617	0.00	0.00	0.00	0.000
36.633	0.00	0.00	0.00	0.000
36.650	0.00	0.00	0.00	0.000
36.667	0.00	0.00	0.00	0.000
36.683	0.00	0.00	0.00	0.000
36.700	0.00	0.00	0.00	0.000
36.717	0.00	0.00	0.00	0.000
36.733	0.00	0.00	0.00	0.000
36.750	0.00	0.00	0.00	0.000
36.767	0.00	0.00	0.00	0.000
36.783	0.00	0.00	0.00	0.000
36.800	0.00	0.00	0.00	0.000
36.817	0.00	0.00	0.00	0.000
36.833	0.00	0.00	0.00	0.000
36.850	0.00	0.00	0.00	0.000
36.867	0.00	0.00	0.00	0.000
36.883	0.00	0.00	0.00	0.000
36.900	0.00	0.00	0.00	0.000
36.917	0.00	0.00	0.00	0.000
36.933	0.00	0.00	0.00	0.000
36.950	0.00	0.00	0.00	0.000
36.967	0.00	0.00	0.00	0.000
36.983	0.00	0.00	0.00	0.000
37.000	0.00	0.00	0.00	0.000
37.017	0.00	0.00	0.00	0.000
37.033	0.00	0.00	0.00	0.000
37.050	0.00	0.00	0.00	0.000
37.067	0.00	0.00	0.00	0.000
37.083	0.00	0.00	0.00	0.000
37.100	0.00	0.00	0.00	0.000
37.117	0.00	0.00	0.00	0.000
37.133	0.00	0.00	0.00	0.000
37.150	0.00	0.00	0.00	0.000
37.167	0.00	0.00	0.00	0.000
37.183	0.00	0.00	0.00	0.000
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37.217	0.00	0.00	0.00	0.000
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37.267	0.00	0.00	0.00	0.000
37.283	0.00	0.00	0.00	0.000
37.300	0.00	0.00	0.00	0.000
37.317	0.00	0.00	0.00	0.000
37.333	0.00	0.00	0.00	0.000
37.350	0.00	0.00	0.00	0.000
37.367	0.00	0.00	0.00	0.000
37.383	0.00	0.00	0.00	0.000
37.400	0.00	0.00	0.00	0.000
37.417	0.00	0.00	0.00	0.000
37.433	0.00	0.00	0.00	0.000
37.450	0.00	0.00	0.00	0.000
37.467	0.00	0.00	0.00	0.000
37.483	0.00	0.00	0.00	0.000
37.500	0.00	0.00	0.00	0.000
37.517	0.00	0.00	0.00	0.000
37.533	0.00	0.00	0.00	0.000
37.550	0.00	0.00	0.00	0.000
37.567	0.00	0.00	0.00	0.000
37.583	0.00	0.00	0.00	0.000
37.600	0.00	0.00	0.00	0.000
37.617	0.00	0.00	0.00	0.000
37.633	0.00	0.00	0.00	0.000
37.650	0.00	0.00	0.00	0.000
37.667	0.00	0.00	0.00	0.000
37.683	0.00	0.00	0.00	0.000
37.700	0.00	0.00	0.00	0.000
37.717	0.00	0.00	0.00	0.000
37.733	0.00	0.00	0.00	0.000
37.750	0.00	0.00	0.00	0.000
37.767	0.00	0.00	0.00	0.000
37.783	0.00	0.00	0.00	0.000
37.800	0.00	0.00	0.00	0.000
37.817	0.00	0.00	0.00	0.000
37.833	0.00	0.00	0.00	0.000
37.850	0.00	0.00	0.00	0.000
37.867	0.00	0.00	0.00	0.000
37.883	0.00	0.00	0.00	0.000
37.900	0.00	0.00	0.00	0.000
37.917	0.00	0.00	0.00	0.000
37.933	0.00	0.00	0.00	0.000
37.950	0.00	0.00	0.00	0.000
37.967	0.00	0.00	0.00	0.000
37.983	0.00	0.00	0.00	0.000
38.000	0.00	0.00	0.00	0.000
38.017	0.00	0.00	0.00	0.000
38.033	0.00	0.00	0.00	0.000

38.050	0.00	0.00	0.00	0.000
38.067	0.00	0.00	0.00	0.000
38.083	0.00	0.00	0.00	0.000
38.100	0.00	0.00	0.00	0.000
38.117	0.00	0.00	0.00	0.000
38.133	0.00	0.00	0.00	0.000
38.150	0.00	0.00	0.00	0.000
38.167	0.00	0.00	0.00	0.000
38.183	0.00	0.00	0.00	0.000
38.200	0.00	0.00	0.00	0.000
38.217	0.00	0.00	0.00	0.000
38.233	0.00	0.00	0.00	0.000
38.250	0.00	0.00	0.00	0.000
38.267	0.00	0.00	0.00	0.000
38.283	0.00	0.00	0.00	0.000
38.300	0.00	0.00	0.00	0.000
38.317	0.00	0.00	0.00	0.000
38.333	0.00	0.00	0.00	0.000
38.350	0.00	0.00	0.00	0.000
38.367	0.00	0.00	0.00	0.000
38.383	0.00	0.00	0.00	0.000
38.400	0.00	0.00	0.00	0.000
38.417	0.00	0.00	0.00	0.000
38.433	0.00	0.00	0.00	0.000
38.450	0.00	0.00	0.00	0.000
38.467	0.00	0.00	0.00	0.000
38.483	0.00	0.00	0.00	0.000
38.500	0.00	0.00	0.00	0.000
38.517	0.00	0.00	0.00	0.000
38.533	0.00	0.00	0.00	0.000
38.550	0.00	0.00	0.00	0.000
38.567	0.00	0.00	0.00	0.000
38.583	0.00	0.00	0.00	0.000
38.600	0.00	0.00	0.00	0.000
38.617	0.00	0.00	0.00	0.000
38.633	0.00	0.00	0.00	0.000
38.650	0.00	0.00	0.00	0.000
38.667	0.00	0.00	0.00	0.000
38.683	0.00	0.00	0.00	0.000
38.700	0.00	0.00	0.00	0.000
38.717	0.00	0.00	0.00	0.000
38.733	0.00	0.00	0.00	0.000
38.750	0.00	0.00	0.00	0.000
38.767	0.00	0.00	0.00	0.000
38.783	0.00	0.00	0.00	0.000
38.800	0.00	0.00	0.00	0.000
38.817	0.00	0.00	0.00	0.000
38.833	0.00	0.00	0.00	0.000
38.850	0.00	0.00	0.00	0.000
38.867	0.00	0.00	0.00	0.000

38.883	0.00	0.00	0.00	0.000
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38.917	0.00	0.00	0.00	0.000
38.933	0.00	0.00	0.00	0.000
38.950	0.00	0.00	0.00	0.000
38.967	0.00	0.00	0.00	0.000
38.983	0.00	0.00	0.00	0.000
39.000	0.00	0.00	0.00	0.000
39.017	0.00	0.00	0.00	0.000
39.033	0.00	0.00	0.00	0.000
39.050	0.00	0.00	0.00	0.000
39.067	0.00	0.00	0.00	0.000
39.083	0.00	0.00	0.00	0.000
39.100	0.00	0.00	0.00	0.000
39.117	0.00	0.00	0.00	0.000
39.133	0.00	0.00	0.00	0.000
39.150	0.00	0.00	0.00	0.000
39.167	0.00	0.00	0.00	0.000
39.183	0.00	0.00	0.00	0.000
39.200	0.00	0.00	0.00	0.000
39.217	0.00	0.00	0.00	0.000
39.233	0.00	0.00	0.00	0.000
39.250	0.00	0.00	0.00	0.000
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39.283	0.00	0.00	0.00	0.000
39.300	0.00	0.00	0.00	0.000
39.317	0.00	0.00	0.00	0.000
39.333	0.00	0.00	0.00	0.000
39.350	0.00	0.00	0.00	0.000
39.367	0.00	0.00	0.00	0.000
39.383	0.00	0.00	0.00	0.000
39.400	0.00	0.00	0.00	0.000
39.417	0.00	0.00	0.00	0.000
39.433	0.00	0.00	0.00	0.000
39.450	0.00	0.00	0.00	0.000
39.467	0.00	0.00	0.00	0.000
39.483	0.00	0.00	0.00	0.000
39.500	0.00	0.00	0.00	0.000
39.517	0.00	0.00	0.00	0.000
39.533	0.00	0.00	0.00	0.000
39.550	0.00	0.00	0.00	0.000
39.567	0.00	0.00	0.00	0.000
39.583	0.00	0.00	0.00	0.000
39.600	0.00	0.00	0.00	0.000
39.617	0.00	0.00	0.00	0.000
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39.817	0.00	0.00	0.00	0.000
39.833	0.00	0.00	0.00	0.000
39.850	0.00	0.00	0.00	0.000
39.867	0.00	0.00	0.00	0.000
39.883	0.00	0.00	0.00	0.000
39.900	0.00	0.00	0.00	0.000
39.917	0.00	0.00	0.00	0.000
39.933	0.00	0.00	0.00	0.000
39.950	0.00	0.00	0.00	0.000
39.967	0.00	0.00	0.00	0.000
39.983	0.00	0.00	0.00	0.000
40.000	0.00	0.00	0.00	0.000
40.017	0.00	0.00	0.00	0.000
40.033	0.00	0.00	0.00	0.000
40.050	0.00	0.00	0.00	0.000
40.067	0.00	0.00	0.00	0.000
40.083	0.00	0.00	0.00	0.000
40.100	0.00	0.00	0.00	0.000
40.117	0.00	0.00	0.00	0.000
40.133	0.00	0.00	0.00	0.000
40.150	0.00	0.00	0.00	0.000
40.167	0.00	0.00	0.00	0.000
40.183	0.00	0.00	0.00	0.000
40.200	0.00	0.00	0.00	0.000
40.217	0.00	0.00	0.00	0.000
40.233	0.00	0.00	0.00	0.000
40.250	0.00	0.00	0.00	0.000
40.267	0.00	0.00	0.00	0.000
40.283	0.00	0.00	0.00	0.000
40.300	0.00	0.00	0.00	0.000
40.317	0.00	0.00	0.00	0.000
40.333	0.00	0.00	0.00	0.000
40.350	0.00	0.00	0.00	0.000
40.367	0.00	0.00	0.00	0.000
40.383	0.00	0.00	0.00	0.000
40.400	0.00	0.00	0.00	0.000
40.417	0.00	0.00	0.00	0.000
40.433	0.00	0.00	0.00	0.000
40.450	0.00	0.00	0.00	0.000
40.467	0.00	0.00	0.00	0.000
40.483	0.00	0.00	0.00	0.000
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40.800	0.00	0.00	0.00	0.000
40.817	0.00	0.00	0.00	0.000
40.833	0.00	0.00	0.00	0.000
40.850	0.00	0.00	0.00	0.000
40.867	0.00	0.00	0.00	0.000
40.883	0.00	0.00	0.00	0.000
40.900	0.00	0.00	0.00	0.000
40.917	0.00	0.00	0.00	0.000
40.933	0.00	0.00	0.00	0.000
40.950	0.00	0.00	0.00	0.000
40.967	0.00	0.00	0.00	0.000
40.983	0.00	0.00	0.00	0.000
41.000	0.00	0.00	0.00	0.000
41.017	0.00	0.00	0.00	0.000
41.033	0.00	0.00	0.00	0.000
41.050	0.00	0.00	0.00	0.000
41.067	0.00	0.00	0.00	0.000
41.083	0.00	0.00	0.00	0.000
41.100	0.00	0.00	0.00	0.000
41.117	0.00	0.00	0.00	0.000
41.133	0.00	0.00	0.00	0.000
41.150	0.00	0.00	0.00	0.000
41.167	0.00	0.00	0.00	0.000
41.183	0.00	0.00	0.00	0.000
41.200	0.00	0.00	0.00	0.000
41.217	0.00	0.00	0.00	0.000
41.233	0.00	0.00	0.00	0.000
41.250	0.00	0.00	0.00	0.000
41.267	0.00	0.00	0.00	0.000
41.283	0.00	0.00	0.00	0.000
41.300	0.00	0.00	0.00	0.000
41.317	0.00	0.00	0.00	0.000
41.333	0.00	0.00	0.00	0.000
41.350	0.00	0.00	0.00	0.000
41.367	0.00	0.00	0.00	0.000

41.383	0.00	0.00	0.00	0.000
41.400	0.00	0.00	0.00	0.000
41.417	0.00	0.00	0.00	0.000
41.433	0.00	0.00	0.00	0.000
41.450	0.00	0.00	0.00	0.000
41.467	0.00	0.00	0.00	0.000
41.483	0.00	0.00	0.00	0.000
41.500	0.00	0.00	0.00	0.000
41.517	0.00	0.00	0.00	0.000
41.533	0.00	0.00	0.00	0.000
41.550	0.00	0.00	0.00	0.000
41.567	0.00	0.00	0.00	0.000
41.583	0.00	0.00	0.00	0.000
41.600	0.00	0.00	0.00	0.000
41.617	0.00	0.00	0.00	0.000
41.633	0.00	0.00	0.00	0.000
41.650	0.00	0.00	0.00	0.000
41.667	0.00	0.00	0.00	0.000
41.683	0.00	0.00	0.00	0.000
41.700	0.00	0.00	0.00	0.000
41.717	0.00	0.00	0.00	0.000
41.733	0.00	0.00	0.00	0.000
41.750	0.00	0.00	0.00	0.000
41.767	0.00	0.00	0.00	0.000
41.783	0.00	0.00	0.00	0.000
41.800	0.00	0.00	0.00	0.000
41.817	0.00	0.00	0.00	0.000
41.833	0.00	0.00	0.00	0.000
41.850	0.00	0.00	0.00	0.000
41.867	0.00	0.00	0.00	0.000
41.883	0.00	0.00	0.00	0.000
41.900	0.00	0.00	0.00	0.000
41.917	0.00	0.00	0.00	0.000
41.933	0.00	0.00	0.00	0.000
41.950	0.00	0.00	0.00	0.000
41.967	0.00	0.00	0.00	0.000
41.983	0.00	0.00	0.00	0.000
42.000	0.00	0.00	0.00	0.000
42.017	0.00	0.00	0.00	0.000
42.033	0.00	0.00	0.00	0.000
42.050	0.00	0.00	0.00	0.000
42.067	0.00	0.00	0.00	0.000
42.083	0.00	0.00	0.00	0.000
42.100	0.00	0.00	0.00	0.000
42.117	0.00	0.00	0.00	0.000
42.133	0.00	0.00	0.00	0.000
42.150	0.00	0.00	0.00	0.000
42.167	0.00	0.00	0.00	0.000
42.183	0.00	0.00	0.00	0.000
42.200	0.00	0.00	0.00	0.000

42.217	0.00	0.00	0.00	0.000
42.233	0.00	0.00	0.00	0.000
42.250	0.00	0.00	0.00	0.000
42.267	0.00	0.00	0.00	0.000
42.283	0.00	0.00	0.00	0.000
42.300	0.00	0.00	0.00	0.000
42.317	0.00	0.00	0.00	0.000
42.333	0.00	0.00	0.00	0.000
42.350	0.00	0.00	0.00	0.000
42.367	0.00	0.00	0.00	0.000
42.383	0.00	0.00	0.00	0.000
42.400	0.00	0.00	0.00	0.000
42.417	0.00	0.00	0.00	0.000
42.433	0.00	0.00	0.00	0.000
42.450	0.00	0.00	0.00	0.000
42.467	0.00	0.00	0.00	0.000
42.483	0.00	0.00	0.00	0.000
42.500	0.00	0.00	0.00	0.000
42.517	0.00	0.00	0.00	0.000
42.533	0.00	0.00	0.00	0.000
42.550	0.00	0.00	0.00	0.000
42.567	0.00	0.00	0.00	0.000
42.583	0.00	0.00	0.00	0.000
42.600	0.00	0.00	0.00	0.000
42.617	0.00	0.00	0.00	0.000
42.633	0.00	0.00	0.00	0.000
42.650	0.00	0.00	0.00	0.000
42.667	0.00	0.00	0.00	0.000
42.683	0.00	0.00	0.00	0.000
42.700	0.00	0.00	0.00	0.000
42.717	0.00	0.00	0.00	0.000
42.733	0.00	0.00	0.00	0.000
42.750	0.00	0.00	0.00	0.000
42.767	0.00	0.00	0.00	0.000
42.783	0.00	0.00	0.00	0.000
42.800	0.00	0.00	0.00	0.000
42.817	0.00	0.00	0.00	0.000
42.833	0.00	0.00	0.00	0.000
42.850	0.00	0.00	0.00	0.000
42.867	0.00	0.00	0.00	0.000
42.883	0.00	0.00	0.00	0.000
42.900	0.00	0.00	0.00	0.000
42.917	0.00	0.00	0.00	0.000
42.933	0.00	0.00	0.00	0.000
42.950	0.00	0.00	0.00	0.000
42.967	0.00	0.00	0.00	0.000
42.983	0.00	0.00	0.00	0.000
43.000	0.00	0.00	0.00	0.000
43.017	0.00	0.00	0.00	0.000
43.033	0.00	0.00	0.00	0.000

43.050	0.00	0.00	0.00	0.000
43.067	0.00	0.00	0.00	0.000
43.083	0.00	0.00	0.00	0.000
43.100	0.00	0.00	0.00	0.000
43.117	0.00	0.00	0.00	0.000
43.133	0.00	0.00	0.00	0.000
43.150	0.00	0.00	0.00	0.000
43.167	0.00	0.00	0.00	0.000
43.183	0.00	0.00	0.00	0.000
43.200	0.00	0.00	0.00	0.000
43.217	0.00	0.00	0.00	0.000
43.233	0.00	0.00	0.00	0.000
43.250	0.00	0.00	0.00	0.000
43.267	0.00	0.00	0.00	0.000
43.283	0.00	0.00	0.00	0.000
43.300	0.00	0.00	0.00	0.000
43.317	0.00	0.00	0.00	0.000
43.333	0.00	0.00	0.00	0.000
43.350	0.00	0.00	0.00	0.000
43.367	0.00	0.00	0.00	0.000
43.383	0.00	0.00	0.00	0.000
43.400	0.00	0.00	0.00	0.000
43.417	0.00	0.00	0.00	0.000
43.433	0.00	0.00	0.00	0.000
43.450	0.00	0.00	0.00	0.000
43.467	0.00	0.00	0.00	0.000
43.483	0.00	0.00	0.00	0.000
43.500	0.00	0.00	0.00	0.000
43.517	0.00	0.00	0.00	0.000
43.533	0.00	0.00	0.00	0.000
43.550	0.00	0.00	0.00	0.000
43.567	0.00	0.00	0.00	0.000
43.583	0.00	0.00	0.00	0.000
43.600	0.00	0.00	0.00	0.000
43.617	0.00	0.00	0.00	0.000
43.633	0.00	0.00	0.00	0.000
43.650	0.00	0.00	0.00	0.000
43.667	0.00	0.00	0.00	0.000
43.683	0.00	0.00	0.00	0.000
43.700	0.00	0.00	0.00	0.000
43.717	0.00	0.00	0.00	0.000
43.733	0.00	0.00	0.00	0.000
43.750	0.00	0.00	0.00	0.000
43.767	0.00	0.00	0.00	0.000
43.783	0.00	0.00	0.00	0.000
43.800	0.00	0.00	0.00	0.000
43.817	0.00	0.00	0.00	0.000
43.833	0.00	0.00	0.00	0.000
43.850	0.00	0.00	0.00	0.000
43.867	0.00	0.00	0.00	0.000

43.883	0.00	0.00	0.00	0.000
43.900	0.00	0.00	0.00	0.000
43.917	0.00	0.00	0.00	0.000
43.933	0.00	0.00	0.00	0.000
43.950	0.00	0.00	0.00	0.000
43.967	0.00	0.00	0.00	0.000
43.983	0.00	0.00	0.00	0.000
44.000	0.00	0.00	0.00	0.000
44.017	0.00	0.00	0.00	0.000
44.033	0.00	0.00	0.00	0.000
44.050	0.00	0.00	0.00	0.000
44.067	0.00	0.00	0.00	0.000
44.083	0.00	0.00	0.00	0.000
44.100	0.00	0.00	0.00	0.000
44.117	0.00	0.00	0.00	0.000
44.133	0.00	0.00	0.00	0.000
44.150	0.00	0.00	0.00	0.000
44.167	0.00	0.00	0.00	0.000
44.183	0.00	0.00	0.00	0.000
44.200	0.00	0.00	0.00	0.000
44.217	0.00	0.00	0.00	0.000
44.233	0.00	0.00	0.00	0.000
44.250	0.00	0.00	0.00	0.000
44.267	0.00	0.00	0.00	0.000
44.283	0.00	0.00	0.00	0.000
44.300	0.00	0.00	0.00	0.000
44.317	0.00	0.00	0.00	0.000
44.333	0.00	0.00	0.00	0.000
44.350	0.00	0.00	0.00	0.000
44.367	0.00	0.00	0.00	0.000
44.383	0.00	0.00	0.00	0.000
44.400	0.00	0.00	0.00	0.000
44.417	0.00	0.00	0.00	0.000
44.433	0.00	0.00	0.00	0.000
44.450	0.00	0.00	0.00	0.000
44.467	0.00	0.00	0.00	0.000
44.483	0.00	0.00	0.00	0.000
44.500	0.00	0.00	0.00	0.000
44.517	0.00	0.00	0.00	0.000
44.533	0.00	0.00	0.00	0.000
44.550	0.00	0.00	0.00	0.000
44.567	0.00	0.00	0.00	0.000
44.583	0.00	0.00	0.00	0.000
44.600	0.00	0.00	0.00	0.000
44.617	0.00	0.00	0.00	0.000
44.633	0.00	0.00	0.00	0.000
44.650	0.00	0.00	0.00	0.000
44.667	0.00	0.00	0.00	0.000
44.683	0.00	0.00	0.00	0.000
44.700	0.00	0.00	0.00	0.000

44.717	0.00	0.00	0.00	0.000
44.733	0.00	0.00	0.00	0.000
44.750	0.00	0.00	0.00	0.000
44.767	0.00	0.00	0.00	0.000
44.783	0.00	0.00	0.00	0.000
44.800	0.00	0.00	0.00	0.000
44.817	0.00	0.00	0.00	0.000
44.833	0.00	0.00	0.00	0.000
44.850	0.00	0.00	0.00	0.000
44.867	0.00	0.00	0.00	0.000
44.883	0.00	0.00	0.00	0.000
44.900	0.00	0.00	0.00	0.000
44.917	0.00	0.00	0.00	0.000
44.933	0.00	0.00	0.00	0.000
44.950	0.00	0.00	0.00	0.000
44.967	0.00	0.00	0.00	0.000
44.983	0.00	0.00	0.00	0.000
45.000	0.00	0.00	0.00	0.000
45.017	0.00	0.00	0.00	0.000
45.033	0.00	0.00	0.00	0.000
45.050	0.00	0.00	0.00	0.000
45.067	0.00	0.00	0.00	0.000
45.083	0.00	0.00	0.00	0.000
45.100	0.00	0.00	0.00	0.000
45.117	0.00	0.00	0.00	0.000
45.133	0.00	0.00	0.00	0.000
45.150	0.00	0.00	0.00	0.000
45.167	0.00	0.00	0.00	0.000
45.183	0.00	0.00	0.00	0.000
45.200	0.00	0.00	0.00	0.000
45.217	0.00	0.00	0.00	0.000
45.233	0.00	0.00	0.00	0.000
45.250	0.00	0.00	0.00	0.000
45.267	0.00	0.00	0.00	0.000
45.283	0.00	0.00	0.00	0.000
45.300	0.00	0.00	0.00	0.000
45.317	0.00	0.00	0.00	0.000
45.333	0.00	0.00	0.00	0.000
45.350	0.00	0.00	0.00	0.000
45.367	0.00	0.00	0.00	0.000
45.383	0.00	0.00	0.00	0.000
45.400	0.00	0.00	0.00	0.000
45.417	0.00	0.00	0.00	0.000
45.433	0.00	0.00	0.00	0.000
45.450	0.00	0.00	0.00	0.000
45.467	0.00	0.00	0.00	0.000
45.483	0.00	0.00	0.00	0.000
45.500	0.00	0.00	0.00	0.000
45.517	0.00	0.00	0.00	0.000
45.533	0.00	0.00	0.00	0.000

45.550	0.00	0.00	0.00	0.000
45.567	0.00	0.00	0.00	0.000
45.583	0.00	0.00	0.00	0.000
45.600	0.00	0.00	0.00	0.000
45.617	0.00	0.00	0.00	0.000
45.633	0.00	0.00	0.00	0.000
45.650	0.00	0.00	0.00	0.000
45.667	0.00	0.00	0.00	0.000
45.683	0.00	0.00	0.00	0.000
45.700	0.00	0.00	0.00	0.000
45.717	0.00	0.00	0.00	0.000
45.733	0.00	0.00	0.00	0.000
45.750	0.00	0.00	0.00	0.000
45.767	0.00	0.00	0.00	0.000
45.783	0.00	0.00	0.00	0.000
45.800	0.00	0.00	0.00	0.000
45.817	0.00	0.00	0.00	0.000
45.833	0.00	0.00	0.00	0.000
45.850	0.00	0.00	0.00	0.000
45.867	0.00	0.00	0.00	0.000
45.883	0.00	0.00	0.00	0.000
45.900	0.00	0.00	0.00	0.000
45.917	0.00	0.00	0.00	0.000
45.933	0.00	0.00	0.00	0.000
45.950	0.00	0.00	0.00	0.000
45.967	0.00	0.00	0.00	0.000
45.983	0.00	0.00	0.00	0.000
46.000	0.00	0.00	0.00	0.000
46.017	0.00	0.00	0.00	0.000
46.033	0.00	0.00	0.00	0.000
46.050	0.00	0.00	0.00	0.000
46.067	0.00	0.00	0.00	0.000
46.083	0.00	0.00	0.00	0.000
46.100	0.00	0.00	0.00	0.000
46.117	0.00	0.00	0.00	0.000
46.133	0.00	0.00	0.00	0.000
46.150	0.00	0.00	0.00	0.000
46.167	0.00	0.00	0.00	0.000
46.183	0.00	0.00	0.00	0.000
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46.250	0.00	0.00	0.00	0.000
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46.283	0.00	0.00	0.00	0.000
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46.467	0.00	0.00	0.00	0.000
46.483	0.00	0.00	0.00	0.000
46.500	0.00	0.00	0.00	0.000
46.517	0.00	0.00	0.00	0.000
46.533	0.00	0.00	0.00	0.000
46.550	0.00	0.00	0.00	0.000
46.567	0.00	0.00	0.00	0.000
46.583	0.00	0.00	0.00	0.000
46.600	0.00	0.00	0.00	0.000
46.617	0.00	0.00	0.00	0.000
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46.667	0.00	0.00	0.00	0.000
46.683	0.00	0.00	0.00	0.000
46.700	0.00	0.00	0.00	0.000
46.717	0.00	0.00	0.00	0.000
46.733	0.00	0.00	0.00	0.000
46.750	0.00	0.00	0.00	0.000
46.767	0.00	0.00	0.00	0.000
46.783	0.00	0.00	0.00	0.000
46.800	0.00	0.00	0.00	0.000
46.817	0.00	0.00	0.00	0.000
46.833	0.00	0.00	0.00	0.000
46.850	0.00	0.00	0.00	0.000
46.867	0.00	0.00	0.00	0.000
46.883	0.00	0.00	0.00	0.000
46.900	0.00	0.00	0.00	0.000
46.917	0.00	0.00	0.00	0.000
46.933	0.00	0.00	0.00	0.000
46.950	0.00	0.00	0.00	0.000
46.967	0.00	0.00	0.00	0.000
46.983	0.00	0.00	0.00	0.000
47.000	0.00	0.00	0.00	0.000
47.017	0.00	0.00	0.00	0.000
47.033	0.00	0.00	0.00	0.000
47.050	0.00	0.00	0.00	0.000
47.067	0.00	0.00	0.00	0.000
47.083	0.00	0.00	0.00	0.000
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47.333	0.00	0.00	0.00	0.000
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47.367	0.00	0.00	0.00	0.000
47.383	0.00	0.00	0.00	0.000
47.400	0.00	0.00	0.00	0.000
47.417	0.00	0.00	0.00	0.000
47.433	0.00	0.00	0.00	0.000
47.450	0.00	0.00	0.00	0.000
47.467	0.00	0.00	0.00	0.000
47.483	0.00	0.00	0.00	0.000
47.500	0.00	0.00	0.00	0.000
47.517	0.00	0.00	0.00	0.000
47.533	0.00	0.00	0.00	0.000
47.550	0.00	0.00	0.00	0.000
47.567	0.00	0.00	0.00	0.000
47.583	0.00	0.00	0.00	0.000
47.600	0.00	0.00	0.00	0.000
47.617	0.00	0.00	0.00	0.000
47.633	0.00	0.00	0.00	0.000
47.650	0.00	0.00	0.00	0.000
47.667	0.00	0.00	0.00	0.000
47.683	0.00	0.00	0.00	0.000
47.700	0.00	0.00	0.00	0.000
47.717	0.00	0.00	0.00	0.000
47.733	0.00	0.00	0.00	0.000
47.750	0.00	0.00	0.00	0.000
47.767	0.00	0.00	0.00	0.000
47.783	0.00	0.00	0.00	0.000
47.800	0.00	0.00	0.00	0.000
47.817	0.00	0.00	0.00	0.000
47.833	0.00	0.00	0.00	0.000
47.850	0.00	0.00	0.00	0.000
47.867	0.00	0.00	0.00	0.000
47.883	0.00	0.00	0.00	0.000
47.900	0.00	0.00	0.00	0.000
47.917	0.00	0.00	0.00	0.000
47.933	0.00	0.00	0.00	0.000
47.950	0.00	0.00	0.00	0.000
47.967	0.00	0.00	0.00	0.000
47.983	0.00	0.00	0.00	0.000
48.000	0.00	0.00	0.00	0.000

==========

END OF FLOODSCx ROUTING ANALYSIS

```
**************************************************************************

             F L O O D    R O U T I N G    A N A L Y S I S
             USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
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                           Analysis prepared by:

                             Huitt-Zollars, Inc.
                          2603 Main Street, Suite 400
                               Irvine, CA. 92614
                                  949-988-5815

 ************************* DESCRIPTION OF STUDY *************************
* GREAT SCOTT                                                           *
* 25 YR STORM PROP - 7 66" PIPES                                        *
* CGULLIXSON REV HHTUN                                                  *
 ************************************************************************

  FILE NAME: LFFR25.DAT
  TIME/DATE OF STUDY: 13:56 08/24/2023

   The Small Area Unit Hydrograph Procedures in Section J
   of the Hydrology Manual provides estimates of runoff
   hydrograph and runoff volume for watersheds whose time of
   concentration is less than 25 minutes. The PROGRAM User
   should check the applicability of using the small area unit
   hydrograph procedures, and follow the guidelines in
   Sections J and K.5 in complex watershed modeling.


**************************************************************************
  FLOW PROCESS FROM NODE    400.00 TO NODE    405.00 IS CODE = 1.2
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (SMALL AREA UNIT-HYDROGRAPH ANALYSIS) <<<<<
==========================================================================

  (SMALL AREA UNIT-HYDROGRAPH ADDED TO STREAM #1)

    RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
    TOTAL CATCHMENT AREA(ACRES) =    2.00
    SOIL-LOSS RATE, Fm,(INCH/HR) =  0.184
    LOW LOSS FRACTION = 0.178
    TIME OF CONCENTRATION(MIN.) =  8.93
    SMALL AREA PEAK Q COMPUTED USING PEAK FLOW RATE FORMULA
    ORANGE COUNTY "VALLEY" RAINFALL VALUES ARE USED:
    RETURN FREQUENCY(YEARS) =  25
       5-MINUTE POINT RAINFALL VALUE(INCHES) =  0.40
```

```
      30-MINUTE POINT RAINFALL VALUE(INCHES) =  0.87
       1-HOUR   POINT RAINFALL VALUE(INCHES) =  1.15
       3-HOUR   POINT RAINFALL VALUE(INCHES) =  1.94
       6-HOUR   POINT RAINFALL VALUE(INCHES) =  2.71
      24-HOUR   POINT RAINFALL VALUE(INCHES) =  4.49

--------------------------------------------------------------------------------
    TOTAL CATCHMENT   RUNOFF  VOLUME(ACRE-FEET) =     0.56
    TOTAL CATCHMENT SOIL-LOSS VOLUME(ACRE-FEET) =     0.19

--------------------------------------------------------------------------------
```

```
================================================================================
```

2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

```
================================================================================
              HYDROGRAPH IN  ONE-MINUTE UNIT INTERVALS(CFS)
       (Notes: Time indicated is at END of Each Unit Intervals.
               Peak 5-minute rainfall intensity is modeled as
               a constant value for entire 5-minute period.)
--------------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.        1.5       2.9       4.4       5.9
--------------------------------------------------------------------------------
   0.017      0.0000      0.01  Q        .         .         .         .
   0.033      0.0001      0.03  Q        .         .         .         .
   0.050      0.0001      0.06  Q        .         .         .         .
   0.067      0.0002      0.08  Q        .         .         .         .
   0.083      0.0004      0.10  Q        .         .         .         .
   0.100      0.0005      0.10  Q        .         .         .         .
   0.117      0.0007      0.10  Q        .         .         .         .
   0.133      0.0008      0.10  Q        .         .         .         .
   0.150      0.0009      0.10  Q        .         .         .         .
   0.167      0.0011      0.10  Q        .         .         .         .
   0.183      0.0012      0.10  Q        .         .         .         .
   0.200      0.0014      0.10  Q        .         .         .         .
   0.217      0.0015      0.10  Q        .         .         .         .
   0.233      0.0016      0.10  Q        .         .         .         .
   0.250      0.0018      0.10  Q        .         .         .         .
   0.267      0.0019      0.10  Q        .         .         .         .
   0.283      0.0021      0.10  Q        .         .         .         .
   0.300      0.0022      0.10  Q        .         .         .         .
   0.317      0.0023      0.10  Q        .         .         .         .
   0.333      0.0025      0.10  Q        .         .         .         .
   0.350      0.0026      0.10  Q        .         .         .         .
   0.367      0.0028      0.10  Q        .         .         .         .
   0.383      0.0029      0.10  Q        .         .         .         .
   0.400      0.0030      0.10  Q        .         .         .         .
   0.417      0.0032      0.10  Q        .         .         .         .
```

0.433	0.0033	0.10	Q	.	.	.	.
0.450	0.0035	0.10	Q	.	.	.	.
0.467	0.0036	0.10	Q	.	.	.	.
0.483	0.0037	0.10	Q	.	.	.	.
0.500	0.0039	0.10	Q	.	.	.	.
0.517	0.0040	0.10	Q	.	.	.	.
0.533	0.0042	0.10	Q	.	.	.	.
0.550	0.0043	0.10	Q	.	.	.	.
0.567	0.0044	0.10	Q	.	.	.	.
0.583	0.0046	0.10	Q	.	.	.	.
0.600	0.0047	0.10	Q	.	.	.	.
0.617	0.0049	0.10	Q	.	.	.	.
0.633	0.0050	0.10	Q	.	.	.	.
0.650	0.0052	0.10	Q	.	.	.	.
0.667	0.0053	0.10	Q	.	.	.	.
0.683	0.0054	0.10	Q	.	.	.	.
0.700	0.0056	0.10	Q	.	.	.	.
0.717	0.0057	0.10	Q	.	.	.	.
0.733	0.0059	0.10	Q	.	.	.	.
0.750	0.0060	0.10	Q	.	.	.	.
0.767	0.0061	0.10	Q	.	.	.	.
0.783	0.0063	0.10	Q	.	.	.	.
0.800	0.0064	0.10	Q	.	.	.	.
0.817	0.0066	0.10	Q	.	.	.	.
0.833	0.0067	0.10	Q	.	.	.	.
0.850	0.0069	0.10	Q	.	.	.	.
0.867	0.0070	0.10	Q	.	.	.	.
0.883	0.0071	0.10	Q	.	.	.	.
0.900	0.0073	0.10	Q	.	.	.	.
0.917	0.0074	0.10	Q	.	.	.	.
0.933	0.0076	0.10	Q	.	.	.	.
0.950	0.0077	0.10	Q	.	.	.	.
0.967	0.0079	0.10	Q	.	.	.	.
0.983	0.0080	0.10	Q	.	.	.	.
1.000	0.0082	0.10	Q	.	.	.	.
1.017	0.0083	0.10	Q	.	.	.	.
1.033	0.0084	0.10	Q	.	.	.	.
1.050	0.0086	0.10	Q	.	.	.	.
1.067	0.0087	0.10	Q	.	.	.	.
1.083	0.0089	0.10	Q	.	.	.	.
1.100	0.0090	0.10	Q	.	.	.	.
1.117	0.0092	0.10	Q	.	.	.	.
1.133	0.0093	0.10	Q	.	.	.	.
1.150	0.0095	0.11	Q	.	.	.	.
1.167	0.0096	0.11	Q	.	.	.	.
1.183	0.0097	0.11	Q	.	.	.	.
1.200	0.0099	0.11	Q	.	.	.	.
1.217	0.0100	0.11	Q	.	.	.	.
1.233	0.0102	0.11	Q	.	.	.	.
1.250	0.0103	0.11	Q	.	.	.	.

1.267	0.0105	0.11	Q	.	.	.	.
1.283	0.0106	0.11	Q	.	.	.	.
1.300	0.0108	0.11	Q	.	.	.	.
1.317	0.0109	0.11	Q	.	.	.	.
1.333	0.0111	0.11	Q	.	.	.	.
1.350	0.0112	0.11	Q	.	.	.	.
1.367	0.0113	0.11	Q	.	.	.	.
1.383	0.0115	0.11	Q	.	.	.	.
1.400	0.0116	0.11	Q	.	.	.	.
1.417	0.0118	0.11	Q	.	.	.	.
1.433	0.0119	0.11	Q	.	.	.	.
1.450	0.0121	0.11	Q	.	.	.	.
1.467	0.0122	0.11	Q	.	.	.	.
1.483	0.0124	0.11	Q	.	.	.	.
1.500	0.0125	0.11	Q	.	.	.	.
1.517	0.0127	0.11	Q	.	.	.	.
1.533	0.0128	0.11	Q	.	.	.	.
1.550	0.0130	0.11	Q	.	.	.	.
1.567	0.0131	0.11	Q	.	.	.	.
1.583	0.0133	0.11	Q	.	.	.	.
1.600	0.0134	0.11	Q	.	.	.	.
1.617	0.0135	0.11	Q	.	.	.	.
1.633	0.0137	0.11	Q	.	.	.	.
1.650	0.0138	0.11	Q	.	.	.	.
1.667	0.0140	0.11	Q	.	.	.	.
1.683	0.0141	0.11	QV	.	.	.	.
1.700	0.0143	0.11	QV	.	.	.	.
1.717	0.0144	0.11	QV	.	.	.	.
1.733	0.0146	0.11	QV	.	.	.	.
1.750	0.0147	0.11	QV	.	.	.	.
1.767	0.0149	0.11	QV	.	.	.	.
1.783	0.0150	0.11	QV	.	.	.	.
1.800	0.0152	0.11	QV	.	.	.	.
1.817	0.0153	0.11	QV	.	.	.	.
1.833	0.0155	0.11	QV	.	.	.	.
1.850	0.0156	0.11	QV	.	.	.	.
1.867	0.0158	0.11	QV	.	.	.	.
1.883	0.0159	0.11	QV	.	.	.	.
1.900	0.0161	0.11	QV	.	.	.	.
1.917	0.0162	0.11	QV	.	.	.	.
1.933	0.0164	0.11	QV	.	.	.	.
1.950	0.0165	0.11	QV	.	.	.	.
1.967	0.0167	0.11	QV	.	.	.	.
1.983	0.0168	0.11	QV	.	.	.	.
2.000	0.0170	0.11	QV	.	.	.	.
2.017	0.0171	0.11	QV	.	.	.	.
2.033	0.0173	0.11	QV	.	.	.	.
2.050	0.0174	0.11	QV	.	.	.	.
2.067	0.0176	0.11	QV	.	.	.	.
2.083	0.0177	0.11	QV	.	.	.	.

2.100	0.0179	0.11	QV	.	.	.	.
2.117	0.0180	0.11	QV	.	.	.	.
2.133	0.0182	0.11	QV	.	.	.	.
2.150	0.0183	0.11	QV	.	.	.	.
2.167	0.0185	0.11	QV	.	.	.	.
2.183	0.0186	0.11	QV	.	.	.	.
2.200	0.0188	0.11	QV	.	.	.	.
2.217	0.0189	0.11	QV	.	.	.	.
2.233	0.0191	0.11	QV	.	.	.	.
2.250	0.0192	0.11	QV	.	.	.	.
2.267	0.0194	0.11	QV	.	.	.	.
2.283	0.0195	0.11	QV	.	.	.	.
2.300	0.0197	0.11	QV	.	.	.	.
2.317	0.0199	0.11	QV	.	.	.	.
2.333	0.0200	0.11	QV	.	.	.	.
2.350	0.0202	0.11	QV	.	.	.	.
2.367	0.0203	0.11	QV	.	.	.	.
2.383	0.0205	0.11	QV	.	.	.	.
2.400	0.0206	0.11	QV	.	.	.	.
2.417	0.0208	0.11	QV	.	.	.	.
2.433	0.0209	0.11	QV	.	.	.	.
2.450	0.0211	0.11	QV	.	.	.	.
2.467	0.0212	0.11	QV	.	.	.	.
2.483	0.0214	0.11	QV	.	.	.	.
2.500	0.0215	0.11	QV	.	.	.	.
2.517	0.0217	0.11	QV	.	.	.	.
2.533	0.0218	0.11	QV	.	.	.	.
2.550	0.0220	0.11	QV	.	.	.	.
2.567	0.0222	0.11	QV	.	.	.	.
2.583	0.0223	0.11	QV	.	.	.	.
2.600	0.0225	0.11	QV	.	.	.	.
2.617	0.0226	0.11	QV	.	.	.	.
2.633	0.0228	0.11	QV	.	.	.	.
2.650	0.0229	0.11	QV	.	.	.	.
2.667	0.0231	0.11	QV	.	.	.	.
2.683	0.0232	0.11	QV	.	.	.	.
2.700	0.0234	0.11	QV	.	.	.	.
2.717	0.0235	0.11	QV	.	.	.	.
2.733	0.0237	0.11	QV	.	.	.	.
2.750	0.0239	0.11	QV	.	.	.	.
2.767	0.0240	0.11	QV	.	.	.	.
2.783	0.0242	0.11	QV	.	.	.	.
2.800	0.0243	0.11	QV	.	.	.	.
2.817	0.0245	0.11	QV	.	.	.	.
2.833	0.0246	0.11	QV	.	.	.	.
2.850	0.0248	0.11	QV	.	.	.	.
2.867	0.0250	0.11	QV	.	.	.	.
2.883	0.0251	0.11	QV	.	.	.	.
2.900	0.0253	0.11	QV	.	.	.	.
2.917	0.0254	0.11	QV	.	.	.	.

2.933	0.0256	0.11	QV	.	.	.	.
2.950	0.0257	0.11	QV	.	.	.	.
2.967	0.0259	0.11	QV	.	.	.	.
2.983	0.0260	0.11	QV	.	.	.	.
3.000	0.0262	0.11	QV	.	.	.	.
3.017	0.0264	0.11	QV	.	.	.	.
3.033	0.0265	0.11	QV	.	.	.	.
3.050	0.0267	0.11	QV	.	.	.	.
3.067	0.0268	0.11	QV	.	.	.	.
3.083	0.0270	0.11	QV	.	.	.	.
3.100	0.0272	0.11	QV	.	.	.	.
3.117	0.0273	0.11	QV	.	.	.	.
3.133	0.0275	0.12	QV	.	.	.	.
3.150	0.0276	0.12	QV	.	.	.	.
3.167	0.0278	0.12	QV	.	.	.	.
3.183	0.0279	0.12	QV	.	.	.	.
3.200	0.0281	0.12	Q V	.	.	.	.
3.217	0.0283	0.12	Q V	.	.	.	.
3.233	0.0284	0.12	Q V	.	.	.	.
3.250	0.0286	0.12	Q V	.	.	.	.
3.267	0.0287	0.12	Q V	.	.	.	.
3.283	0.0289	0.12	Q V	.	.	.	.
3.300	0.0291	0.12	Q V	.	.	.	.
3.317	0.0292	0.12	Q V	.	.	.	.
3.333	0.0294	0.12	Q V	.	.	.	.
3.350	0.0295	0.12	Q V	.	.	.	.
3.367	0.0297	0.12	Q V	.	.	.	.
3.383	0.0299	0.12	Q V	.	.	.	.
3.400	0.0300	0.12	Q V	.	.	.	.
3.417	0.0302	0.12	Q V	.	.	.	.
3.433	0.0303	0.12	Q V	.	.	.	.
3.450	0.0305	0.12	Q V	.	.	.	.
3.467	0.0307	0.12	Q V	.	.	.	.
3.483	0.0308	0.12	Q V	.	.	.	.
3.500	0.0310	0.12	Q V	.	.	.	.
3.517	0.0312	0.12	Q V	.	.	.	.
3.533	0.0313	0.12	Q V	.	.	.	.
3.550	0.0315	0.12	Q V	.	.	.	.
3.567	0.0316	0.12	Q V	.	.	.	.
3.583	0.0318	0.12	Q V	.	.	.	.
3.600	0.0320	0.12	Q V	.	.	.	.
3.617	0.0321	0.12	Q V	.	.	.	.
3.633	0.0323	0.12	Q V	.	.	.	.
3.650	0.0324	0.12	Q V	.	.	.	.
3.667	0.0326	0.12	Q V	.	.	.	.
3.683	0.0328	0.12	Q V	.	.	.	.
3.700	0.0329	0.12	Q V	.	.	.	.
3.717	0.0331	0.12	Q V	.	.	.	.
3.733	0.0333	0.12	Q V	.	.	.	.
3.750	0.0334	0.12	Q V	.	.	.	.

3.767	0.0336	0.12	Q V	.	.	.	.
3.783	0.0338	0.12	Q V	.	.	.	.
3.800	0.0339	0.12	Q V	.	.	.	.
3.817	0.0341	0.12	Q V	.	.	.	.
3.833	0.0342	0.12	Q V	.	.	.	.
3.850	0.0344	0.12	Q V	.	.	.	.
3.867	0.0346	0.12	Q V	.	.	.	.
3.883	0.0347	0.12	Q V	.	.	.	.
3.900	0.0349	0.12	Q V	.	.	.	.
3.917	0.0351	0.12	Q V	.	.	.	.
3.933	0.0352	0.12	Q V	.	.	.	.
3.950	0.0354	0.12	Q V	.	.	.	.
3.967	0.0356	0.12	Q V	.	.	.	.
3.983	0.0357	0.12	Q V	.	.	.	.
4.000	0.0359	0.12	Q V	.	.	.	.
4.017	0.0361	0.12	Q V	.	.	.	.
4.033	0.0362	0.12	Q V	.	.	.	.
4.050	0.0364	0.12	Q V	.	.	.	.
4.067	0.0366	0.12	Q V	.	.	.	.
4.083	0.0367	0.12	Q V	.	.	.	.
4.100	0.0369	0.12	Q V	.	.	.	.
4.117	0.0371	0.12	Q V	.	.	.	.
4.133	0.0372	0.12	Q V	.	.	.	.
4.150	0.0374	0.12	Q V	.	.	.	.
4.167	0.0376	0.12	Q V	.	.	.	.
4.183	0.0377	0.12	Q V	.	.	.	.
4.200	0.0379	0.12	Q V	.	.	.	.
4.217	0.0381	0.12	Q V	.	.	.	.
4.233	0.0382	0.12	Q V	.	.	.	.
4.250	0.0384	0.12	Q V	.	.	.	.
4.267	0.0386	0.12	Q V	.	.	.	.
4.283	0.0387	0.12	Q V	.	.	.	.
4.300	0.0389	0.12	Q V	.	.	.	.
4.317	0.0391	0.12	Q V	.	.	.	.
4.333	0.0392	0.12	Q V	.	.	.	.
4.350	0.0394	0.12	Q V	.	.	.	.
4.367	0.0396	0.12	Q V	.	.	.	.
4.383	0.0397	0.12	Q V	.	.	.	.
4.400	0.0399	0.12	Q V	.	.	.	.
4.417	0.0401	0.12	Q V	.	.	.	.
4.433	0.0403	0.12	Q V	.	.	.	.
4.450	0.0404	0.12	Q V	.	.	.	.
4.467	0.0406	0.12	Q V	.	.	.	.
4.483	0.0408	0.12	Q V	.	.	.	.
4.500	0.0409	0.12	Q V	.	.	.	.
4.517	0.0411	0.12	Q V	.	.	.	.
4.533	0.0413	0.12	Q V	.	.	.	.
4.550	0.0414	0.12	Q V	.	.	.	.
4.567	0.0416	0.12	Q V	.	.	.	.
4.583	0.0418	0.12	Q V	.	.	.	.

4.600	0.0420	0.12	Q	V	.	.	.	.
4.617	0.0421	0.12	Q	V	.	.	.	.
4.633	0.0423	0.12	Q	V	.	.	.	.
4.650	0.0425	0.12	Q	V	.	.	.	.
4.667	0.0426	0.12	Q	V	.	.	.	.
4.683	0.0428	0.12	Q	V	.	.	.	.
4.700	0.0430	0.12	Q	V	.	.	.	.
4.717	0.0432	0.12	Q	V	.	.	.	.
4.733	0.0433	0.12	Q	V	.	.	.	.
4.750	0.0435	0.13	Q	V	.	.	.	.
4.767	0.0437	0.13	Q	V	.	.	.	.
4.783	0.0438	0.13	Q	V	.	.	.	.
4.800	0.0440	0.13	Q	V	.	.	.	.
4.817	0.0442	0.13	Q	V	.	.	.	.
4.833	0.0444	0.13	Q	V	.	.	.	.
4.850	0.0445	0.13	Q	V	.	.	.	.
4.867	0.0447	0.13	Q	V	.	.	.	.
4.883	0.0449	0.13	Q	V	.	.	.	.
4.900	0.0451	0.13	Q	V	.	.	.	.
4.917	0.0452	0.13	Q	V	.	.	.	.
4.933	0.0454	0.13	Q	V	.	.	.	.
4.950	0.0456	0.13	Q	V	.	.	.	.
4.967	0.0458	0.13	Q	V	.	.	.	.
4.983	0.0459	0.13	Q	V	.	.	.	.
5.000	0.0461	0.13	Q	V	.	.	.	.
5.017	0.0463	0.13	Q	V	.	.	.	.
5.033	0.0465	0.13	Q	V	.	.	.	.
5.050	0.0466	0.13	Q	V	.	.	.	.
5.067	0.0468	0.13	Q	V	.	.	.	.
5.083	0.0470	0.13	Q	V	.	.	.	.
5.100	0.0472	0.13	Q	V	.	.	.	.
5.117	0.0473	0.13	Q	V	.	.	.	.
5.133	0.0475	0.13	Q	V	.	.	.	.
5.150	0.0477	0.13	Q	V	.	.	.	.
5.167	0.0479	0.13	Q	V	.	.	.	.
5.183	0.0480	0.13	Q	V	.	.	.	.
5.200	0.0482	0.13	Q	V	.	.	.	.
5.217	0.0484	0.13	Q	V	.	.	.	.
5.233	0.0486	0.13	Q	V	.	.	.	.
5.250	0.0488	0.13	Q	V	.	.	.	.
5.267	0.0489	0.13	Q	V	.	.	.	.
5.283	0.0491	0.13	Q	V	.	.	.	.
5.300	0.0493	0.13	Q	V	.	.	.	.
5.317	0.0495	0.13	Q	V	.	.	.	.
5.333	0.0496	0.13	Q	V	.	.	.	.
5.350	0.0498	0.13	Q	V	.	.	.	.
5.367	0.0500	0.13	Q	V	.	.	.	.
5.383	0.0502	0.13	Q	V	.	.	.	.
5.400	0.0504	0.13	Q	V	.	.	.	.
5.417	0.0505	0.13	Q	V	.	.	.	.

5.433	0.0507	0.13	Q	V	.	.	.	.
5.450	0.0509	0.13	Q	V	.	.	.	.
5.467	0.0511	0.13	Q	V	.	.	.	.
5.483	0.0513	0.13	Q	V	.	.	.	.
5.500	0.0514	0.13	Q	V	.	.	.	.
5.517	0.0516	0.13	Q	V	.	.	.	.
5.533	0.0518	0.13	Q	V	.	.	.	.
5.550	0.0520	0.13	Q	V	.	.	.	.
5.567	0.0522	0.13	Q	V	.	.	.	.
5.583	0.0523	0.13	Q	V	.	.	.	.
5.600	0.0525	0.13	Q	V	.	.	.	.
5.617	0.0527	0.13	Q	V	.	.	.	.
5.633	0.0529	0.13	Q	V	.	.	.	.
5.650	0.0531	0.13	Q	V	.	.	.	.
5.667	0.0532	0.13	Q	V	.	.	.	.
5.683	0.0534	0.13	Q	V	.	.	.	.
5.700	0.0536	0.13	Q	V	.	.	.	.
5.717	0.0538	0.13	Q	V	.	.	.	.
5.733	0.0540	0.13	Q	V	.	.	.	.
5.750	0.0542	0.13	Q	V	.	.	.	.
5.767	0.0543	0.13	Q	V	.	.	.	.
5.783	0.0545	0.13	Q	V	.	.	.	.
5.800	0.0547	0.13	Q	V	.	.	.	.
5.817	0.0549	0.13	Q	V	.	.	.	.
5.833	0.0551	0.13	Q	V	.	.	.	.
5.850	0.0553	0.13	Q	V	.	.	.	.
5.867	0.0554	0.13	Q	V	.	.	.	.
5.883	0.0556	0.13	Q	V	.	.	.	.
5.900	0.0558	0.13	Q	V	.	.	.	.
5.917	0.0560	0.13	Q	V	.	.	.	.
5.933	0.0562	0.13	Q	V	.	.	.	.
5.950	0.0564	0.13	Q	V	.	.	.	.
5.967	0.0566	0.13	Q	V	.	.	.	.
5.983	0.0567	0.13	Q	V	.	.	.	.
6.000	0.0569	0.13	Q	V	.	.	.	.
6.017	0.0571	0.14	Q	V	.	.	.	.
6.033	0.0573	0.14	Q	V	.	.	.	.
6.050	0.0575	0.14	Q	V	.	.	.	.
6.067	0.0577	0.14	Q	V	.	.	.	.
6.083	0.0579	0.14	Q	V	.	.	.	.
6.100	0.0580	0.14	Q	V	.	.	.	.
6.117	0.0582	0.14	Q	V	.	.	.	.
6.133	0.0584	0.14	Q	V	.	.	.	.
6.150	0.0586	0.14	Q	V	.	.	.	.
6.167	0.0588	0.14	Q	V	.	.	.	.
6.183	0.0590	0.14	Q	V	.	.	.	.
6.200	0.0592	0.14	Q	V	.	.	.	.
6.217	0.0594	0.14	Q	V	.	.	.	.
6.233	0.0595	0.14	Q	V	.	.	.	.
6.250	0.0597	0.14	Q	V	.	.	.	.

6.267	0.0599	0.14	Q	V	.	.	.	.
6.283	0.0601	0.14	Q	V	.	.	.	.
6.300	0.0603	0.14	Q	V	.	.	.	.
6.317	0.0605	0.14	Q	V	.	.	.	.
6.333	0.0607	0.14	Q	V	.	.	.	.
6.350	0.0609	0.14	Q	V	.	.	.	.
6.367	0.0611	0.14	Q	V	.	.	.	.
6.383	0.0612	0.14	Q	V	.	.	.	.
6.400	0.0614	0.14	Q	V	.	.	.	.
6.417	0.0616	0.14	Q	V	.	.	.	.
6.433	0.0618	0.14	Q	V	.	.	.	.
6.450	0.0620	0.14	Q	V	.	.	.	.
6.467	0.0622	0.14	Q	V	.	.	.	.
6.483	0.0624	0.14	Q	V	.	.	.	.
6.500	0.0626	0.14	Q	V	.	.	.	.
6.517	0.0628	0.14	Q	V	.	.	.	.
6.533	0.0630	0.14	Q	V	.	.	.	.
6.550	0.0632	0.14	Q	V	.	.	.	.
6.567	0.0634	0.14	Q	V	.	.	.	.
6.583	0.0635	0.14	Q	V	.	.	.	.
6.600	0.0637	0.14	Q	V	.	.	.	.
6.617	0.0639	0.14	Q	V	.	.	.	.
6.633	0.0641	0.14	Q	V	.	.	.	.
6.650	0.0643	0.14	Q	V	.	.	.	.
6.667	0.0645	0.14	Q	V	.	.	.	.
6.683	0.0647	0.14	Q	V	.	.	.	.
6.700	0.0649	0.14	Q	V	.	.	.	.
6.717	0.0651	0.14	Q	V	.	.	.	.
6.733	0.0653	0.14	Q	V	.	.	.	.
6.750	0.0655	0.14	Q	V	.	.	.	.
6.767	0.0657	0.14	Q	V	.	.	.	.
6.783	0.0659	0.14	Q	V	.	.	.	.
6.800	0.0661	0.14	Q	V	.	.	.	.
6.817	0.0663	0.14	Q	V	.	.	.	.
6.833	0.0665	0.14	Q	V	.	.	.	.
6.850	0.0667	0.14	Q	V	.	.	.	.
6.867	0.0669	0.14	Q	V	.	.	.	.
6.883	0.0671	0.14	Q	V	.	.	.	.
6.900	0.0673	0.14	Q	V	.	.	.	.
6.917	0.0674	0.14	Q	V	.	.	.	.
6.933	0.0676	0.14	Q	V	.	.	.	.
6.950	0.0678	0.14	Q	V	.	.	.	.
6.967	0.0680	0.14	Q	V	.	.	.	.
6.983	0.0682	0.14	Q	V	.	.	.	.
7.000	0.0684	0.14	Q	V	.	.	.	.
7.017	0.0686	0.14	Q	V	.	.	.	.
7.033	0.0688	0.14	Q	V	.	.	.	.
7.050	0.0690	0.14	Q	V	.	.	.	.
7.067	0.0692	0.14	Q	V	.	.	.	.
7.083	0.0694	0.14	Q	V	.	.	.	.

7.100	0.0696	0.14	Q	V	.	.	.	.
7.117	0.0698	0.15	Q	V	.	.	.	.
7.133	0.0700	0.15	Q	V	.	.	.	.
7.150	0.0702	0.15	Q	V	.	.	.	.
7.167	0.0704	0.15	Q	V	.	.	.	.
7.183	0.0706	0.15	Q	V	.	.	.	.
7.200	0.0708	0.15	Q	V	.	.	.	.
7.217	0.0710	0.15	Q	V	.	.	.	.
7.233	0.0712	0.15	Q	V	.	.	.	.
7.250	0.0714	0.15	Q	V	.	.	.	.
7.267	0.0716	0.15	Q	V	.	.	.	.
7.283	0.0718	0.15	Q	V	.	.	.	.
7.300	0.0721	0.15	Q	V	.	.	.	.
7.317	0.0723	0.15	Q	V	.	.	.	.
7.333	0.0725	0.15	.Q	V	.	.	.	.
7.350	0.0727	0.15	.Q	V	.	.	.	.
7.367	0.0729	0.15	.Q	V	.	.	.	.
7.383	0.0731	0.15	.Q	V	.	.	.	.
7.400	0.0733	0.15	.Q	V	.	.	.	.
7.417	0.0735	0.15	.Q	V	.	.	.	.
7.433	0.0737	0.15	.Q	V	.	.	.	.
7.450	0.0739	0.15	.Q	V	.	.	.	.
7.467	0.0741	0.15	.Q	V	.	.	.	.
7.483	0.0743	0.15	.Q	V	.	.	.	.
7.500	0.0745	0.15	.Q	V	.	.	.	.
7.517	0.0747	0.15	.Q	V	.	.	.	.
7.533	0.0749	0.15	.Q	V	.	.	.	.
7.550	0.0751	0.15	.Q	V	.	.	.	.
7.567	0.0753	0.15	.Q	V	.	.	.	.
7.583	0.0755	0.15	.Q	V	.	.	.	.
7.600	0.0757	0.15	.Q	V	.	.	.	.
7.617	0.0759	0.15	.Q	V	.	.	.	.
7.633	0.0762	0.15	.Q	V	.	.	.	.
7.650	0.0764	0.15	.Q	V	.	.	.	.
7.667	0.0766	0.15	.Q	V	.	.	.	.
7.683	0.0768	0.15	.Q	V	.	.	.	.
7.700	0.0770	0.15	.Q	V	.	.	.	.
7.717	0.0772	0.15	.Q	V	.	.	.	.
7.733	0.0774	0.15	.Q	V	.	.	.	.
7.750	0.0776	0.15	.Q	V	.	.	.	.
7.767	0.0778	0.15	.Q	V	.	.	.	.
7.783	0.0780	0.15	.Q	V	.	.	.	.
7.800	0.0782	0.15	.Q	V	.	.	.	.
7.817	0.0785	0.15	.Q	V	.	.	.	.
7.833	0.0787	0.15	.Q	V	.	.	.	.
7.850	0.0789	0.15	.Q	V	.	.	.	.
7.867	0.0791	0.15	.Q	V	.	.	.	.
7.883	0.0793	0.15	.Q	V	.	.	.	.
7.900	0.0795	0.15	.Q	V	.	.	.	.
7.917	0.0797	0.15	.Q	V	.	.	.	.

7.933	0.0799	0.15	.Q	V	.	.	.	.
7.950	0.0801	0.15	.Q	V	.	.	.	.
7.967	0.0804	0.15	.Q	V	.	.	.	.
7.983	0.0806	0.15	.Q	V	.	.	.	.
8.000	0.0808	0.15	.Q	V	.	.	.	.
8.017	0.0810	0.16	.Q	V	.	.	.	.
8.033	0.0812	0.16	.Q	V	.	.	.	.
8.050	0.0814	0.16	.Q	V	.	.	.	.
8.067	0.0816	0.16	.Q	V	.	.	.	.
8.083	0.0819	0.16	.Q	V	.	.	.	.
8.100	0.0821	0.16	.Q	V	.	.	.	.
8.117	0.0823	0.16	.Q	V	.	.	.	.
8.133	0.0825	0.16	.Q	V	.	.	.	.
8.150	0.0827	0.16	.Q	V	.	.	.	.
8.167	0.0829	0.16	.Q	V	.	.	.	.
8.183	0.0832	0.16	.Q	V	.	.	.	.
8.200	0.0834	0.16	.Q	V	.	.	.	.
8.217	0.0836	0.16	.Q	V	.	.	.	.
8.233	0.0838	0.16	.Q	V	.	.	.	.
8.250	0.0840	0.16	.Q	V	.	.	.	.
8.267	0.0842	0.16	.Q	V	.	.	.	.
8.283	0.0845	0.16	.Q	V	.	.	.	.
8.300	0.0847	0.16	.Q	V	.	.	.	.
8.317	0.0849	0.16	.Q	V	.	.	.	.
8.333	0.0851	0.16	.Q	V	.	.	.	.
8.350	0.0853	0.16	.Q	V	.	.	.	.
8.367	0.0856	0.16	.Q	V	.	.	.	.
8.383	0.0858	0.16	.Q	V	.	.	.	.
8.400	0.0860	0.16	.Q	V	.	.	.	.
8.417	0.0862	0.16	.Q	V	.	.	.	.
8.433	0.0864	0.16	.Q	V	.	.	.	.
8.450	0.0867	0.16	.Q	V	.	.	.	.
8.467	0.0869	0.16	.Q	V	.	.	.	.
8.483	0.0871	0.16	.Q	V	.	.	.	.
8.500	0.0873	0.16	.Q	V	.	.	.	.
8.517	0.0876	0.16	.Q	V	.	.	.	.
8.533	0.0878	0.16	.Q	V	.	.	.	.
8.550	0.0880	0.16	.Q	V	.	.	.	.
8.567	0.0882	0.16	.Q	V	.	.	.	.
8.583	0.0884	0.16	.Q	V	.	.	.	.
8.600	0.0887	0.16	.Q	V	.	.	.	.
8.617	0.0889	0.16	.Q	V	.	.	.	.
8.633	0.0891	0.16	.Q	V	.	.	.	.
8.650	0.0893	0.16	.Q	V	.	.	.	.
8.667	0.0896	0.16	.Q	V	.	.	.	.
8.683	0.0898	0.16	.Q	V	.	.	.	.
8.700	0.0900	0.16	.Q	V	.	.	.	.
8.717	0.0902	0.16	.Q	V	.	.	.	.
8.733	0.0905	0.16	.Q	V	.	.	.	.
8.750	0.0907	0.17	.Q	V	.	.	.	.

8.767	0.0909	0.17	.Q	V	.	.	.	.
8.783	0.0912	0.17	.Q	V	.	.	.	.
8.800	0.0914	0.17	.Q	V	.	.	.	.
8.817	0.0916	0.17	.Q	V	.	.	.	.
8.833	0.0918	0.17	.Q	V	.	.	.	.
8.850	0.0921	0.17	.Q	V	.	.	.	.
8.867	0.0923	0.17	.Q	V	.	.	.	.
8.883	0.0925	0.17	.Q	V	.	.	.	.
8.900	0.0928	0.17	.Q	V	.	.	.	.
8.917	0.0930	0.17	.Q	V	.	.	.	.
8.933	0.0932	0.17	.Q	V	.	.	.	.
8.950	0.0935	0.17	.Q	V	.	.	.	.
8.967	0.0937	0.17	.Q	V	.	.	.	.
8.983	0.0939	0.17	.Q	V	.	.	.	.
9.000	0.0941	0.17	.Q	V	.	.	.	.
9.017	0.0944	0.17	.Q	V	.	.	.	.
9.033	0.0946	0.17	.Q	V	.	.	.	.
9.050	0.0948	0.17	.Q	V	.	.	.	.
9.067	0.0951	0.17	.Q	V	.	.	.	.
9.083	0.0953	0.17	.Q	V	.	.	.	.
9.100	0.0955	0.17	.Q	V	.	.	.	.
9.117	0.0958	0.17	.Q	V	.	.	.	.
9.133	0.0960	0.17	.Q	V	.	.	.	.
9.150	0.0963	0.17	.Q	V	.	.	.	.
9.167	0.0965	0.17	.Q	V	.	.	.	.
9.183	0.0967	0.17	.Q	V	.	.	.	.
9.200	0.0970	0.17	.Q	V	.	.	.	.
9.217	0.0972	0.17	.Q	V	.	.	.	.
9.233	0.0974	0.17	.Q	V	.	.	.	.
9.250	0.0977	0.17	.Q	V	.	.	.	.
9.267	0.0979	0.17	.Q	V	.	.	.	.
9.283	0.0981	0.17	.Q	V	.	.	.	.
9.300	0.0984	0.17	.Q	V	.	.	.	.
9.317	0.0986	0.17	.Q	V	.	.	.	.
9.333	0.0989	0.17	.Q	V	.	.	.	.
9.350	0.0991	0.17	.Q	V	.	.	.	.
9.367	0.0993	0.17	.Q	V	.	.	.	.
9.383	0.0996	0.17	.Q	V	.	.	.	.
9.400	0.0998	0.17	.Q	V	.	.	.	.
9.417	0.1001	0.17	.Q	V	.	.	.	.
9.433	0.1003	0.18	.Q	V	.	.	.	.
9.450	0.1006	0.18	.Q	V	.	.	.	.
9.467	0.1008	0.18	.Q	V	.	.	.	.
9.483	0.1010	0.18	.Q	V	.	.	.	.
9.500	0.1013	0.18	.Q	V	.	.	.	.
9.517	0.1015	0.18	.Q	V	.	.	.	.
9.533	0.1018	0.18	.Q	V	.	.	.	.
9.550	0.1020	0.18	.Q	V	.	.	.	.
9.567	0.1023	0.18	.Q	V	.	.	.	.
9.583	0.1025	0.18	.Q	V	.	.	.	.

9.600	0.1027	0.18	.Q	V	.	.	.	.
9.617	0.1030	0.18	.Q	V	.	.	.	.
9.633	0.1032	0.18	.Q	V	.	.	.	.
9.650	0.1035	0.18	.Q	V	.	.	.	.
9.667	0.1037	0.18	.Q	V	.	.	.	.
9.683	0.1040	0.18	.Q	V	.	.	.	.
9.700	0.1042	0.18	.Q	V	.	.	.	.
9.717	0.1045	0.18	.Q	V	.	.	.	.
9.733	0.1047	0.18	.Q	V	.	.	.	.
9.750	0.1050	0.18	.Q	V	.	.	.	.
9.767	0.1052	0.18	.Q	V	.	.	.	.
9.783	0.1055	0.18	.Q	V	.	.	.	.
9.800	0.1057	0.18	.Q	V	.	.	.	.
9.817	0.1060	0.18	.Q	V	.	.	.	.
9.833	0.1062	0.18	.Q	V	.	.	.	.
9.850	0.1065	0.18	.Q	V	.	.	.	.
9.867	0.1067	0.18	.Q	V	.	.	.	.
9.883	0.1070	0.18	.Q	V	.	.	.	.
9.900	0.1072	0.18	.Q	V	.	.	.	.
9.917	0.1075	0.18	.Q	V	.	.	.	.
9.933	0.1077	0.18	.Q	V	.	.	.	.
9.950	0.1080	0.18	.Q	V	.	.	.	.
9.967	0.1083	0.18	.Q	V	.	.	.	.
9.983	0.1085	0.19	.Q	V	.	.	.	.
10.000	0.1088	0.19	.Q	V	.	.	.	.
10.017	0.1090	0.19	.Q	V	.	.	.	.
10.033	0.1093	0.19	.Q	V	.	.	.	.
10.050	0.1095	0.19	.Q	V	.	.	.	.
10.067	0.1098	0.19	.Q	V	.	.	.	.
10.083	0.1100	0.19	.Q	V	.	.	.	.
10.100	0.1103	0.19	.Q	V	.	.	.	.
10.117	0.1106	0.19	.Q	V	.	.	.	.
10.133	0.1108	0.19	.Q	V	.	.	.	.
10.150	0.1111	0.19	.Q	V	.	.	.	.
10.167	0.1113	0.19	.Q	V	.	.	.	.
10.183	0.1116	0.19	.Q	V	.	.	.	.
10.200	0.1119	0.19	.Q	V	.	.	.	.
10.217	0.1121	0.19	.Q	V	.	.	.	.
10.233	0.1124	0.19	.Q	V	.	.	.	.
10.250	0.1126	0.19	.Q	V	.	.	.	.
10.267	0.1129	0.19	.Q	V	.	.	.	.
10.283	0.1132	0.19	.Q	V	.	.	.	.
10.300	0.1134	0.19	.Q	V	.	.	.	.
10.317	0.1137	0.19	.Q	V	.	.	.	.
10.333	0.1140	0.19	.Q	V	.	.	.	.
10.350	0.1142	0.19	.Q	V	.	.	.	.
10.367	0.1145	0.19	.Q	V	.	.	.	.
10.383	0.1148	0.19	.Q	V	.	.	.	.
10.400	0.1150	0.19	.Q	V	.	.	.	.
10.417	0.1153	0.19	.Q	V	.	.	.	.

10.433	0.1156	0.19	.Q	V	.	.	.
10.450	0.1158	0.19	.Q	V	.	.	.
10.467	0.1161	0.20	.Q	V	.	.	.
10.483	0.1164	0.20	.Q	V	.	.	.
10.500	0.1166	0.20	.Q	V	.	.	.
10.517	0.1169	0.20	.Q	V	.	.	.
10.533	0.1172	0.20	.Q	V	.	.	.
10.550	0.1175	0.20	.Q	V	.	.	.
10.567	0.1177	0.20	.Q	V	.	.	.
10.583	0.1180	0.20	.Q	V	.	.	.
10.600	0.1183	0.20	.Q	V	.	.	.
10.617	0.1185	0.20	.Q	V	.	.	.
10.633	0.1188	0.20	.Q	V	.	.	.
10.650	0.1191	0.20	.Q	V	.	.	.
10.667	0.1194	0.20	.Q	V	.	.	.
10.683	0.1196	0.20	.Q	V	.	.	.
10.700	0.1199	0.20	.Q	V	.	.	.
10.717	0.1202	0.20	.Q	V	.	.	.
10.733	0.1205	0.20	.Q	V	.	.	.
10.750	0.1207	0.20	.Q	V	.	.	.
10.767	0.1210	0.20	.Q	V	.	.	.
10.783	0.1213	0.20	.Q	V	.	.	.
10.800	0.1216	0.20	.Q	V	.	.	.
10.817	0.1219	0.20	.Q	V	.	.	.
10.833	0.1221	0.20	.Q	V	.	.	.
10.850	0.1224	0.20	.Q	V	.	.	.
10.867	0.1227	0.20	.Q	V	.	.	.
10.883	0.1230	0.20	.Q	V	.	.	.
10.900	0.1233	0.20	.Q	V	.	.	.
10.917	0.1236	0.21	.Q	V	.	.	.
10.933	0.1238	0.21	.Q	V	.	.	.
10.950	0.1241	0.21	.Q	V	.	.	.
10.967	0.1244	0.21	.Q	V	.	.	.
10.983	0.1247	0.21	.Q	V	.	.	.
11.000	0.1250	0.21	.Q	V	.	.	.
11.017	0.1253	0.21	.Q	V	.	.	.
11.033	0.1256	0.21	.Q	V	.	.	.
11.050	0.1258	0.21	.Q	V	.	.	.
11.067	0.1261	0.21	.Q	V	.	.	.
11.083	0.1264	0.21	.Q	V	.	.	.
11.100	0.1267	0.21	.Q	V	.	.	.
11.117	0.1270	0.21	.Q	V	.	.	.
11.133	0.1273	0.21	.Q	V	.	.	.
11.150	0.1276	0.21	.Q	V	.	.	.
11.167	0.1279	0.21	.Q	V	.	.	.
11.183	0.1282	0.21	.Q	V	.	.	.
11.200	0.1285	0.21	.Q	V	.	.	.
11.217	0.1288	0.21	.Q	V	.	.	.
11.233	0.1291	0.21	.Q	V	.	.	.
11.250	0.1293	0.21	.Q	V	.	.	.

11.267	0.1296	0.21	.Q	V.	.	.	.
11.283	0.1299	0.22	.Q	V.	.	.	.
11.300	0.1302	0.22	.Q	V.	.	.	.
11.317	0.1305	0.22	.Q	V.	.	.	.
11.333	0.1308	0.22	.Q	V.	.	.	.
11.350	0.1311	0.22	.Q	V.	.	.	.
11.367	0.1314	0.22	.Q	V.	.	.	.
11.383	0.1317	0.22	.Q	V.	.	.	.
11.400	0.1320	0.22	.Q	V.	.	.	.
11.417	0.1323	0.22	.Q	V.	.	.	.
11.433	0.1326	0.22	.Q	V.	.	.	.
11.450	0.1329	0.22	.Q	V.	.	.	.
11.467	0.1332	0.22	.Q	V.	.	.	.
11.483	0.1336	0.22	.Q	V.	.	.	.
11.500	0.1339	0.22	.Q	V.	.	.	.
11.517	0.1342	0.22	.Q	V.	.	.	.
11.533	0.1345	0.22	.Q	V.	.	.	.
11.550	0.1348	0.22	.Q	V.	.	.	.
11.567	0.1351	0.22	.Q	V.	.	.	.
11.583	0.1354	0.22	.Q	V.	.	.	.
11.600	0.1357	0.22	.Q	V.	.	.	.
11.617	0.1360	0.23	.Q	V.	.	.	.
11.633	0.1363	0.23	.Q	V.	.	.	.
11.650	0.1366	0.23	.Q	V.	.	.	.
11.667	0.1369	0.23	.Q	V.	.	.	.
11.683	0.1373	0.23	.Q	V.	.	.	.
11.700	0.1376	0.23	.Q	V.	.	.	.
11.717	0.1379	0.23	.Q	V.	.	.	.
11.733	0.1382	0.23	.Q	V.	.	.	.
11.750	0.1385	0.23	.Q	V.	.	.	.
11.767	0.1388	0.23	.Q	V.	.	.	.
11.783	0.1392	0.23	.Q	V.	.	.	.
11.800	0.1395	0.23	.Q	V.	.	.	.
11.817	0.1398	0.23	.Q	V.	.	.	.
11.833	0.1401	0.23	.Q	V	.	.	.
11.850	0.1404	0.23	.Q	V	.	.	.
11.867	0.1408	0.23	.Q	V	.	.	.
11.883	0.1411	0.23	.Q	V	.	.	.
11.900	0.1414	0.23	.Q	V	.	.	.
11.917	0.1417	0.24	.Q	V	.	.	.
11.933	0.1421	0.24	.Q	V	.	.	.
11.950	0.1424	0.24	.Q	V	.	.	.
11.967	0.1427	0.24	.Q	V	.	.	.
11.983	0.1430	0.24	.Q	V	.	.	.
12.000	0.1434	0.24	.Q	V	.	.	.
12.017	0.1437	0.24	.Q	V	.	.	.
12.033	0.1440	0.25	.Q	V	.	.	.
12.050	0.1444	0.25	.Q	V	.	.	.
12.067	0.1447	0.25	.Q	V	.	.	.
12.083	0.1451	0.26	.Q	V	.	.	.

12.100	0.1455	0.26	.Q	V	.	.	.
12.117	0.1458	0.26	.Q	V	.	.	.
12.133	0.1462	0.27	.Q	V	.	.	.
12.150	0.1466	0.27	.Q	V	.	.	.
12.167	0.1469	0.28	.Q	V	.	.	.
12.183	0.1473	0.29	.Q	V	.	.	.
12.200	0.1477	0.29	.Q	V	.	.	.
12.217	0.1482	0.30	. Q	V	.	.	.
12.233	0.1486	0.31	. Q	V	.	.	.
12.250	0.1490	0.31	. Q	V	.	.	.
12.267	0.1495	0.32	. Q	V	.	.	.
12.283	0.1499	0.33	. Q	V	.	.	.
12.300	0.1504	0.33	. Q	V	.	.	.
12.317	0.1508	0.33	. Q	V	.	.	.
12.333	0.1513	0.33	. Q	V	.	.	.
12.350	0.1517	0.33	. Q	V	.	.	.
12.367	0.1522	0.33	. Q	V	.	.	.
12.383	0.1526	0.33	. Q	V	.	.	.
12.400	0.1531	0.33	. Q	V	.	.	.
12.417	0.1536	0.33	. Q	V	.	.	.
12.433	0.1540	0.33	. Q	V	.	.	.
12.450	0.1545	0.34	. Q	.V	.	.	.
12.467	0.1550	0.34	. Q	.V	.	.	.
12.483	0.1554	0.34	. Q	.V	.	.	.
12.500	0.1559	0.34	. Q	.V	.	.	.
12.517	0.1564	0.34	. Q	.V	.	.	.
12.533	0.1568	0.34	. Q	.V	.	.	.
12.550	0.1573	0.34	. Q	.V	.	.	.
12.567	0.1578	0.34	. Q	.V	.	.	.
12.583	0.1582	0.34	. Q	.V	.	.	.
12.600	0.1587	0.34	. Q	.V	.	.	.
12.617	0.1592	0.35	. Q	.V	.	.	.
12.633	0.1597	0.35	. Q	.V	.	.	.
12.650	0.1601	0.35	. Q	.V	.	.	.
12.667	0.1606	0.35	. Q	.V	.	.	.
12.683	0.1611	0.35	. Q	.V	.	.	.
12.700	0.1616	0.35	. Q	.V	.	.	.
12.717	0.1621	0.35	. Q	.V	.	.	.
12.733	0.1625	0.35	. Q	.V	.	.	.
12.750	0.1630	0.35	. Q	.V	.	.	.
12.767	0.1635	0.35	. Q	.V	.	.	.
12.783	0.1640	0.35	. Q	.V	.	.	.
12.800	0.1645	0.35	. Q	.V	.	.	.
12.817	0.1650	0.36	. Q	.V	.	.	.
12.833	0.1655	0.36	. Q	.V	.	.	.
12.850	0.1660	0.36	. Q	.V	.	.	.
12.867	0.1664	0.36	. Q	.V	.	.	.
12.883	0.1669	0.36	. Q	.V	.	.	.
12.900	0.1674	0.36	. Q	.V	.	.	.
12.917	0.1679	0.36	. Q	.V	.	.	.

12.933	0.1684	0.36	. Q	. V	.	.	.
12.950	0.1689	0.36	. Q	. V	.	.	.
12.967	0.1694	0.36	. Q	. V	.	.	.
12.983	0.1699	0.36	. Q	. V	.	.	.
13.000	0.1704	0.36	. Q	. V	.	.	.
13.017	0.1709	0.37	. Q	. V	.	.	.
13.033	0.1715	0.37	. Q	. V	.	.	.
13.050	0.1720	0.37	. Q	. V	.	.	.
13.067	0.1725	0.37	. Q	. V	.	.	.
13.083	0.1730	0.37	. Q	. V	.	.	.
13.100	0.1735	0.37	. Q	. V	.	.	.
13.117	0.1740	0.37	. Q	. V	.	.	.
13.133	0.1745	0.37	. Q	. V	.	.	.
13.150	0.1750	0.38	. Q	. V	.	.	.
13.167	0.1756	0.38	. Q	. V	.	.	.
13.183	0.1761	0.38	. Q	. V	.	.	.
13.200	0.1766	0.38	. Q	. V	.	.	.
13.217	0.1771	0.38	. Q	. V	.	.	.
13.233	0.1777	0.38	. Q	. V	.	.	.
13.250	0.1782	0.38	. Q	. V	.	.	.
13.267	0.1787	0.38	. Q	. V	.	.	.
13.283	0.1792	0.38	. Q	. V	.	.	.
13.300	0.1798	0.38	. Q	. V	.	.	.
13.317	0.1803	0.39	. Q	. V	.	.	.
13.333	0.1808	0.39	. Q	. V	.	.	.
13.350	0.1814	0.39	. Q	. V	.	.	.
13.367	0.1819	0.39	. Q	. V	.	.	.
13.383	0.1824	0.39	. Q	. V	.	.	.
13.400	0.1830	0.39	. Q	. V	.	.	.
13.417	0.1835	0.39	. Q	. V	.	.	.
13.433	0.1841	0.40	. Q	. V	.	.	.
13.450	0.1846	0.40	. Q	. V	.	.	.
13.467	0.1852	0.40	. Q	. V	.	.	.
13.483	0.1857	0.40	. Q	. V	.	.	.
13.500	0.1863	0.40	. Q	. V	.	.	.
13.517	0.1868	0.40	. Q	. V	.	.	.
13.533	0.1874	0.40	. Q	. V	.	.	.
13.550	0.1879	0.40	. Q	. V	.	.	.
13.567	0.1885	0.41	. Q	. V	.	.	.
13.583	0.1891	0.41	. Q	. V	.	.	.
13.600	0.1896	0.41	. Q	. V	.	.	.
13.617	0.1902	0.41	. Q	. V	.	.	.
13.633	0.1907	0.41	. Q	. V	.	.	.
13.650	0.1913	0.41	. Q	. V	.	.	.
13.667	0.1919	0.41	. Q	. V	.	.	.
13.683	0.1924	0.42	. Q	. V	.	.	.
13.700	0.1930	0.42	. Q	. V	.	.	.
13.717	0.1936	0.42	. Q	. V	.	.	.
13.733	0.1942	0.42	. Q	. V	.	.	.
13.750	0.1948	0.42	. Q	. V	.	.	.

13.767	0.1953	0.43	. Q	. V	.	.	.	
13.783	0.1959	0.43	. Q	. V	.	.	.	
13.800	0.1965	0.43	. Q	. V	.	.	.	
13.817	0.1971	0.43	. Q	. V	.	.	.	
13.833	0.1977	0.43	. Q	. V	.	.	.	
13.850	0.1983	0.43	. Q	. V	.	.	.	
13.867	0.1989	0.43	. Q	. V	.	.	.	
13.883	0.1995	0.43	. Q	. V	.	.	.	
13.900	0.2001	0.43	. Q	. V	.	.	.	
13.917	0.2007	0.44	. Q	. V	.	.	.	
13.933	0.2013	0.44	. Q	. V	.	.	.	
13.950	0.2019	0.44	. Q	. V	.	.	.	
13.967	0.2025	0.44	. Q	. V	.	.	.	
13.983	0.2031	0.44	. Q	. V	.	.	.	
14.000	0.2037	0.45	. Q	. V	.	.	.	
14.017	0.2044	0.45	. Q	. V	.	.	.	
14.033	0.2050	0.45	. Q	. V	.	.	.	
14.050	0.2056	0.45	. Q	. V	.	.	.	
14.067	0.2062	0.46	. Q	. V	.	.	.	
14.083	0.2069	0.46	. Q	. V	.	.	.	
14.100	0.2075	0.46	. Q	. V	.	.	.	
14.117	0.2081	0.46	. Q	. V	.	.	.	
14.133	0.2087	0.46	. Q	. V	.	.	.	
14.150	0.2094	0.46	. Q	. V	.	.	.	
14.167	0.2100	0.46	. Q	. V	.	.	.	
14.183	0.2107	0.46	. Q	. V	.	.	.	
14.200	0.2113	0.46	. Q	. V	.	.	.	
14.217	0.2119	0.46	. Q	. V	.	.	.	
14.233	0.2126	0.47	. Q	. V	.	.	.	
14.250	0.2132	0.47	. Q	. V	.	.	.	
14.267	0.2139	0.47	. Q	. V	.	.	.	
14.283	0.2145	0.47	. Q	. V	.	.	.	
14.300	0.2152	0.48	. Q	. V	.	.	.	
14.317	0.2158	0.48	. Q	. V	.	.	.	
14.333	0.2165	0.48	. Q	. V	.	.	.	
14.350	0.2172	0.49	. Q	. V	.	.	.	
14.367	0.2178	0.49	. Q	. V	.	.	.	
14.383	0.2185	0.49	. Q	. V	.	.	.	
14.400	0.2192	0.49	. Q	. V	.	.	.	
14.417	0.2199	0.50	. Q	. V	.	.	.	
14.433	0.2206	0.50	. Q	. V	.	.	.	
14.450	0.2213	0.50	. Q	. V	.	.	.	
14.467	0.2219	0.50	. Q	. V	.	.	.	
14.483	0.2226	0.50	. Q	. V	.	.	.	
14.500	0.2233	0.50	. Q	. V	.	.	.	
14.517	0.2240	0.51	. Q	. V	.	.	.	
14.533	0.2247	0.51	. Q	. V	.	.	.	
14.550	0.2254	0.51	. Q	. V	.	.	.	
14.567	0.2262	0.52	. Q	. V	.	.	.	
14.583	0.2269	0.52	. Q	. V	.	.	.	

14.600	0.2276	0.52	.	Q	.	V	.	.	.
14.617	0.2283	0.53	.	Q	.	V	.	.	.
14.633	0.2291	0.53	.	Q	.	V	.	.	.
14.650	0.2298	0.54	.	Q	.	V	.	.	.
14.667	0.2305	0.54	.	Q	.	V	.	.	.
14.683	0.2313	0.54	.	Q	.	V	.	.	.
14.700	0.2320	0.55	.	Q	.	V	.	.	.
14.717	0.2328	0.55	.	Q	.	V	.	.	.
14.733	0.2336	0.55	.	Q	.	V	.	.	.
14.750	0.2343	0.55	.	Q	.	V	.	.	.
14.767	0.2351	0.55	.	Q	.	V	.	.	.
14.783	0.2358	0.56	.	Q	.	V	.	.	.
14.800	0.2366	0.56	.	Q	.	V	.	.	.
14.817	0.2374	0.56	.	Q	.	V	.	.	.
14.833	0.2382	0.57	.	Q	.	V	.	.	.
14.850	0.2390	0.57	.	Q	.	V	.	.	.
14.867	0.2398	0.58	.	Q	.	V	.	.	.
14.883	0.2406	0.58	.	Q	.	V	.	.	.
14.900	0.2414	0.59	.	Q	.	V	.	.	.
14.917	0.2422	0.59	.	Q	.	V	.	.	.
14.933	0.2430	0.60	.	Q	.	V	.	.	.
14.950	0.2439	0.61	.	Q	.	V	.	.	.
14.967	0.2447	0.61	.	Q	.	V	.	.	.
14.983	0.2455	0.61	.	Q	.	V	.	.	.
15.000	0.2464	0.62	.	Q	.	V	.	.	.
15.017	0.2472	0.62	.	Q	.	V	.	.	.
15.033	0.2481	0.62	.	Q	.	V	.	.	.
15.050	0.2490	0.63	.	Q	.	V	.	.	.
15.067	0.2498	0.63	.	Q	.	V	.	.	.
15.083	0.2507	0.63	.	Q	.	V	.	.	.
15.100	0.2516	0.64	.	Q	.	V	.	.	.
15.117	0.2525	0.64	.	Q	.	V	.	.	.
15.133	0.2534	0.65	.	Q	.	V	.	.	.
15.150	0.2543	0.66	.	Q	.	V	.	.	.
15.167	0.2552	0.67	.	Q	.	V	.	.	.
15.183	0.2561	0.68	.	Q	.	V	.	.	.
15.200	0.2571	0.68	.	Q	.	V	.	.	.
15.217	0.2580	0.69	.	Q	.	V	.	.	.
15.233	0.2590	0.70	.	Q	.	V	.	.	.
15.250	0.2600	0.71	.	Q	.	V	.	.	.
15.267	0.2610	0.72	.	Q	.	V	.	.	.
15.283	0.2620	0.72	.	Q	.	V	.	.	.
15.300	0.2630	0.73	.	Q	.	V	.	.	.
15.317	0.2640	0.73	.	Q	.	V	.	.	.
15.333	0.2650	0.74	.	Q	.	V	.	.	.
15.350	0.2660	0.74	.	Q	.	V	.	.	.
15.367	0.2670	0.75	.	Q	.	V	.	.	.
15.383	0.2681	0.76	.	Q	.	V	.	.	.
15.400	0.2691	0.76	.	Q	.	V	.	.	.
15.417	0.2702	0.77	.	Q	.	V	.	.	.

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15.433      0.2712      0.77  .    Q    .        V.         .         .
15.450      0.2723      0.77  .    Q    .        V.         .         .
15.467      0.2734      0.77  .    Q    .        V.         .         .
15.483      0.2744      0.77  .    Q    .        V.         .         .
15.500      0.2755      0.77  .    Q    .        V.         .         .
15.517      0.2765      0.77  .    Q    .        V.         .         .
15.533      0.2776      0.77  .    Q    .        V.         .         .
15.550      0.2787      0.77  .    Q    .        V.         .         .
15.567      0.2797      0.78  .    Q    .        V.         .         .
15.583      0.2808      0.79  .    Q    .         V         .         .
15.600      0.2819      0.80  .    Q    .         V         .         .
15.617      0.2830      0.81  .    Q    .         V         .         .
15.633      0.2842      0.82  .    Q    .         V         .         .
15.650      0.2853      0.83  .    Q    .         V         .         .
15.667      0.2865      0.84  .    Q    .         V         .         .
15.683      0.2876      0.85  .    Q    .         V         .         .
15.700      0.2888      0.86  .    Q    .         V         .         .
15.717      0.2901      0.89  .     Q   .         V         .         .
15.733      0.2914      0.94  .     Q   .         V         .         .
15.750      0.2927      0.99  .     Q   .         V         .         .
15.767      0.2942      1.04  .      Q  .         .V        .         .
15.783      0.2957      1.09  .      Q  .         .V        .         .
15.800      0.2972      1.15  .      Q  .         .V        .         .
15.817      0.2989      1.20  .       Q .         .V        .         .
15.833      0.3006      1.25  .       Q .         .V        .         .
15.850      0.3024      1.30  .       Q .         .V        .         .
15.867      0.3043      1.35  .        Q.         .V        .         .
15.883      0.3062      1.41  .        Q.         .V        .         .
15.900      0.3082      1.47  .        Q.         . V       .         .
15.917      0.3103      1.53  .         Q         . V       .         .
15.933      0.3125      1.59  .         Q         . V       .         .
15.950      0.3148      1.65  .         .Q        . V       .         .
15.967      0.3171      1.70  .         .Q        . V       .         .
15.983      0.3196      1.76  .         .Q        . V       .         .
16.000      0.3221      1.82  .         . Q       . V       .         .
16.017      0.3249      2.08  .         .   Q     .  V      .         .
16.033      0.3284      2.53  .         .      Q  .  V      .         .
16.050      0.3325      2.98  .         .         Q  V      .         .
16.067      0.3373      3.43  .         .         .  QV     .         .
16.083      0.3426      3.89  .         .         .   V Q   .         .
16.100      0.3486      4.34  .         .         .   V    Q.         .
16.117      0.3552      4.79  .         .         .    V    . Q       .
16.133      0.3624      5.24  .         .         .    V    .    Q    .
16.150      0.3705      5.89  .         .         .     V   .         Q
16.167      0.3782      5.58  .         .         .      V  .      Q  .
16.183      0.3851      5.04  .         .         .      V  .   Q     .
16.200      0.3913      4.50  .         .         .      V  Q        .
16.217      0.3968      3.95  .         .         .     Q V .        .
16.233      0.4015      3.41  .         .         .  Q    V .        .
16.250      0.4054      2.87  .         .        Q.       V .        .
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16.267      0.4086      2.32  .          .    Q    .         V.          .
16.283      0.4111      1.78  .          . Q       .         V.          .
16.300      0.4128      1.24  .        Q .         .         V.          .
16.317      0.4142      1.02  .     Q    .         .         V.          .
16.333      0.4156      0.99  .     Q    .         .         V.          .
16.350      0.4169      0.95  .     Q    .         .         V.          .
16.367      0.4181      0.92  .     Q    .         .         V.          .
16.383      0.4194      0.88  .    Q     .         .         V.          .
16.400      0.4205      0.85  .    Q     .         .          V          .
16.417      0.4216      0.81  .    Q     .         .          V          .
16.433      0.4227      0.78  .    Q     .         .          V          .
16.450      0.4237      0.74  .    Q     .         .          V          .
16.467      0.4247      0.73  .   Q      .         .          V          .
16.483      0.4257      0.72  .   Q      .         .          V          .
16.500      0.4267      0.72  .   Q      .         .          V          .
16.517      0.4277      0.71  .   Q      .         .          V          .
16.533      0.4287      0.70  .   Q      .         .          V          .
16.550      0.4296      0.70  .   Q      .         .          V          .
16.567      0.4306      0.69  .   Q      .         .          V          .
16.583      0.4315      0.68  .   Q      .         .          V          .
16.600      0.4325      0.68  .   Q      .         .          V          .
16.617      0.4334      0.67  .   Q      .         .          V          .
16.633      0.4343      0.66  .   Q      .         .          .V         .
16.650      0.4352      0.65  .   Q      .         .          .V         .
16.667      0.4361      0.64  .   Q      .         .          .V         .
16.683      0.4369      0.63  .   Q      .         .          .V         .
16.700      0.4378      0.62  .   Q      .         .          .V         .
16.717      0.4386      0.61  .   Q      .         .          .V         .
16.733      0.4394      0.60  .   Q      .         .          .V         .
16.750      0.4402      0.59  .  Q       .         .          .V         .
16.767      0.4410      0.58  .  Q       .         .          .V         .
16.783      0.4418      0.57  .  Q       .         .          .V         .
16.800      0.4426      0.57  .  Q       .         .          .V         .
16.817      0.4434      0.56  .  Q       .         .          .V         .
16.833      0.4441      0.55  .  Q       .         .          .V         .
16.850      0.4449      0.54  .  Q       .         .          .V         .
16.867      0.4456      0.54  .  Q       .         .          .V         .
16.883      0.4463      0.53  .  Q       .         .          .V         .
16.900      0.4471      0.52  .  Q       .         .          .V         .
16.917      0.4478      0.52  .  Q       .         .          .V         .
16.933      0.4485      0.51  .  Q       .         .          . V        .
16.950      0.4492      0.51  .  Q       .         .          . V        .
16.967      0.4499      0.50  .  Q       .         .          . V        .
16.983      0.4506      0.50  .  Q       .         .          . V        .
17.000      0.4512      0.49  .  Q       .         .          . V        .
17.017      0.4519      0.49  .  Q       .         .          . V        .
17.033      0.4526      0.48  .  Q       .         .          . V        .
17.050      0.4532      0.48  .  Q       .         .          . V        .
17.067      0.4539      0.47  .  Q       .         .          . V        .
17.083      0.4545      0.47  .  Q       .         .          . V        .
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17.100	0.4552	0.47	.	Q	.	.	.	V	.
17.117	0.4558	0.46	.	Q	.	.	.	V	.
17.133	0.4564	0.46	.	Q	.	.	.	V	.
17.150	0.4571	0.46	.	Q	.	.	.	V	.
17.167	0.4577	0.45	.	Q	.	.	.	V	.
17.183	0.4583	0.45	.	Q	.	.	.	V	.
17.200	0.4589	0.45	.	Q	.	.	.	V	.
17.217	0.4595	0.44	.	Q	.	.	.	V	.
17.233	0.4601	0.44	.	Q	.	.	.	V	.
17.250	0.4607	0.44	.	Q	.	.	.	V	.
17.267	0.4613	0.43	.	Q	.	.	.	V	.
17.283	0.4619	0.43	.	Q	.	.	.	V	.
17.300	0.4625	0.43	.	Q	.	.	.	V	.
17.317	0.4631	0.42	.	Q	.	.	.	V	.
17.333	0.4637	0.42	.	Q	.	.	.	V	.
17.350	0.4643	0.42	.	Q	.	.	.	V	.
17.367	0.4648	0.41	.	Q	.	.	.	V	.
17.383	0.4654	0.41	.	Q	.	.	.	V	.
17.400	0.4660	0.41	.	Q	.	.	.	V	.
17.417	0.4665	0.41	.	Q	.	.	.	V	.
17.433	0.4671	0.40	.	Q	.	.	.	V	.
17.450	0.4676	0.40	.	Q	.	.	.	V	.
17.467	0.4682	0.40	.	Q	.	.	.	V	.
17.483	0.4687	0.40	.	Q	.	.	.	V	.
17.500	0.4693	0.39	.	Q	.	.	.	V	.
17.517	0.4698	0.39	.	Q	.	.	.	V	.
17.533	0.4703	0.39	.	Q	.	.	.	V	.
17.550	0.4709	0.39	.	Q	.	.	.	V	.
17.567	0.4714	0.38	.	Q	.	.	.	V	.
17.583	0.4719	0.38	.	Q	.	.	.	V	.
17.600	0.4724	0.38	.	Q	.	.	.	V	.
17.617	0.4730	0.38	.	Q	.	.	.	V	.
17.633	0.4735	0.37	.	Q	.	.	.	V	.
17.650	0.4740	0.37	.	Q	.	.	.	V	.
17.667	0.4745	0.37	.	Q	.	.	.	V	.
17.683	0.4750	0.37	.	Q	.	.	.	V	.
17.700	0.4755	0.37	.	Q	.	.	.	V	.
17.717	0.4760	0.36	.	Q	.	.	.	V	.
17.733	0.4765	0.36	.	Q	.	.	.	V	.
17.750	0.4770	0.36	.	Q	.	.	.	V	.
17.767	0.4775	0.36	.	Q	.	.	.	V	.
17.783	0.4780	0.36	.	Q	.	.	.	V	.
17.800	0.4785	0.35	.	Q	.	.	.	V	.
17.817	0.4790	0.35	.	Q	.	.	.	V	.
17.833	0.4794	0.35	.	Q	.	.	.	V	.
17.850	0.4799	0.35	.	Q	.	.	.	V	.
17.867	0.4804	0.35	.	Q	.	.	.	V	.
17.883	0.4809	0.35	.	Q	.	.	.	V	.
17.900	0.4813	0.34	.	Q	.	.	.	V	.
17.917	0.4818	0.34	.	Q	.	.	.	V	.

17.933	0.4823	0.34	. Q	.	.	.	V	.
17.950	0.4827	0.34	. Q	.	.	.	V	.
17.967	0.4832	0.34	. Q	.	.	.	V	.
17.983	0.4837	0.34	. Q	.	.	.	V	.
18.000	0.4841	0.33	. Q	.	.	.	V	.
18.017	0.4846	0.33	. Q	.	.	.	V	.
18.033	0.4850	0.33	. Q	.	.	.	V	.
18.050	0.4855	0.33	. Q	.	.	.	V	.
18.067	0.4860	0.33	. Q	.	.	.	V	.
18.083	0.4864	0.33	. Q	.	.	.	V	.
18.100	0.4868	0.32	. Q	.	.	.	V	.
18.117	0.4873	0.31	. Q	.	.	.	V	.
18.133	0.4877	0.30	. Q	.	.	.	V	.
18.150	0.4881	0.29	.Q	.	.	.	V	.
18.167	0.4885	0.28	.Q	.	.	.	V	.
18.183	0.4888	0.27	.Q	.	.	.	V	.
18.200	0.4892	0.26	.Q	.	.	.	V	.
18.217	0.4896	0.25	.Q	.	.	.	V	.
18.233	0.4899	0.24	.Q	.	.	.	V	.
18.250	0.4902	0.23	.Q	.	.	.	V	.
18.267	0.4905	0.23	.Q	.	.	.	V	.
18.283	0.4908	0.23	.Q	.	.	.	V	.
18.300	0.4912	0.23	.Q	.	.	.	V	.
18.317	0.4915	0.23	.Q	.	.	.	V	.
18.333	0.4918	0.23	.Q	.	.	.	V	.
18.350	0.4921	0.23	.Q	.	.	.	V	.
18.367	0.4924	0.23	.Q	.	.	.	V	.
18.383	0.4927	0.23	.Q	.	.	.	V	.
18.400	0.4930	0.22	.Q	.	.	.	V	.
18.417	0.4934	0.22	.Q	.	.	.	V	.
18.433	0.4937	0.22	.Q	.	.	.	V	.
18.450	0.4940	0.22	.Q	.	.	.	V	.
18.467	0.4943	0.22	.Q	.	.	.	V	.
18.483	0.4946	0.22	.Q	.	.	.	V	.
18.500	0.4949	0.22	.Q	.	.	.	V	.
18.517	0.4952	0.22	.Q	.	.	.	V	.
18.533	0.4955	0.22	.Q	.	.	.	V	.
18.550	0.4958	0.22	.Q	.	.	.	V	.
18.567	0.4961	0.21	.Q	.	.	.	V	.
18.583	0.4964	0.21	.Q	.	.	.	V	.
18.600	0.4967	0.21	.Q	.	.	.	V	.
18.617	0.4969	0.21	.Q	.	.	.	V	.
18.633	0.4972	0.21	.Q	.	.	.	V	.
18.650	0.4975	0.21	.Q	.	.	.	V	.
18.667	0.4978	0.21	.Q	.	.	.	V	.
18.683	0.4981	0.21	.Q	.	.	.	V	.
18.700	0.4984	0.21	.Q	.	.	.	V	.
18.717	0.4987	0.21	.Q	.	.	.	V	.
18.733	0.4990	0.21	.Q	.	.	.	V	.
18.750	0.4992	0.21	.Q	.	.	.	V	.

18.767	0.4995	0.20	.Q	.	.	.	V	.
18.783	0.4998	0.20	.Q	.	.	.	V	.
18.800	0.5001	0.20	.Q	.	.	.	V	.
18.817	0.5004	0.20	.Q	.	.	.	V	.
18.833	0.5006	0.20	.Q	.	.	.	V	.
18.850	0.5009	0.20	.Q	.	.	.	V	.
18.867	0.5012	0.20	.Q	.	.	.	V	.
18.883	0.5015	0.20	.Q	.	.	.	V	.
18.900	0.5017	0.20	.Q	.	.	.	V	.
18.917	0.5020	0.20	.Q	.	.	.	V	.
18.933	0.5023	0.20	.Q	.	.	.	V	.
18.950	0.5025	0.20	.Q	.	.	.	V	.
18.967	0.5028	0.20	.Q	.	.	.	V	.
18.983	0.5031	0.19	.Q	.	.	.	V	.
19.000	0.5033	0.19	.Q	.	.	.	V	.
19.017	0.5036	0.19	.Q	.	.	.	V	.
19.033	0.5039	0.19	.Q	.	.	.	V	.
19.050	0.5041	0.19	.Q	.	.	.	V	.
19.067	0.5044	0.19	.Q	.	.	.	V	.
19.083	0.5047	0.19	.Q	.	.	.	V	.
19.100	0.5049	0.19	.Q	.	.	.	V	.
19.117	0.5052	0.19	.Q	.	.	.	V	.
19.133	0.5054	0.19	.Q	.	.	.	V	.
19.150	0.5057	0.19	.Q	.	.	.	V	.
19.167	0.5060	0.19	.Q	.	.	.	V	.
19.183	0.5062	0.19	.Q	.	.	.	V	.
19.200	0.5065	0.19	.Q	.	.	.	V	.
19.217	0.5067	0.18	.Q	.	.	.	V	.
19.233	0.5070	0.18	.Q	.	.	.	V	.
19.250	0.5072	0.18	.Q	.	.	.	V	.
19.267	0.5075	0.18	.Q	.	.	.	V	.
19.283	0.5077	0.18	.Q	.	.	.	V	.
19.300	0.5080	0.18	.Q	.	.	.	V	.
19.317	0.5082	0.18	.Q	.	.	.	V	.
19.333	0.5085	0.18	.Q	.	.	.	V	.
19.350	0.5087	0.18	.Q	.	.	.	V	.
19.367	0.5090	0.18	.Q	.	.	.	V	.
19.383	0.5092	0.18	.Q	.	.	.	V	.
19.400	0.5095	0.18	.Q	.	.	.	V	.
19.417	0.5097	0.18	.Q	.	.	.	V	.
19.433	0.5100	0.18	.Q	.	.	.	V	.
19.450	0.5102	0.18	.Q	.	.	.	V	.
19.467	0.5104	0.18	.Q	.	.	.	V	.
19.483	0.5107	0.18	.Q	.	.	.	V	.
19.500	0.5109	0.17	.Q	.	.	.	V	.
19.517	0.5112	0.17	.Q	.	.	.	V	.
19.533	0.5114	0.17	.Q	.	.	.	V	.
19.550	0.5116	0.17	.Q	.	.	.	V	.
19.567	0.5119	0.17	.Q	.	.	.	V	.
19.583	0.5121	0.17	.Q	.	.	.	V	.

19.600	0.5124	0.17	.Q	.	.	.	V	.
19.617	0.5126	0.17	.Q	.	.	.	V	.
19.633	0.5128	0.17	.Q	.	.	.	V	.
19.650	0.5131	0.17	.Q	.	.	.	V	.
19.667	0.5133	0.17	.Q	.	.	.	V	.
19.683	0.5135	0.17	.Q	.	.	.	V	.
19.700	0.5138	0.17	.Q	.	.	.	V	.
19.717	0.5140	0.17	.Q	.	.	.	V	.
19.733	0.5142	0.17	.Q	.	.	.	V	.
19.750	0.5145	0.17	.Q	.	.	.	V	.
19.767	0.5147	0.17	.Q	.	.	.	V	.
19.783	0.5149	0.17	.Q	.	.	.	V	.
19.800	0.5151	0.17	.Q	.	.	.	V	.
19.817	0.5154	0.17	.Q	.	.	.	V	.
19.833	0.5156	0.16	.Q	.	.	.	V	.
19.850	0.5158	0.16	.Q	.	.	.	V	.
19.867	0.5160	0.16	.Q	.	.	.	V	.
19.883	0.5163	0.16	.Q	.	.	.	V	.
19.900	0.5165	0.16	.Q	.	.	.	V	.
19.917	0.5167	0.16	.Q	.	.	.	V	.
19.933	0.5169	0.16	.Q	.	.	.	V	.
19.950	0.5172	0.16	.Q	.	.	.	V	.
19.967	0.5174	0.16	.Q	.	.	.	V	.
19.983	0.5176	0.16	.Q	.	.	.	V	.
20.000	0.5178	0.16	.Q	.	.	.	V	.
20.017	0.5180	0.16	.Q	.	.	.	V	.
20.033	0.5183	0.16	.Q	.	.	.	V	.
20.050	0.5185	0.16	.Q	.	.	.	V	.
20.067	0.5187	0.16	.Q	.	.	.	V	.
20.083	0.5189	0.16	.Q	.	.	.	V	.
20.100	0.5191	0.16	.Q	.	.	.	V	.
20.117	0.5194	0.16	.Q	.	.	.	V	.
20.133	0.5196	0.16	.Q	.	.	.	V	.
20.150	0.5198	0.16	.Q	.	.	.	V	.
20.167	0.5200	0.16	.Q	.	.	.	V	.
20.183	0.5202	0.16	.Q	.	.	.	V	.
20.200	0.5204	0.16	.Q	.	.	.	V	.
20.217	0.5206	0.15	.Q	.	.	.	V	.
20.233	0.5209	0.15	.Q	.	.	.	V	.
20.250	0.5211	0.15	.Q	.	.	.	V	.
20.267	0.5213	0.15	.Q	.	.	.	V	.
20.283	0.5215	0.15	.Q	.	.	.	V	.
20.300	0.5217	0.15	.Q	.	.	.	V	.
20.317	0.5219	0.15	.Q	.	.	.	V	.
20.333	0.5221	0.15	.Q	.	.	.	V	.
20.350	0.5223	0.15	.Q	.	.	.	V	.
20.367	0.5225	0.15	.Q	.	.	.	V	.
20.383	0.5227	0.15	.Q	.	.	.	V	.
20.400	0.5229	0.15	.Q	.	.	.	V	.
20.417	0.5232	0.15	.Q	.	.	.	V	.

20.433	0.5234	0.15	.Q	.	.	.	V	.
20.450	0.5236	0.15	.Q	.	.	.	V	.
20.467	0.5238	0.15	.Q	.	.	.	V	.
20.483	0.5240	0.15	.Q	.	.	.	V	.
20.500	0.5242	0.15	.Q	.	.	.	V	.
20.517	0.5244	0.15	.Q	.	.	.	V	.
20.533	0.5246	0.15	.Q	.	.	.	V	.
20.550	0.5248	0.15	Q	.	.	.	V	.
20.567	0.5250	0.15	Q	.	.	.	V	.
20.583	0.5252	0.15	Q	.	.	.	V	.
20.600	0.5254	0.15	Q	.	.	.	V	.
20.617	0.5256	0.15	Q	.	.	.	V	.
20.633	0.5258	0.15	Q	.	.	.	V	.
20.650	0.5260	0.15	Q	.	.	.	V	.
20.667	0.5262	0.14	Q	.	.	.	V	.
20.683	0.5264	0.14	Q	.	.	.	V	.
20.700	0.5266	0.14	Q	.	.	.	V	.
20.717	0.5268	0.14	Q	.	.	.	V	.
20.733	0.5270	0.14	Q	.	.	.	V	.
20.750	0.5272	0.14	Q	.	.	.	V	.
20.767	0.5274	0.14	Q	.	.	.	V	.
20.783	0.5276	0.14	Q	.	.	.	V	.
20.800	0.5278	0.14	Q	.	.	.	V	.
20.817	0.5280	0.14	Q	.	.	.	V	.
20.833	0.5282	0.14	Q	.	.	.	V	.
20.850	0.5284	0.14	Q	.	.	.	V	.
20.867	0.5285	0.14	Q	.	.	.	V	.
20.883	0.5287	0.14	Q	.	.	.	V	.
20.900	0.5289	0.14	Q	.	.	.	V	.
20.917	0.5291	0.14	Q	.	.	.	V	.
20.933	0.5293	0.14	Q	.	.	.	V	.
20.950	0.5295	0.14	Q	.	.	.	V	.
20.967	0.5297	0.14	Q	.	.	.	V	.
20.983	0.5299	0.14	Q	.	.	.	V	.
21.000	0.5301	0.14	Q	.	.	.	V	.
21.017	0.5303	0.14	Q	.	.	.	V	.
21.033	0.5305	0.14	Q	.	.	.	V	.
21.050	0.5307	0.14	Q	.	.	.	V	.
21.067	0.5308	0.14	Q	.	.	.	V	.
21.083	0.5310	0.14	Q	.	.	.	V	.
21.100	0.5312	0.14	Q	.	.	.	V	.
21.117	0.5314	0.14	Q	.	.	.	V	.
21.133	0.5316	0.14	Q	.	.	.	V	.
21.150	0.5318	0.14	Q	.	.	.	V	.
21.167	0.5320	0.14	Q	.	.	.	V	.
21.183	0.5322	0.14	Q	.	.	.	V	.
21.200	0.5323	0.13	Q	.	.	.	V	.
21.217	0.5325	0.13	Q	.	.	.	V	.
21.233	0.5327	0.13	Q	.	.	.	V	.
21.250	0.5329	0.13	Q	.	.	.	V	.

21.267	0.5331	0.13	Q	.	.	.	V .
21.283	0.5333	0.13	Q	.	.	.	V .
21.300	0.5334	0.13	Q	.	.	.	V .
21.317	0.5336	0.13	Q	.	.	.	V .
21.333	0.5338	0.13	Q	.	.	.	V .
21.350	0.5340	0.13	Q	.	.	.	V .
21.367	0.5342	0.13	Q	.	.	.	V .
21.383	0.5344	0.13	Q	.	.	.	V .
21.400	0.5345	0.13	Q	.	.	.	V .
21.417	0.5347	0.13	Q	.	.	.	V .
21.433	0.5349	0.13	Q	.	.	.	V .
21.450	0.5351	0.13	Q	.	.	.	V .
21.467	0.5353	0.13	Q	.	.	.	V .
21.483	0.5354	0.13	Q	.	.	.	V .
21.500	0.5356	0.13	Q	.	.	.	V .
21.517	0.5358	0.13	Q	.	.	.	V .
21.533	0.5360	0.13	Q	.	.	.	V .
21.550	0.5361	0.13	Q	.	.	.	V .
21.567	0.5363	0.13	Q	.	.	.	V .
21.583	0.5365	0.13	Q	.	.	.	V .
21.600	0.5367	0.13	Q	.	.	.	V .
21.617	0.5369	0.13	Q	.	.	.	V .
21.633	0.5370	0.13	Q	.	.	.	V .
21.650	0.5372	0.13	Q	.	.	.	V .
21.667	0.5374	0.13	Q	.	.	.	V .
21.683	0.5376	0.13	Q	.	.	.	V .
21.700	0.5377	0.13	Q	.	.	.	V .
21.717	0.5379	0.13	Q	.	.	.	V .
21.733	0.5381	0.13	Q	.	.	.	V .
21.750	0.5383	0.13	Q	.	.	.	V .
21.767	0.5384	0.13	Q	.	.	.	V .
21.783	0.5386	0.13	Q	.	.	.	V .
21.800	0.5388	0.13	Q	.	.	.	V .
21.817	0.5390	0.13	Q	.	.	.	V .
21.833	0.5391	0.13	Q	.	.	.	V .
21.850	0.5393	0.12	Q	.	.	.	V .
21.867	0.5395	0.12	Q	.	.	.	V .
21.883	0.5396	0.12	Q	.	.	.	V .
21.900	0.5398	0.12	Q	.	.	.	V .
21.917	0.5400	0.12	Q	.	.	.	V .
21.933	0.5401	0.12	Q	.	.	.	V .
21.950	0.5403	0.12	Q	.	.	.	V .
21.967	0.5405	0.12	Q	.	.	.	V .
21.983	0.5407	0.12	Q	.	.	.	V .
22.000	0.5408	0.12	Q	.	.	.	V .
22.017	0.5410	0.12	Q	.	.	.	V .
22.033	0.5412	0.12	Q	.	.	.	V .
22.050	0.5413	0.12	Q	.	.	.	V .
22.067	0.5415	0.12	Q	.	.	.	V .
22.083	0.5417	0.12	Q	.	.	.	V .

22.100	0.5418	0.12	Q	.	.	.	V .
22.117	0.5420	0.12	Q	.	.	.	V .
22.133	0.5422	0.12	Q	.	.	.	V .
22.150	0.5423	0.12	Q	.	.	.	V .
22.167	0.5425	0.12	Q	.	.	.	V .
22.183	0.5427	0.12	Q	.	.	.	V .
22.200	0.5428	0.12	Q	.	.	.	V .
22.217	0.5430	0.12	Q	.	.	.	V .
22.233	0.5432	0.12	Q	.	.	.	V .
22.250	0.5433	0.12	Q	.	.	.	V .
22.267	0.5435	0.12	Q	.	.	.	V .
22.283	0.5437	0.12	Q	.	.	.	V .
22.300	0.5438	0.12	Q	.	.	.	V .
22.317	0.5440	0.12	Q	.	.	.	V .
22.333	0.5441	0.12	Q	.	.	.	V .
22.350	0.5443	0.12	Q	.	.	.	V .
22.367	0.5445	0.12	Q	.	.	.	V .
22.383	0.5446	0.12	Q	.	.	.	V .
22.400	0.5448	0.12	Q	.	.	.	V .
22.417	0.5450	0.12	Q	.	.	.	V .
22.433	0.5451	0.12	Q	.	.	.	V .
22.450	0.5453	0.12	Q	.	.	.	V .
22.467	0.5454	0.12	Q	.	.	.	V .
22.483	0.5456	0.12	Q	.	.	.	V .
22.500	0.5458	0.12	Q	.	.	.	V .
22.517	0.5459	0.12	Q	.	.	.	V .
22.533	0.5461	0.12	Q	.	.	.	V .
22.550	0.5462	0.12	Q	.	.	.	V.
22.567	0.5464	0.12	Q	.	.	.	V.
22.583	0.5466	0.12	Q	.	.	.	V.
22.600	0.5467	0.12	Q	.	.	.	V.
22.617	0.5469	0.12	Q	.	.	.	V.
22.633	0.5470	0.12	Q	.	.	.	V.
22.650	0.5472	0.11	Q	.	.	.	V.
22.667	0.5474	0.11	Q	.	.	.	V.
22.683	0.5475	0.11	Q	.	.	.	V.
22.700	0.5477	0.11	Q	.	.	.	V.
22.717	0.5478	0.11	Q	.	.	.	V.
22.733	0.5480	0.11	Q	.	.	.	V.
22.750	0.5481	0.11	Q	.	.	.	V.
22.767	0.5483	0.11	Q	.	.	.	V.
22.783	0.5485	0.11	Q	.	.	.	V.
22.800	0.5486	0.11	Q	.	.	.	V.
22.817	0.5488	0.11	Q	.	.	.	V.
22.833	0.5489	0.11	Q	.	.	.	V.
22.850	0.5491	0.11	Q	.	.	.	V.
22.867	0.5492	0.11	Q	.	.	.	V.
22.883	0.5494	0.11	Q	.	.	.	V.
22.900	0.5495	0.11	Q	.	.	.	V.
22.917	0.5497	0.11	Q	.	.	.	V.

22.933	0.5499	0.11	Q	.	.	.	V.
22.950	0.5500	0.11	Q	.	.	.	V.
22.967	0.5502	0.11	Q	.	.	.	V.
22.983	0.5503	0.11	Q	.	.	.	V.
23.000	0.5505	0.11	Q	.	.	.	V.
23.017	0.5506	0.11	Q	.	.	.	V.
23.033	0.5508	0.11	Q	.	.	.	V.
23.050	0.5509	0.11	Q	.	.	.	V.
23.067	0.5511	0.11	Q	.	.	.	V.
23.083	0.5512	0.11	Q	.	.	.	V.
23.100	0.5514	0.11	Q	.	.	.	V.
23.117	0.5515	0.11	Q	.	.	.	V.
23.133	0.5517	0.11	Q	.	.	.	V.
23.150	0.5518	0.11	Q	.	.	.	V.
23.167	0.5520	0.11	Q	.	.	.	V.
23.183	0.5521	0.11	Q	.	.	.	V.
23.200	0.5523	0.11	Q	.	.	.	V.
23.217	0.5524	0.11	Q	.	.	.	V.
23.233	0.5526	0.11	Q	.	.	.	V.
23.250	0.5527	0.11	Q	.	.	.	V.
23.267	0.5529	0.11	Q	.	.	.	V.
23.283	0.5530	0.11	Q	.	.	.	V.
23.300	0.5532	0.11	Q	.	.	.	V.
23.317	0.5533	0.11	Q	.	.	.	V.
23.333	0.5535	0.11	Q	.	.	.	V.
23.350	0.5536	0.11	Q	.	.	.	V.
23.367	0.5538	0.11	Q	.	.	.	V.
23.383	0.5539	0.11	Q	.	.	.	V.
23.400	0.5541	0.11	Q	.	.	.	V.
23.417	0.5542	0.11	Q	.	.	.	V.
23.433	0.5544	0.11	Q	.	.	.	V.
23.450	0.5545	0.11	Q	.	.	.	V.
23.467	0.5547	0.11	Q	.	.	.	V.
23.483	0.5548	0.11	Q	.	.	.	V.
23.500	0.5549	0.11	Q	.	.	.	V.
23.517	0.5551	0.11	Q	.	.	.	V.
23.533	0.5552	0.11	Q	.	.	.	V.
23.550	0.5554	0.11	Q	.	.	.	V.
23.567	0.5555	0.11	Q	.	.	.	V.
23.583	0.5557	0.11	Q	.	.	.	V.
23.600	0.5558	0.11	Q	.	.	.	V.
23.617	0.5560	0.11	Q	.	.	.	V.
23.633	0.5561	0.11	Q	.	.	.	V.
23.650	0.5563	0.10	Q	.	.	.	V.
23.667	0.5564	0.10	Q	.	.	.	V.
23.683	0.5565	0.10	Q	.	.	.	V.
23.700	0.5567	0.10	Q	.	.	.	V.
23.717	0.5568	0.10	Q	.	.	.	V.
23.733	0.5570	0.10	Q	.	.	.	V.
23.750	0.5571	0.10	Q	.	.	.	V.

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  23.767      0.5573      0.10  Q         .         .         .         V.
  23.783      0.5574      0.10  Q         .         .         .         V.
  23.800      0.5575      0.10  Q         .         .         .         V.
  23.817      0.5577      0.10  Q         .         .         .         V.
  23.833      0.5578      0.10  Q         .         .         .         V.
  23.850      0.5580      0.10  Q         .         .         .         V.
  23.867      0.5581      0.10  Q         .         .         .         V.
  23.883      0.5583      0.10  Q         .         .         .         V.
  23.900      0.5584      0.10  Q         .         .         .         V.
  23.917      0.5585      0.10  Q         .         .         .         V.
  23.933      0.5587      0.10  Q         .         .         .         V.
  23.950      0.5588      0.10  Q         .         .         .         V.
  23.967      0.5590      0.10  Q         .         .         .         V.
  23.983      0.5591      0.10  Q         .         .         .         V.
  24.000      0.5592      0.10  Q         .         .         .         V.
  24.017      0.5594      0.10  Q         .         .         .         V.
  24.033      0.5595      0.10  Q         .         .         .         V.
  24.050      0.5597      0.10  Q         .         .         .         V.
  24.067      0.5598      0.09  Q         .         .         .         V.
  24.083      0.5599      0.08  Q         .         .         .         V.
  24.100      0.5600      0.06  Q         .         .         .         V.
  24.117      0.5600      0.05  Q         .         .         .         V.
  24.133      0.5601      0.04  Q         .         .         .         V.
  24.150      0.5601      0.03  Q         .         .         .         V.
  24.167      0.5602      0.02  Q         .         .         .         V.
  24.183      0.5602      0.01  Q         .         .         .         V.
--------------------------------------------------------------------------------
   TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
   (Note: 100% of Peak Flow Rate estimate assumed to have
   an instantaneous time duration)

   Percentile of Estimated              Duration
       Peak Flow Rate                   (minutes)
   ======================             =========
             0%                         1451.0
            10%                          555.0
            20%                          150.0
            30%                           90.0
            40%                           70.0
            50%                           60.0
            60%                           45.0
            70%                           35.0
            80%                           25.0
            90%                           10.0


****************************************************************************
  FLOW PROCESS FROM NODE    405.00 TO NODE    405.00 IS CODE = 3.2
----------------------------------------------------------------------------
  >>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #1<<<<<
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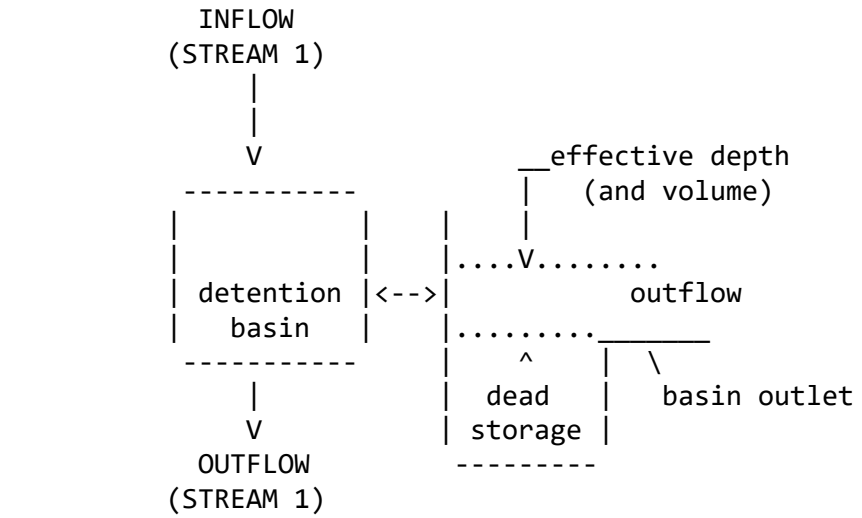

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 1
THROUGH A FLOW-THROUGH DETENTION BASIN
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE(AF) = 0.000
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.30	6.52	0.100
3	1.50	7.61	0.118
4	2.00	9.83	0.175
5	2.50	11.63	0.236
6	3.00	13.19	0.305
7	3.50	14.58	0.366
8	4.00	15.85	0.423
9	4.50	17.03	0.475
10	5.00	18.13	0.517
11	5.50	19.16	0.541

MODIFIED-PULS BASIN ROUTING MODEL RESULTS(1-MINUTE COMPUTATION INTERVALS):
(Note: Computed EFFECTIVE DEPTH and VOLUME are estimated at the clock time;
MEAN OUTFLOW is the average value during the unit interval.)

CLOCK TIME (HRS)	DEAD-STORAGE FILLED(AF)	INFLOW (CFS)	LOSS (CFS)	EFFECTIVE DEPTH(FT)	MEAN OUTFLOW (CFS)	EFFECTIVE VOLUME(AF)
0.017	0.000	0.01	0.00	0.00	0.0	0.000
0.033	0.000	0.03	0.00	0.00	0.0	0.000
0.050	0.000	0.06	0.00	0.00	0.0	0.000
0.067	0.000	0.08	0.00	0.00	0.0	0.000
0.083	0.000	0.10	0.00	0.00	0.0	0.000
0.100	0.000	0.10	0.00	0.01	0.0	0.000
0.117	0.000	0.10	0.00	0.01	0.0	0.001
0.133	0.000	0.10	0.00	0.01	0.0	0.001
0.150	0.000	0.10	0.00	0.01	0.0	0.001
0.167	0.000	0.10	0.00	0.01	0.0	0.001
0.183	0.000	0.10	0.00	0.01	0.1	0.001
0.200	0.000	0.10	0.00	0.01	0.1	0.001
0.217	0.000	0.10	0.00	0.01	0.1	0.001
0.233	0.000	0.10	0.00	0.01	0.1	0.001
0.250	0.000	0.10	0.00	0.01	0.1	0.001
0.267	0.000	0.10	0.00	0.01	0.1	0.001
0.283	0.000	0.10	0.00	0.01	0.1	0.001
0.300	0.000	0.10	0.00	0.02	0.1	0.001
0.317	0.000	0.10	0.00	0.02	0.1	0.001
0.333	0.000	0.10	0.00	0.02	0.1	0.001
0.350	0.000	0.10	0.00	0.02	0.1	0.001
0.367	0.000	0.10	0.00	0.02	0.1	0.001
0.383	0.000	0.10	0.00	0.02	0.1	0.001
0.400	0.000	0.10	0.00	0.02	0.1	0.001
0.417	0.000	0.10	0.00	0.02	0.1	0.001
0.433	0.000	0.10	0.00	0.02	0.1	0.001
0.450	0.000	0.10	0.00	0.02	0.1	0.001
0.467	0.000	0.10	0.00	0.02	0.1	0.001
0.483	0.000	0.10	0.00	0.02	0.1	0.001
0.500	0.000	0.10	0.00	0.02	0.1	0.001
0.517	0.000	0.10	0.00	0.02	0.1	0.001
0.533	0.000	0.10	0.00	0.02	0.1	0.001
0.550	0.000	0.10	0.00	0.02	0.1	0.001
0.567	0.000	0.10	0.00	0.02	0.1	0.001
0.583	0.000	0.10	0.00	0.02	0.1	0.001
0.600	0.000	0.10	0.00	0.02	0.1	0.001
0.617	0.000	0.10	0.00	0.02	0.1	0.001
0.633	0.000	0.10	0.00	0.02	0.1	0.002
0.650	0.000	0.10	0.00	0.02	0.1	0.002
0.667	0.000	0.10	0.00	0.02	0.1	0.002
0.683	0.000	0.10	0.00	0.02	0.1	0.002
0.700	0.000	0.10	0.00	0.02	0.1	0.002
0.717	0.000	0.10	0.00	0.02	0.1	0.002
0.733	0.000	0.10	0.00	0.02	0.1	0.002
0.750	0.000	0.10	0.00	0.02	0.1	0.002

0.767	0.000	0.10	0.00	0.02	0.1	0.002
0.783	0.000	0.10	0.00	0.02	0.1	0.002
0.800	0.000	0.10	0.00	0.02	0.1	0.002
0.817	0.000	0.10	0.00	0.02	0.1	0.002
0.833	0.000	0.10	0.00	0.02	0.1	0.002
0.850	0.000	0.10	0.00	0.02	0.1	0.002
0.867	0.000	0.10	0.00	0.02	0.1	0.002
0.883	0.000	0.10	0.00	0.02	0.1	0.002
0.900	0.000	0.10	0.00	0.02	0.1	0.002
0.917	0.000	0.10	0.00	0.02	0.1	0.002
0.933	0.000	0.10	0.00	0.02	0.1	0.002
0.950	0.000	0.10	0.00	0.02	0.1	0.002
0.967	0.000	0.10	0.00	0.02	0.1	0.002
0.983	0.000	0.10	0.00	0.02	0.1	0.002
1.000	0.000	0.10	0.00	0.02	0.1	0.002
1.017	0.000	0.10	0.00	0.02	0.1	0.002
1.033	0.000	0.10	0.00	0.02	0.1	0.002
1.050	0.000	0.10	0.00	0.02	0.1	0.002
1.067	0.000	0.10	0.00	0.02	0.1	0.002
1.083	0.000	0.10	0.00	0.02	0.1	0.002
1.100	0.000	0.10	0.00	0.02	0.1	0.002
1.117	0.000	0.10	0.00	0.02	0.1	0.002
1.133	0.000	0.10	0.00	0.02	0.1	0.002
1.150	0.000	0.11	0.00	0.02	0.1	0.002
1.167	0.000	0.11	0.00	0.02	0.1	0.002
1.183	0.000	0.11	0.00	0.02	0.1	0.002
1.200	0.000	0.11	0.00	0.02	0.1	0.002
1.217	0.000	0.11	0.00	0.02	0.1	0.002
1.233	0.000	0.11	0.00	0.02	0.1	0.002
1.250	0.000	0.11	0.00	0.02	0.1	0.002
1.267	0.000	0.11	0.00	0.02	0.1	0.002
1.283	0.000	0.11	0.00	0.02	0.1	0.002
1.300	0.000	0.11	0.00	0.02	0.1	0.002
1.317	0.000	0.11	0.00	0.02	0.1	0.002
1.333	0.000	0.11	0.00	0.02	0.1	0.002
1.350	0.000	0.11	0.00	0.02	0.1	0.002
1.367	0.000	0.11	0.00	0.02	0.1	0.002
1.383	0.000	0.11	0.00	0.02	0.1	0.002
1.400	0.000	0.11	0.00	0.02	0.1	0.002
1.417	0.000	0.11	0.00	0.02	0.1	0.002
1.433	0.000	0.11	0.00	0.02	0.1	0.002
1.450	0.000	0.11	0.00	0.02	0.1	0.002
1.467	0.000	0.11	0.00	0.02	0.1	0.002
1.483	0.000	0.11	0.00	0.02	0.1	0.002
1.500	0.000	0.11	0.00	0.02	0.1	0.002
1.517	0.000	0.11	0.00	0.02	0.1	0.002
1.533	0.000	0.11	0.00	0.02	0.1	0.002
1.550	0.000	0.11	0.00	0.02	0.1	0.002
1.567	0.000	0.11	0.00	0.02	0.1	0.002
1.583	0.000	0.11	0.00	0.02	0.1	0.002

1.600	0.000	0.11	0.00	0.02	0.1	0.002
1.617	0.000	0.11	0.00	0.02	0.1	0.002
1.633	0.000	0.11	0.00	0.02	0.1	0.002
1.650	0.000	0.11	0.00	0.02	0.1	0.002
1.667	0.000	0.11	0.00	0.02	0.1	0.002
1.683	0.000	0.11	0.00	0.02	0.1	0.002
1.700	0.000	0.11	0.00	0.02	0.1	0.002
1.717	0.000	0.11	0.00	0.02	0.1	0.002
1.733	0.000	0.11	0.00	0.02	0.1	0.002
1.750	0.000	0.11	0.00	0.02	0.1	0.002
1.767	0.000	0.11	0.00	0.02	0.1	0.002
1.783	0.000	0.11	0.00	0.02	0.1	0.002
1.800	0.000	0.11	0.00	0.02	0.1	0.002
1.817	0.000	0.11	0.00	0.02	0.1	0.002
1.833	0.000	0.11	0.00	0.02	0.1	0.002
1.850	0.000	0.11	0.00	0.02	0.1	0.002
1.867	0.000	0.11	0.00	0.02	0.1	0.002
1.883	0.000	0.11	0.00	0.02	0.1	0.002
1.900	0.000	0.11	0.00	0.02	0.1	0.002
1.917	0.000	0.11	0.00	0.02	0.1	0.002
1.933	0.000	0.11	0.00	0.02	0.1	0.002
1.950	0.000	0.11	0.00	0.02	0.1	0.002
1.967	0.000	0.11	0.00	0.02	0.1	0.002
1.983	0.000	0.11	0.00	0.02	0.1	0.002
2.000	0.000	0.11	0.00	0.02	0.1	0.002
2.017	0.000	0.11	0.00	0.02	0.1	0.002
2.033	0.000	0.11	0.00	0.02	0.1	0.002
2.050	0.000	0.11	0.00	0.02	0.1	0.002
2.067	0.000	0.11	0.00	0.02	0.1	0.002
2.083	0.000	0.11	0.00	0.02	0.1	0.002
2.100	0.000	0.11	0.00	0.02	0.1	0.002
2.117	0.000	0.11	0.00	0.02	0.1	0.002
2.133	0.000	0.11	0.00	0.02	0.1	0.002
2.150	0.000	0.11	0.00	0.02	0.1	0.002
2.167	0.000	0.11	0.00	0.02	0.1	0.002
2.183	0.000	0.11	0.00	0.02	0.1	0.002
2.200	0.000	0.11	0.00	0.02	0.1	0.002
2.217	0.000	0.11	0.00	0.02	0.1	0.002
2.233	0.000	0.11	0.00	0.02	0.1	0.002
2.250	0.000	0.11	0.00	0.02	0.1	0.002
2.267	0.000	0.11	0.00	0.02	0.1	0.002
2.283	0.000	0.11	0.00	0.02	0.1	0.002
2.300	0.000	0.11	0.00	0.02	0.1	0.002
2.317	0.000	0.11	0.00	0.02	0.1	0.002
2.333	0.000	0.11	0.00	0.02	0.1	0.002
2.350	0.000	0.11	0.00	0.02	0.1	0.002
2.367	0.000	0.11	0.00	0.02	0.1	0.002
2.383	0.000	0.11	0.00	0.02	0.1	0.002
2.400	0.000	0.11	0.00	0.02	0.1	0.002
2.417	0.000	0.11	0.00	0.02	0.1	0.002

2.433	0.000	0.11	0.00	0.02	0.1	0.002
2.450	0.000	0.11	0.00	0.02	0.1	0.002
2.467	0.000	0.11	0.00	0.02	0.1	0.002
2.483	0.000	0.11	0.00	0.02	0.1	0.002
2.500	0.000	0.11	0.00	0.02	0.1	0.002
2.517	0.000	0.11	0.00	0.02	0.1	0.002
2.533	0.000	0.11	0.00	0.02	0.1	0.002
2.550	0.000	0.11	0.00	0.02	0.1	0.002
2.567	0.000	0.11	0.00	0.02	0.1	0.002
2.583	0.000	0.11	0.00	0.02	0.1	0.002
2.600	0.000	0.11	0.00	0.02	0.1	0.002
2.617	0.000	0.11	0.00	0.02	0.1	0.002
2.633	0.000	0.11	0.00	0.02	0.1	0.002
2.650	0.000	0.11	0.00	0.02	0.1	0.002
2.667	0.000	0.11	0.00	0.02	0.1	0.002
2.683	0.000	0.11	0.00	0.02	0.1	0.002
2.700	0.000	0.11	0.00	0.02	0.1	0.002
2.717	0.000	0.11	0.00	0.02	0.1	0.002
2.733	0.000	0.11	0.00	0.02	0.1	0.002
2.750	0.000	0.11	0.00	0.02	0.1	0.002
2.767	0.000	0.11	0.00	0.02	0.1	0.002
2.783	0.000	0.11	0.00	0.02	0.1	0.002
2.800	0.000	0.11	0.00	0.02	0.1	0.002
2.817	0.000	0.11	0.00	0.02	0.1	0.002
2.833	0.000	0.11	0.00	0.02	0.1	0.002
2.850	0.000	0.11	0.00	0.02	0.1	0.002
2.867	0.000	0.11	0.00	0.02	0.1	0.002
2.883	0.000	0.11	0.00	0.02	0.1	0.002
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2.950	0.000	0.11	0.00	0.02	0.1	0.002
2.967	0.000	0.11	0.00	0.02	0.1	0.002
2.983	0.000	0.11	0.00	0.02	0.1	0.002
3.000	0.000	0.11	0.00	0.02	0.1	0.002
3.017	0.000	0.11	0.00	0.02	0.1	0.002
3.033	0.000	0.11	0.00	0.02	0.1	0.002
3.050	0.000	0.11	0.00	0.02	0.1	0.002
3.067	0.000	0.11	0.00	0.02	0.1	0.002
3.083	0.000	0.11	0.00	0.02	0.1	0.002
3.100	0.000	0.11	0.00	0.02	0.1	0.002
3.117	0.000	0.11	0.00	0.02	0.1	0.002
3.133	0.000	0.12	0.00	0.02	0.1	0.002
3.150	0.000	0.12	0.00	0.02	0.1	0.002
3.167	0.000	0.12	0.00	0.02	0.1	0.002
3.183	0.000	0.12	0.00	0.02	0.1	0.002
3.200	0.000	0.12	0.00	0.02	0.1	0.002
3.217	0.000	0.12	0.00	0.02	0.1	0.002
3.233	0.000	0.12	0.00	0.02	0.1	0.002
3.250	0.000	0.12	0.00	0.02	0.1	0.002

3.267	0.000	0.12	0.00	0.02	0.1	0.002
3.283	0.000	0.12	0.00	0.02	0.1	0.002
3.300	0.000	0.12	0.00	0.02	0.1	0.002
3.317	0.000	0.12	0.00	0.02	0.1	0.002
3.333	0.000	0.12	0.00	0.02	0.1	0.002
3.350	0.000	0.12	0.00	0.02	0.1	0.002
3.367	0.000	0.12	0.00	0.02	0.1	0.002
3.383	0.000	0.12	0.00	0.02	0.1	0.002
3.400	0.000	0.12	0.00	0.02	0.1	0.002
3.417	0.000	0.12	0.00	0.02	0.1	0.002
3.433	0.000	0.12	0.00	0.02	0.1	0.002
3.450	0.000	0.12	0.00	0.02	0.1	0.002
3.467	0.000	0.12	0.00	0.02	0.1	0.002
3.483	0.000	0.12	0.00	0.02	0.1	0.002
3.500	0.000	0.12	0.00	0.02	0.1	0.002
3.517	0.000	0.12	0.00	0.02	0.1	0.002
3.533	0.000	0.12	0.00	0.02	0.1	0.002
3.550	0.000	0.12	0.00	0.02	0.1	0.002
3.567	0.000	0.12	0.00	0.02	0.1	0.002
3.583	0.000	0.12	0.00	0.02	0.1	0.002
3.600	0.000	0.12	0.00	0.02	0.1	0.002
3.617	0.000	0.12	0.00	0.02	0.1	0.002
3.633	0.000	0.12	0.00	0.02	0.1	0.002
3.650	0.000	0.12	0.00	0.02	0.1	0.002
3.667	0.000	0.12	0.00	0.02	0.1	0.002
3.683	0.000	0.12	0.00	0.02	0.1	0.002
3.700	0.000	0.12	0.00	0.02	0.1	0.002
3.717	0.000	0.12	0.00	0.02	0.1	0.002
3.733	0.000	0.12	0.00	0.02	0.1	0.002
3.750	0.000	0.12	0.00	0.02	0.1	0.002
3.767	0.000	0.12	0.00	0.02	0.1	0.002
3.783	0.000	0.12	0.00	0.02	0.1	0.002
3.800	0.000	0.12	0.00	0.02	0.1	0.002
3.817	0.000	0.12	0.00	0.02	0.1	0.002
3.833	0.000	0.12	0.00	0.02	0.1	0.002
3.850	0.000	0.12	0.00	0.02	0.1	0.002
3.867	0.000	0.12	0.00	0.02	0.1	0.002
3.883	0.000	0.12	0.00	0.02	0.1	0.002
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3.917	0.000	0.12	0.00	0.02	0.1	0.002
3.933	0.000	0.12	0.00	0.02	0.1	0.002
3.950	0.000	0.12	0.00	0.02	0.1	0.002
3.967	0.000	0.12	0.00	0.02	0.1	0.002
3.983	0.000	0.12	0.00	0.02	0.1	0.002
4.000	0.000	0.12	0.00	0.02	0.1	0.002
4.017	0.000	0.12	0.00	0.02	0.1	0.002
4.033	0.000	0.12	0.00	0.02	0.1	0.002
4.050	0.000	0.12	0.00	0.02	0.1	0.002
4.067	0.000	0.12	0.00	0.02	0.1	0.002
4.083	0.000	0.12	0.00	0.02	0.1	0.002

4.100	0.000	0.12	0.00	0.02	0.1	0.002
4.117	0.000	0.12	0.00	0.02	0.1	0.002
4.133	0.000	0.12	0.00	0.02	0.1	0.002
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4.217	0.000	0.12	0.00	0.02	0.1	0.002
4.233	0.000	0.12	0.00	0.02	0.1	0.002
4.250	0.000	0.12	0.00	0.02	0.1	0.002
4.267	0.000	0.12	0.00	0.02	0.1	0.002
4.283	0.000	0.12	0.00	0.02	0.1	0.002
4.300	0.000	0.12	0.00	0.02	0.1	0.002
4.317	0.000	0.12	0.00	0.02	0.1	0.002
4.333	0.000	0.12	0.00	0.02	0.1	0.002
4.350	0.000	0.12	0.00	0.02	0.1	0.002
4.367	0.000	0.12	0.00	0.02	0.1	0.002
4.383	0.000	0.12	0.00	0.02	0.1	0.002
4.400	0.000	0.12	0.00	0.02	0.1	0.002
4.417	0.000	0.12	0.00	0.02	0.1	0.002
4.433	0.000	0.12	0.00	0.02	0.1	0.002
4.450	0.000	0.12	0.00	0.02	0.1	0.002
4.467	0.000	0.12	0.00	0.02	0.1	0.002
4.483	0.000	0.12	0.00	0.02	0.1	0.002
4.500	0.000	0.12	0.00	0.02	0.1	0.002
4.517	0.000	0.12	0.00	0.02	0.1	0.002
4.533	0.000	0.12	0.00	0.02	0.1	0.002
4.550	0.000	0.12	0.00	0.02	0.1	0.002
4.567	0.000	0.12	0.00	0.02	0.1	0.002
4.583	0.000	0.12	0.00	0.02	0.1	0.002
4.600	0.000	0.12	0.00	0.02	0.1	0.002
4.617	0.000	0.12	0.00	0.02	0.1	0.002
4.633	0.000	0.12	0.00	0.02	0.1	0.002
4.650	0.000	0.12	0.00	0.02	0.1	0.002
4.667	0.000	0.12	0.00	0.02	0.1	0.002
4.683	0.000	0.12	0.00	0.02	0.1	0.002
4.700	0.000	0.12	0.00	0.02	0.1	0.002
4.717	0.000	0.12	0.00	0.02	0.1	0.002
4.733	0.000	0.12	0.00	0.02	0.1	0.002
4.750	0.000	0.13	0.00	0.02	0.1	0.002
4.767	0.000	0.13	0.00	0.02	0.1	0.002
4.783	0.000	0.13	0.00	0.02	0.1	0.002
4.800	0.000	0.13	0.00	0.02	0.1	0.002
4.817	0.000	0.13	0.00	0.02	0.1	0.002
4.833	0.000	0.13	0.00	0.02	0.1	0.002
4.850	0.000	0.13	0.00	0.02	0.1	0.002
4.867	0.000	0.13	0.00	0.02	0.1	0.002
4.883	0.000	0.13	0.00	0.02	0.1	0.002
4.900	0.000	0.13	0.00	0.02	0.1	0.002
4.917	0.000	0.13	0.00	0.02	0.1	0.002

4.933	0.000	0.13	0.00	0.02	0.1	0.002
4.950	0.000	0.13	0.00	0.02	0.1	0.002
4.967	0.000	0.13	0.00	0.03	0.1	0.002
4.983	0.000	0.13	0.00	0.03	0.1	0.002
5.000	0.000	0.13	0.00	0.03	0.1	0.002
5.017	0.000	0.13	0.00	0.03	0.1	0.002
5.033	0.000	0.13	0.00	0.03	0.1	0.002
5.050	0.000	0.13	0.00	0.03	0.1	0.002
5.067	0.000	0.13	0.00	0.03	0.1	0.002
5.083	0.000	0.13	0.00	0.03	0.1	0.002
5.100	0.000	0.13	0.00	0.03	0.1	0.002
5.117	0.000	0.13	0.00	0.03	0.1	0.002
5.133	0.000	0.13	0.00	0.03	0.1	0.002
5.150	0.000	0.13	0.00	0.03	0.1	0.002
5.167	0.000	0.13	0.00	0.03	0.1	0.002
5.183	0.000	0.13	0.00	0.03	0.1	0.002
5.200	0.000	0.13	0.00	0.03	0.1	0.002
5.217	0.000	0.13	0.00	0.03	0.1	0.002
5.233	0.000	0.13	0.00	0.03	0.1	0.002
5.250	0.000	0.13	0.00	0.03	0.1	0.002
5.267	0.000	0.13	0.00	0.03	0.1	0.002
5.283	0.000	0.13	0.00	0.03	0.1	0.002
5.300	0.000	0.13	0.00	0.03	0.1	0.002
5.317	0.000	0.13	0.00	0.03	0.1	0.002
5.333	0.000	0.13	0.00	0.03	0.1	0.002
5.350	0.000	0.13	0.00	0.03	0.1	0.002
5.367	0.000	0.13	0.00	0.03	0.1	0.002
5.383	0.000	0.13	0.00	0.03	0.1	0.002
5.400	0.000	0.13	0.00	0.03	0.1	0.002
5.417	0.000	0.13	0.00	0.03	0.1	0.002
5.433	0.000	0.13	0.00	0.03	0.1	0.002
5.450	0.000	0.13	0.00	0.03	0.1	0.002
5.467	0.000	0.13	0.00	0.03	0.1	0.002
5.483	0.000	0.13	0.00	0.03	0.1	0.002
5.500	0.000	0.13	0.00	0.03	0.1	0.002
5.517	0.000	0.13	0.00	0.03	0.1	0.002
5.533	0.000	0.13	0.00	0.03	0.1	0.002
5.550	0.000	0.13	0.00	0.03	0.1	0.002
5.567	0.000	0.13	0.00	0.03	0.1	0.002
5.583	0.000	0.13	0.00	0.03	0.1	0.002
5.600	0.000	0.13	0.00	0.03	0.1	0.002
5.617	0.000	0.13	0.00	0.03	0.1	0.002
5.633	0.000	0.13	0.00	0.03	0.1	0.002
5.650	0.000	0.13	0.00	0.03	0.1	0.002
5.667	0.000	0.13	0.00	0.03	0.1	0.002
5.683	0.000	0.13	0.00	0.03	0.1	0.002
5.700	0.000	0.13	0.00	0.03	0.1	0.002
5.717	0.000	0.13	0.00	0.03	0.1	0.002
5.733	0.000	0.13	0.00	0.03	0.1	0.002
5.750	0.000	0.13	0.00	0.03	0.1	0.002

5.767	0.000	0.13	0.00	0.03	0.1	0.002
5.783	0.000	0.13	0.00	0.03	0.1	0.002
5.800	0.000	0.13	0.00	0.03	0.1	0.002
5.817	0.000	0.13	0.00	0.03	0.1	0.002
5.833	0.000	0.13	0.00	0.03	0.1	0.002
5.850	0.000	0.13	0.00	0.03	0.1	0.002
5.867	0.000	0.13	0.00	0.03	0.1	0.002
5.883	0.000	0.13	0.00	0.03	0.1	0.002
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5.983	0.000	0.13	0.00	0.03	0.1	0.002
6.000	0.000	0.13	0.00	0.03	0.1	0.002
6.017	0.000	0.14	0.00	0.03	0.1	0.002
6.033	0.000	0.14	0.00	0.03	0.1	0.002
6.050	0.000	0.14	0.00	0.03	0.1	0.002
6.067	0.000	0.14	0.00	0.03	0.1	0.002
6.083	0.000	0.14	0.00	0.03	0.1	0.002
6.100	0.000	0.14	0.00	0.03	0.1	0.002
6.117	0.000	0.14	0.00	0.03	0.1	0.002
6.133	0.000	0.14	0.00	0.03	0.1	0.002
6.150	0.000	0.14	0.00	0.03	0.1	0.002
6.167	0.000	0.14	0.00	0.03	0.1	0.002
6.183	0.000	0.14	0.00	0.03	0.1	0.002
6.200	0.000	0.14	0.00	0.03	0.1	0.002
6.217	0.000	0.14	0.00	0.03	0.1	0.002
6.233	0.000	0.14	0.00	0.03	0.1	0.002
6.250	0.000	0.14	0.00	0.03	0.1	0.002
6.267	0.000	0.14	0.00	0.03	0.1	0.002
6.283	0.000	0.14	0.00	0.03	0.1	0.002
6.300	0.000	0.14	0.00	0.03	0.1	0.002
6.317	0.000	0.14	0.00	0.03	0.1	0.002
6.333	0.000	0.14	0.00	0.03	0.1	0.002
6.350	0.000	0.14	0.00	0.03	0.1	0.002
6.367	0.000	0.14	0.00	0.03	0.1	0.002
6.383	0.000	0.14	0.00	0.03	0.1	0.002
6.400	0.000	0.14	0.00	0.03	0.1	0.002
6.417	0.000	0.14	0.00	0.03	0.1	0.002
6.433	0.000	0.14	0.00	0.03	0.1	0.002
6.450	0.000	0.14	0.00	0.03	0.1	0.002
6.467	0.000	0.14	0.00	0.03	0.1	0.002
6.483	0.000	0.14	0.00	0.03	0.1	0.002
6.500	0.000	0.14	0.00	0.03	0.1	0.002
6.517	0.000	0.14	0.00	0.03	0.1	0.002
6.533	0.000	0.14	0.00	0.03	0.1	0.002
6.550	0.000	0.14	0.00	0.03	0.1	0.002
6.567	0.000	0.14	0.00	0.03	0.1	0.002
6.583	0.000	0.14	0.00	0.03	0.1	0.002

6.600	0.000	0.14	0.00	0.03	0.1	0.002
6.617	0.000	0.14	0.00	0.03	0.1	0.002
6.633	0.000	0.14	0.00	0.03	0.1	0.002
6.650	0.000	0.14	0.00	0.03	0.1	0.002
6.667	0.000	0.14	0.00	0.03	0.1	0.002
6.683	0.000	0.14	0.00	0.03	0.1	0.002
6.700	0.000	0.14	0.00	0.03	0.1	0.002
6.717	0.000	0.14	0.00	0.03	0.1	0.002
6.733	0.000	0.14	0.00	0.03	0.1	0.002
6.750	0.000	0.14	0.00	0.03	0.1	0.002
6.767	0.000	0.14	0.00	0.03	0.1	0.002
6.783	0.000	0.14	0.00	0.03	0.1	0.002
6.800	0.000	0.14	0.00	0.03	0.1	0.002
6.817	0.000	0.14	0.00	0.03	0.1	0.002
6.833	0.000	0.14	0.00	0.03	0.1	0.002
6.850	0.000	0.14	0.00	0.03	0.1	0.002
6.867	0.000	0.14	0.00	0.03	0.1	0.002
6.883	0.000	0.14	0.00	0.03	0.1	0.002
6.900	0.000	0.14	0.00	0.03	0.1	0.002
6.917	0.000	0.14	0.00	0.03	0.1	0.002
6.933	0.000	0.14	0.00	0.03	0.1	0.002
6.950	0.000	0.14	0.00	0.03	0.1	0.002
6.967	0.000	0.14	0.00	0.03	0.1	0.002
6.983	0.000	0.14	0.00	0.03	0.1	0.002
7.000	0.000	0.14	0.00	0.03	0.1	0.002
7.017	0.000	0.14	0.00	0.03	0.1	0.002
7.033	0.000	0.14	0.00	0.03	0.1	0.002
7.050	0.000	0.14	0.00	0.03	0.1	0.002
7.067	0.000	0.14	0.00	0.03	0.1	0.002
7.083	0.000	0.14	0.00	0.03	0.1	0.002
7.100	0.000	0.14	0.00	0.03	0.1	0.002
7.117	0.000	0.15	0.00	0.03	0.1	0.002
7.133	0.000	0.15	0.00	0.03	0.1	0.002
7.150	0.000	0.15	0.00	0.03	0.1	0.002
7.167	0.000	0.15	0.00	0.03	0.1	0.002
7.183	0.000	0.15	0.00	0.03	0.1	0.002
7.200	0.000	0.15	0.00	0.03	0.1	0.002
7.217	0.000	0.15	0.00	0.03	0.1	0.002
7.233	0.000	0.15	0.00	0.03	0.1	0.002
7.250	0.000	0.15	0.00	0.03	0.1	0.002
7.267	0.000	0.15	0.00	0.03	0.1	0.002
7.283	0.000	0.15	0.00	0.03	0.1	0.002
7.300	0.000	0.15	0.00	0.03	0.1	0.002
7.317	0.000	0.15	0.00	0.03	0.1	0.002
7.333	0.000	0.15	0.00	0.03	0.1	0.002
7.350	0.000	0.15	0.00	0.03	0.1	0.002
7.367	0.000	0.15	0.00	0.03	0.1	0.002
7.383	0.000	0.15	0.00	0.03	0.1	0.002
7.400	0.000	0.15	0.00	0.03	0.1	0.002
7.417	0.000	0.15	0.00	0.03	0.1	0.002

7.433	0.000	0.15	0.00	0.03	0.1	0.002
7.450	0.000	0.15	0.00	0.03	0.1	0.002
7.467	0.000	0.15	0.00	0.03	0.1	0.002
7.483	0.000	0.15	0.00	0.03	0.1	0.002
7.500	0.000	0.15	0.00	0.03	0.1	0.002
7.517	0.000	0.15	0.00	0.03	0.1	0.002
7.533	0.000	0.15	0.00	0.03	0.1	0.002
7.550	0.000	0.15	0.00	0.03	0.1	0.002
7.567	0.000	0.15	0.00	0.03	0.1	0.002
7.583	0.000	0.15	0.00	0.03	0.1	0.002
7.600	0.000	0.15	0.00	0.03	0.1	0.002
7.617	0.000	0.15	0.00	0.03	0.1	0.002
7.633	0.000	0.15	0.00	0.03	0.1	0.002
7.650	0.000	0.15	0.00	0.03	0.1	0.002
7.667	0.000	0.15	0.00	0.03	0.1	0.002
7.683	0.000	0.15	0.00	0.03	0.1	0.002
7.700	0.000	0.15	0.00	0.03	0.1	0.002
7.717	0.000	0.15	0.00	0.03	0.1	0.002
7.733	0.000	0.15	0.00	0.03	0.1	0.002
7.750	0.000	0.15	0.00	0.03	0.1	0.002
7.767	0.000	0.15	0.00	0.03	0.2	0.002
7.783	0.000	0.15	0.00	0.03	0.2	0.002
7.800	0.000	0.15	0.00	0.03	0.2	0.002
7.817	0.000	0.15	0.00	0.03	0.2	0.002
7.833	0.000	0.15	0.00	0.03	0.2	0.002
7.850	0.000	0.15	0.00	0.03	0.2	0.002
7.867	0.000	0.15	0.00	0.03	0.2	0.002
7.883	0.000	0.15	0.00	0.03	0.2	0.002
7.900	0.000	0.15	0.00	0.03	0.2	0.002
7.917	0.000	0.15	0.00	0.03	0.2	0.002
7.933	0.000	0.15	0.00	0.03	0.2	0.002
7.950	0.000	0.15	0.00	0.03	0.2	0.002
7.967	0.000	0.15	0.00	0.03	0.2	0.002
7.983	0.000	0.15	0.00	0.03	0.2	0.002
8.000	0.000	0.15	0.00	0.03	0.2	0.002
8.017	0.000	0.16	0.00	0.03	0.2	0.002
8.033	0.000	0.16	0.00	0.03	0.2	0.002
8.050	0.000	0.16	0.00	0.03	0.2	0.002
8.067	0.000	0.16	0.00	0.03	0.2	0.002
8.083	0.000	0.16	0.00	0.03	0.2	0.002
8.100	0.000	0.16	0.00	0.03	0.2	0.002
8.117	0.000	0.16	0.00	0.03	0.2	0.002
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8.150	0.000	0.16	0.00	0.03	0.2	0.002
8.167	0.000	0.16	0.00	0.03	0.2	0.002
8.183	0.000	0.16	0.00	0.03	0.2	0.002
8.200	0.000	0.16	0.00	0.03	0.2	0.002
8.217	0.000	0.16	0.00	0.03	0.2	0.002
8.233	0.000	0.16	0.00	0.03	0.2	0.002
8.250	0.000	0.16	0.00	0.03	0.2	0.002

8.267	0.000	0.16	0.00	0.03	0.2	0.002
8.283	0.000	0.16	0.00	0.03	0.2	0.002
8.300	0.000	0.16	0.00	0.03	0.2	0.002
8.317	0.000	0.16	0.00	0.03	0.2	0.002
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8.367	0.000	0.16	0.00	0.03	0.2	0.002
8.383	0.000	0.16	0.00	0.03	0.2	0.002
8.400	0.000	0.16	0.00	0.03	0.2	0.002
8.417	0.000	0.16	0.00	0.03	0.2	0.002
8.433	0.000	0.16	0.00	0.03	0.2	0.002
8.450	0.000	0.16	0.00	0.03	0.2	0.002
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8.500	0.000	0.16	0.00	0.03	0.2	0.002
8.517	0.000	0.16	0.00	0.03	0.2	0.002
8.533	0.000	0.16	0.00	0.03	0.2	0.002
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8.567	0.000	0.16	0.00	0.03	0.2	0.002
8.583	0.000	0.16	0.00	0.03	0.2	0.002
8.600	0.000	0.16	0.00	0.03	0.2	0.002
8.617	0.000	0.16	0.00	0.03	0.2	0.002
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8.683	0.000	0.16	0.00	0.03	0.2	0.002
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8.900	0.000	0.17	0.00	0.03	0.2	0.003
8.917	0.000	0.17	0.00	0.03	0.2	0.003
8.933	0.000	0.17	0.00	0.03	0.2	0.003
8.950	0.000	0.17	0.00	0.03	0.2	0.003
8.967	0.000	0.17	0.00	0.03	0.2	0.003
8.983	0.000	0.17	0.00	0.03	0.2	0.003
9.000	0.000	0.17	0.00	0.03	0.2	0.003
9.017	0.000	0.17	0.00	0.03	0.2	0.003
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9.283	0.000	0.17	0.00	0.03	0.2	0.003
9.300	0.000	0.17	0.00	0.03	0.2	0.003
9.317	0.000	0.17	0.00	0.03	0.2	0.003
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9.350	0.000	0.17	0.00	0.03	0.2	0.003
9.367	0.000	0.17	0.00	0.03	0.2	0.003
9.383	0.000	0.17	0.00	0.03	0.2	0.003
9.400	0.000	0.17	0.00	0.03	0.2	0.003
9.417	0.000	0.17	0.00	0.03	0.2	0.003
9.433	0.000	0.18	0.00	0.03	0.2	0.003
9.450	0.000	0.18	0.00	0.03	0.2	0.003
9.467	0.000	0.18	0.00	0.03	0.2	0.003
9.483	0.000	0.18	0.00	0.03	0.2	0.003
9.500	0.000	0.18	0.00	0.03	0.2	0.003
9.517	0.000	0.18	0.00	0.03	0.2	0.003
9.533	0.000	0.18	0.00	0.03	0.2	0.003
9.550	0.000	0.18	0.00	0.03	0.2	0.003
9.567	0.000	0.18	0.00	0.03	0.2	0.003
9.583	0.000	0.18	0.00	0.03	0.2	0.003
9.600	0.000	0.18	0.00	0.03	0.2	0.003
9.617	0.000	0.18	0.00	0.04	0.2	0.003
9.633	0.000	0.18	0.00	0.04	0.2	0.003
9.650	0.000	0.18	0.00	0.04	0.2	0.003
9.667	0.000	0.18	0.00	0.04	0.2	0.003
9.683	0.000	0.18	0.00	0.04	0.2	0.003
9.700	0.000	0.18	0.00	0.04	0.2	0.003
9.717	0.000	0.18	0.00	0.04	0.2	0.003
9.733	0.000	0.18	0.00	0.04	0.2	0.003
9.750	0.000	0.18	0.00	0.04	0.2	0.003
9.767	0.000	0.18	0.00	0.04	0.2	0.003
9.783	0.000	0.18	0.00	0.04	0.2	0.003
9.800	0.000	0.18	0.00	0.04	0.2	0.003
9.817	0.000	0.18	0.00	0.04	0.2	0.003
9.833	0.000	0.18	0.00	0.04	0.2	0.003
9.850	0.000	0.18	0.00	0.04	0.2	0.003
9.867	0.000	0.18	0.00	0.04	0.2	0.003
9.883	0.000	0.18	0.00	0.04	0.2	0.003
9.900	0.000	0.18	0.00	0.04	0.2	0.003
9.917	0.000	0.18	0.00	0.04	0.2	0.003

9.933	0.000	0.18	0.00	0.04	0.2	0.003
9.950	0.000	0.18	0.00	0.04	0.2	0.003
9.967	0.000	0.18	0.00	0.04	0.2	0.003
9.983	0.000	0.19	0.00	0.04	0.2	0.003
10.000	0.000	0.19	0.00	0.04	0.2	0.003
10.017	0.000	0.19	0.00	0.04	0.2	0.003
10.033	0.000	0.19	0.00	0.04	0.2	0.003
10.050	0.000	0.19	0.00	0.04	0.2	0.003
10.067	0.000	0.19	0.00	0.04	0.2	0.003
10.083	0.000	0.19	0.00	0.04	0.2	0.003
10.100	0.000	0.19	0.00	0.04	0.2	0.003
10.117	0.000	0.19	0.00	0.04	0.2	0.003
10.133	0.000	0.19	0.00	0.04	0.2	0.003
10.150	0.000	0.19	0.00	0.04	0.2	0.003
10.167	0.000	0.19	0.00	0.04	0.2	0.003
10.183	0.000	0.19	0.00	0.04	0.2	0.003
10.200	0.000	0.19	0.00	0.04	0.2	0.003
10.217	0.000	0.19	0.00	0.04	0.2	0.003
10.233	0.000	0.19	0.00	0.04	0.2	0.003
10.250	0.000	0.19	0.00	0.04	0.2	0.003
10.267	0.000	0.19	0.00	0.04	0.2	0.003
10.283	0.000	0.19	0.00	0.04	0.2	0.003
10.300	0.000	0.19	0.00	0.04	0.2	0.003
10.317	0.000	0.19	0.00	0.04	0.2	0.003
10.333	0.000	0.19	0.00	0.04	0.2	0.003
10.350	0.000	0.19	0.00	0.04	0.2	0.003
10.367	0.000	0.19	0.00	0.04	0.2	0.003
10.383	0.000	0.19	0.00	0.04	0.2	0.003
10.400	0.000	0.19	0.00	0.04	0.2	0.003
10.417	0.000	0.19	0.00	0.04	0.2	0.003
10.433	0.000	0.19	0.00	0.04	0.2	0.003
10.450	0.000	0.19	0.00	0.04	0.2	0.003
10.467	0.000	0.20	0.00	0.04	0.2	0.003
10.483	0.000	0.20	0.00	0.04	0.2	0.003
10.500	0.000	0.20	0.00	0.04	0.2	0.003
10.517	0.000	0.20	0.00	0.04	0.2	0.003
10.533	0.000	0.20	0.00	0.04	0.2	0.003
10.550	0.000	0.20	0.00	0.04	0.2	0.003
10.567	0.000	0.20	0.00	0.04	0.2	0.003
10.583	0.000	0.20	0.00	0.04	0.2	0.003
10.600	0.000	0.20	0.00	0.04	0.2	0.003
10.617	0.000	0.20	0.00	0.04	0.2	0.003
10.633	0.000	0.20	0.00	0.04	0.2	0.003
10.650	0.000	0.20	0.00	0.04	0.2	0.003
10.667	0.000	0.20	0.00	0.04	0.2	0.003
10.683	0.000	0.20	0.00	0.04	0.2	0.003
10.700	0.000	0.20	0.00	0.04	0.2	0.003
10.717	0.000	0.20	0.00	0.04	0.2	0.003
10.733	0.000	0.20	0.00	0.04	0.2	0.003
10.750	0.000	0.20	0.00	0.04	0.2	0.003

10.767	0.000	0.20	0.00	0.04	0.2	0.003
10.783	0.000	0.20	0.00	0.04	0.2	0.003
10.800	0.000	0.20	0.00	0.04	0.2	0.003
10.817	0.000	0.20	0.00	0.04	0.2	0.003
10.833	0.000	0.20	0.00	0.04	0.2	0.003
10.850	0.000	0.20	0.00	0.04	0.2	0.003
10.867	0.000	0.20	0.00	0.04	0.2	0.003
10.883	0.000	0.20	0.00	0.04	0.2	0.003
10.900	0.000	0.20	0.00	0.04	0.2	0.003
10.917	0.000	0.21	0.00	0.04	0.2	0.003
10.933	0.000	0.21	0.00	0.04	0.2	0.003
10.950	0.000	0.21	0.00	0.04	0.2	0.003
10.967	0.000	0.21	0.00	0.04	0.2	0.003
10.983	0.000	0.21	0.00	0.04	0.2	0.003
11.000	0.000	0.21	0.00	0.04	0.2	0.003
11.017	0.000	0.21	0.00	0.04	0.2	0.003
11.033	0.000	0.21	0.00	0.04	0.2	0.003
11.050	0.000	0.21	0.00	0.04	0.2	0.003
11.067	0.000	0.21	0.00	0.04	0.2	0.003
11.083	0.000	0.21	0.00	0.04	0.2	0.003
11.100	0.000	0.21	0.00	0.04	0.2	0.003
11.117	0.000	0.21	0.00	0.04	0.2	0.003
11.133	0.000	0.21	0.00	0.04	0.2	0.003
11.150	0.000	0.21	0.00	0.04	0.2	0.003
11.167	0.000	0.21	0.00	0.04	0.2	0.003
11.183	0.000	0.21	0.00	0.04	0.2	0.003
11.200	0.000	0.21	0.00	0.04	0.2	0.003
11.217	0.000	0.21	0.00	0.04	0.2	0.003
11.233	0.000	0.21	0.00	0.04	0.2	0.003
11.250	0.000	0.21	0.00	0.04	0.2	0.003
11.267	0.000	0.21	0.00	0.04	0.2	0.003
11.283	0.000	0.22	0.00	0.04	0.2	0.003
11.300	0.000	0.22	0.00	0.04	0.2	0.003
11.317	0.000	0.22	0.00	0.04	0.2	0.003
11.333	0.000	0.22	0.00	0.04	0.2	0.003
11.350	0.000	0.22	0.00	0.04	0.2	0.003
11.367	0.000	0.22	0.00	0.04	0.2	0.003
11.383	0.000	0.22	0.00	0.04	0.2	0.003
11.400	0.000	0.22	0.00	0.04	0.2	0.003
11.417	0.000	0.22	0.00	0.04	0.2	0.003
11.433	0.000	0.22	0.00	0.04	0.2	0.003
11.450	0.000	0.22	0.00	0.04	0.2	0.003
11.467	0.000	0.22	0.00	0.04	0.2	0.003
11.483	0.000	0.22	0.00	0.04	0.2	0.003
11.500	0.000	0.22	0.00	0.04	0.2	0.003
11.517	0.000	0.22	0.00	0.04	0.2	0.003
11.533	0.000	0.22	0.00	0.04	0.2	0.003
11.550	0.000	0.22	0.00	0.04	0.2	0.003
11.567	0.000	0.22	0.00	0.04	0.2	0.003
11.583	0.000	0.22	0.00	0.04	0.2	0.003

11.600	0.000	0.22	0.00	0.04	0.2	0.003
11.617	0.000	0.23	0.00	0.04	0.2	0.003
11.633	0.000	0.23	0.00	0.04	0.2	0.003
11.650	0.000	0.23	0.00	0.04	0.2	0.003
11.667	0.000	0.23	0.00	0.04	0.2	0.003
11.683	0.000	0.23	0.00	0.04	0.2	0.003
11.700	0.000	0.23	0.00	0.04	0.2	0.003
11.717	0.000	0.23	0.00	0.04	0.2	0.003
11.733	0.000	0.23	0.00	0.04	0.2	0.003
11.750	0.000	0.23	0.00	0.04	0.2	0.003
11.767	0.000	0.23	0.00	0.04	0.2	0.003
11.783	0.000	0.23	0.00	0.04	0.2	0.003
11.800	0.000	0.23	0.00	0.05	0.2	0.003
11.817	0.000	0.23	0.00	0.05	0.2	0.003
11.833	0.000	0.23	0.00	0.05	0.2	0.003
11.850	0.000	0.23	0.00	0.05	0.2	0.003
11.867	0.000	0.23	0.00	0.05	0.2	0.003
11.883	0.000	0.23	0.00	0.05	0.2	0.004
11.900	0.000	0.23	0.00	0.05	0.2	0.004
11.917	0.000	0.24	0.00	0.05	0.2	0.004
11.933	0.000	0.24	0.00	0.05	0.2	0.004
11.950	0.000	0.24	0.00	0.05	0.2	0.004
11.967	0.000	0.24	0.00	0.05	0.2	0.004
11.983	0.000	0.24	0.00	0.05	0.2	0.004
12.000	0.000	0.24	0.00	0.05	0.2	0.004
12.017	0.000	0.24	0.00	0.05	0.2	0.004
12.033	0.000	0.25	0.00	0.05	0.2	0.004
12.050	0.000	0.25	0.00	0.05	0.2	0.004
12.067	0.000	0.25	0.00	0.05	0.2	0.004
12.083	0.000	0.26	0.00	0.05	0.2	0.004
12.100	0.000	0.26	0.00	0.05	0.2	0.004
12.117	0.000	0.26	0.00	0.05	0.2	0.004
12.133	0.000	0.27	0.00	0.05	0.2	0.004
12.150	0.000	0.27	0.00	0.05	0.2	0.004
12.167	0.000	0.28	0.00	0.05	0.2	0.004
12.183	0.000	0.29	0.00	0.05	0.3	0.004
12.200	0.000	0.29	0.00	0.05	0.3	0.004
12.217	0.000	0.30	0.00	0.05	0.3	0.004
12.233	0.000	0.31	0.00	0.05	0.3	0.004
12.250	0.000	0.31	0.00	0.05	0.3	0.004
12.267	0.000	0.32	0.00	0.05	0.3	0.004
12.283	0.000	0.33	0.00	0.06	0.3	0.004
12.300	0.000	0.33	0.00	0.06	0.3	0.004
12.317	0.000	0.33	0.00	0.06	0.3	0.004
12.333	0.000	0.33	0.00	0.06	0.3	0.004
12.350	0.000	0.33	0.00	0.06	0.3	0.005
12.367	0.000	0.33	0.00	0.06	0.3	0.005
12.383	0.000	0.33	0.00	0.06	0.3	0.005
12.400	0.000	0.33	0.00	0.06	0.3	0.005
12.417	0.000	0.33	0.00	0.06	0.3	0.005

12.433	0.000	0.33	0.00	0.06	0.3	0.005
12.450	0.000	0.34	0.00	0.06	0.3	0.005
12.467	0.000	0.34	0.00	0.06	0.3	0.005
12.483	0.000	0.34	0.00	0.06	0.3	0.005
12.500	0.000	0.34	0.00	0.06	0.3	0.005
12.517	0.000	0.34	0.00	0.06	0.3	0.005
12.533	0.000	0.34	0.00	0.06	0.3	0.005
12.550	0.000	0.34	0.00	0.06	0.3	0.005
12.567	0.000	0.34	0.00	0.06	0.3	0.005
12.583	0.000	0.34	0.00	0.07	0.3	0.005
12.600	0.000	0.34	0.00	0.07	0.3	0.005
12.617	0.000	0.35	0.00	0.07	0.3	0.005
12.633	0.000	0.35	0.00	0.07	0.3	0.005
12.650	0.000	0.35	0.00	0.07	0.3	0.005
12.667	0.000	0.35	0.00	0.07	0.3	0.005
12.683	0.000	0.35	0.00	0.07	0.3	0.005
12.700	0.000	0.35	0.00	0.07	0.3	0.005
12.717	0.000	0.35	0.00	0.07	0.3	0.005
12.733	0.000	0.35	0.00	0.07	0.3	0.005
12.750	0.000	0.35	0.00	0.07	0.3	0.005
12.767	0.000	0.35	0.00	0.07	0.3	0.005
12.783	0.000	0.35	0.00	0.07	0.3	0.005
12.800	0.000	0.35	0.00	0.07	0.3	0.005
12.817	0.000	0.36	0.00	0.07	0.3	0.005
12.833	0.000	0.36	0.00	0.07	0.3	0.005
12.850	0.000	0.36	0.00	0.07	0.3	0.005
12.867	0.000	0.36	0.00	0.07	0.3	0.005
12.883	0.000	0.36	0.00	0.07	0.3	0.005
12.900	0.000	0.36	0.00	0.07	0.3	0.005
12.917	0.000	0.36	0.00	0.07	0.3	0.005
12.933	0.000	0.36	0.00	0.07	0.4	0.005
12.950	0.000	0.36	0.00	0.07	0.4	0.005
12.967	0.000	0.36	0.00	0.07	0.4	0.005
12.983	0.000	0.36	0.00	0.07	0.4	0.005
13.000	0.000	0.36	0.00	0.07	0.4	0.005
13.017	0.000	0.37	0.00	0.07	0.4	0.005
13.033	0.000	0.37	0.00	0.07	0.4	0.005
13.050	0.000	0.37	0.00	0.07	0.4	0.005
13.067	0.000	0.37	0.00	0.07	0.4	0.006
13.083	0.000	0.37	0.00	0.07	0.4	0.006
13.100	0.000	0.37	0.00	0.07	0.4	0.006
13.117	0.000	0.37	0.00	0.07	0.4	0.006
13.133	0.000	0.37	0.00	0.07	0.4	0.006
13.150	0.000	0.38	0.00	0.07	0.4	0.006
13.167	0.000	0.38	0.00	0.07	0.4	0.006
13.183	0.000	0.38	0.00	0.07	0.4	0.006
13.200	0.000	0.38	0.00	0.07	0.4	0.006
13.217	0.000	0.38	0.00	0.07	0.4	0.006
13.233	0.000	0.38	0.00	0.07	0.4	0.006
13.250	0.000	0.38	0.00	0.07	0.4	0.006

13.267	0.000	0.38	0.00	0.07	0.4	0.006
13.283	0.000	0.38	0.00	0.07	0.4	0.006
13.300	0.000	0.38	0.00	0.07	0.4	0.006
13.317	0.000	0.39	0.00	0.07	0.4	0.006
13.333	0.000	0.39	0.00	0.07	0.4	0.006
13.350	0.000	0.39	0.00	0.08	0.4	0.006
13.367	0.000	0.39	0.00	0.08	0.4	0.006
13.383	0.000	0.39	0.00	0.08	0.4	0.006
13.400	0.000	0.39	0.00	0.08	0.4	0.006
13.417	0.000	0.39	0.00	0.08	0.4	0.006
13.433	0.000	0.40	0.00	0.08	0.4	0.006
13.450	0.000	0.40	0.00	0.08	0.4	0.006
13.467	0.000	0.40	0.00	0.08	0.4	0.006
13.483	0.000	0.40	0.00	0.08	0.4	0.006
13.500	0.000	0.40	0.00	0.08	0.4	0.006
13.517	0.000	0.40	0.00	0.08	0.4	0.006
13.533	0.000	0.40	0.00	0.08	0.4	0.006
13.550	0.000	0.40	0.00	0.08	0.4	0.006
13.567	0.000	0.41	0.00	0.08	0.4	0.006
13.583	0.000	0.41	0.00	0.08	0.4	0.006
13.600	0.000	0.41	0.00	0.08	0.4	0.006
13.617	0.000	0.41	0.00	0.08	0.4	0.006
13.633	0.000	0.41	0.00	0.08	0.4	0.006
13.650	0.000	0.41	0.00	0.08	0.4	0.006
13.667	0.000	0.41	0.00	0.08	0.4	0.006
13.683	0.000	0.42	0.00	0.08	0.4	0.006
13.700	0.000	0.42	0.00	0.08	0.4	0.006
13.717	0.000	0.42	0.00	0.08	0.4	0.006
13.733	0.000	0.42	0.00	0.08	0.4	0.006
13.750	0.000	0.42	0.00	0.08	0.4	0.006
13.767	0.000	0.43	0.00	0.08	0.4	0.006
13.783	0.000	0.43	0.00	0.08	0.4	0.006
13.800	0.000	0.43	0.00	0.08	0.4	0.006
13.817	0.000	0.43	0.00	0.08	0.4	0.006
13.833	0.000	0.43	0.00	0.08	0.4	0.006
13.850	0.000	0.43	0.00	0.08	0.4	0.006
13.867	0.000	0.43	0.00	0.08	0.4	0.006
13.883	0.000	0.43	0.00	0.08	0.4	0.006
13.900	0.000	0.43	0.00	0.08	0.4	0.006
13.917	0.000	0.44	0.00	0.08	0.4	0.006
13.933	0.000	0.44	0.00	0.08	0.4	0.006
13.950	0.000	0.44	0.00	0.08	0.4	0.007
13.967	0.000	0.44	0.00	0.08	0.4	0.007
13.983	0.000	0.44	0.00	0.09	0.4	0.007
14.000	0.000	0.45	0.00	0.09	0.4	0.007
14.017	0.000	0.45	0.00	0.09	0.4	0.007
14.033	0.000	0.45	0.00	0.09	0.4	0.007
14.050	0.000	0.45	0.00	0.09	0.4	0.007
14.067	0.000	0.46	0.00	0.09	0.4	0.007
14.083	0.000	0.46	0.00	0.09	0.4	0.007

14.100	0.000	0.46	0.00	0.09	0.4	0.007
14.117	0.000	0.46	0.00	0.09	0.4	0.007
14.133	0.000	0.46	0.00	0.09	0.4	0.007
14.150	0.000	0.46	0.00	0.09	0.4	0.007
14.167	0.000	0.46	0.00	0.09	0.4	0.007
14.183	0.000	0.46	0.00	0.09	0.4	0.007
14.200	0.000	0.46	0.00	0.09	0.4	0.007
14.217	0.000	0.46	0.00	0.09	0.4	0.007
14.233	0.000	0.47	0.00	0.09	0.5	0.007
14.250	0.000	0.47	0.00	0.09	0.5	0.007
14.267	0.000	0.47	0.00	0.09	0.5	0.007
14.283	0.000	0.47	0.00	0.09	0.5	0.007
14.300	0.000	0.48	0.00	0.09	0.5	0.007
14.317	0.000	0.48	0.00	0.09	0.5	0.007
14.333	0.000	0.48	0.00	0.09	0.5	0.007
14.350	0.000	0.49	0.00	0.09	0.5	0.007
14.367	0.000	0.49	0.00	0.09	0.5	0.007
14.383	0.000	0.49	0.00	0.09	0.5	0.007
14.400	0.000	0.49	0.00	0.09	0.5	0.007
14.417	0.000	0.50	0.00	0.09	0.5	0.007
14.433	0.000	0.50	0.00	0.09	0.5	0.007
14.450	0.000	0.50	0.00	0.10	0.5	0.007
14.467	0.000	0.50	0.00	0.10	0.5	0.007
14.483	0.000	0.50	0.00	0.10	0.5	0.007
14.500	0.000	0.50	0.00	0.10	0.5	0.007
14.517	0.000	0.51	0.00	0.10	0.5	0.007
14.533	0.000	0.51	0.00	0.10	0.5	0.007
14.550	0.000	0.51	0.00	0.10	0.5	0.007
14.567	0.000	0.52	0.00	0.10	0.5	0.008
14.583	0.000	0.52	0.00	0.10	0.5	0.008
14.600	0.000	0.52	0.00	0.10	0.5	0.008
14.617	0.000	0.53	0.00	0.10	0.5	0.008
14.633	0.000	0.53	0.00	0.10	0.5	0.008
14.650	0.000	0.54	0.00	0.10	0.5	0.008
14.667	0.000	0.54	0.00	0.10	0.5	0.008
14.683	0.000	0.54	0.00	0.10	0.5	0.008
14.700	0.000	0.55	0.00	0.10	0.5	0.008
14.717	0.000	0.55	0.00	0.10	0.5	0.008
14.733	0.000	0.55	0.00	0.10	0.5	0.008
14.750	0.000	0.55	0.00	0.10	0.5	0.008
14.767	0.000	0.55	0.00	0.10	0.5	0.008
14.783	0.000	0.56	0.00	0.11	0.5	0.008
14.800	0.000	0.56	0.00	0.11	0.5	0.008
14.817	0.000	0.56	0.00	0.11	0.5	0.008
14.833	0.000	0.57	0.00	0.11	0.5	0.008
14.850	0.000	0.57	0.00	0.11	0.5	0.008
14.867	0.000	0.58	0.00	0.11	0.5	0.008
14.883	0.000	0.58	0.00	0.11	0.5	0.008
14.900	0.000	0.59	0.00	0.11	0.5	0.008
14.917	0.000	0.59	0.00	0.11	0.6	0.008

14.933	0.000	0.60	0.00	0.11	0.6	0.009
14.950	0.000	0.61	0.00	0.11	0.6	0.009
14.967	0.000	0.61	0.00	0.11	0.6	0.009
14.983	0.000	0.61	0.00	0.11	0.6	0.009
15.000	0.000	0.62	0.00	0.11	0.6	0.009
15.017	0.000	0.62	0.00	0.12	0.6	0.009
15.033	0.000	0.62	0.00	0.12	0.6	0.009
15.050	0.000	0.63	0.00	0.12	0.6	0.009
15.067	0.000	0.63	0.00	0.12	0.6	0.009
15.083	0.000	0.63	0.00	0.12	0.6	0.009
15.100	0.000	0.64	0.00	0.12	0.6	0.009
15.117	0.000	0.64	0.00	0.12	0.6	0.009
15.133	0.000	0.65	0.00	0.12	0.6	0.009
15.150	0.000	0.66	0.00	0.12	0.6	0.009
15.167	0.000	0.67	0.00	0.12	0.6	0.009
15.183	0.000	0.68	0.00	0.12	0.6	0.010
15.200	0.000	0.68	0.00	0.12	0.6	0.010
15.217	0.000	0.69	0.00	0.13	0.6	0.010
15.233	0.000	0.70	0.00	0.13	0.6	0.010
15.250	0.000	0.71	0.00	0.13	0.6	0.010
15.267	0.000	0.72	0.00	0.13	0.6	0.010
15.283	0.000	0.72	0.00	0.13	0.7	0.010
15.300	0.000	0.73	0.00	0.13	0.7	0.010
15.317	0.000	0.73	0.00	0.13	0.7	0.010
15.333	0.000	0.74	0.00	0.13	0.7	0.010
15.350	0.000	0.74	0.00	0.14	0.7	0.010
15.367	0.000	0.75	0.00	0.14	0.7	0.011
15.383	0.000	0.76	0.00	0.14	0.7	0.011
15.400	0.000	0.76	0.00	0.14	0.7	0.011
15.417	0.000	0.77	0.00	0.14	0.7	0.011
15.433	0.000	0.77	0.00	0.14	0.7	0.011
15.450	0.000	0.77	0.00	0.14	0.7	0.011
15.467	0.000	0.77	0.00	0.14	0.7	0.011
15.483	0.000	0.77	0.00	0.14	0.7	0.011
15.500	0.000	0.77	0.00	0.14	0.7	0.011
15.517	0.000	0.77	0.00	0.15	0.7	0.011
15.533	0.000	0.77	0.00	0.15	0.7	0.011
15.550	0.000	0.77	0.00	0.15	0.7	0.011
15.567	0.000	0.78	0.00	0.15	0.7	0.011
15.583	0.000	0.79	0.00	0.15	0.7	0.011
15.600	0.000	0.80	0.00	0.15	0.7	0.011
15.617	0.000	0.81	0.00	0.15	0.8	0.012
15.633	0.000	0.82	0.00	0.15	0.8	0.012
15.650	0.000	0.83	0.00	0.15	0.8	0.012
15.667	0.000	0.84	0.00	0.15	0.8	0.012
15.683	0.000	0.85	0.00	0.16	0.8	0.012
15.700	0.000	0.86	0.00	0.16	0.8	0.012
15.717	0.000	0.89	0.00	0.16	0.8	0.012
15.733	0.000	0.94	0.00	0.16	0.8	0.012
15.750	0.000	0.99	0.00	0.16	0.8	0.013

15.767	0.000	1.04	0.00	0.17	0.8	0.013
15.783	0.000	1.09	0.00	0.17	0.9	0.013
15.800	0.000	1.15	0.00	0.18	0.9	0.014
15.817	0.000	1.20	0.00	0.18	0.9	0.014
15.833	0.000	1.25	0.00	0.19	0.9	0.014
15.850	0.000	1.30	0.00	0.19	1.0	0.015
15.867	0.000	1.35	0.00	0.20	1.0	0.015
15.883	0.000	1.41	0.00	0.21	1.0	0.016
15.900	0.000	1.47	0.00	0.22	1.1	0.017
15.917	0.000	1.53	0.00	0.22	1.1	0.017
15.933	0.000	1.59	0.00	0.23	1.1	0.018
15.950	0.000	1.65	0.00	0.24	1.2	0.018
15.967	0.000	1.70	0.00	0.25	1.2	0.019
15.983	0.000	1.76	0.00	0.26	1.3	0.020
16.000	0.000	1.82	0.00	0.27	1.3	0.020
16.017	0.000	2.08	0.00	0.28	1.4	0.021
16.033	0.000	2.53	0.00	0.30	1.4	0.023
16.050	0.000	2.98	0.00	0.32	1.6	0.025
16.067	0.000	3.43	0.00	0.35	1.7	0.027
16.083	0.000	3.89	0.00	0.39	1.9	0.030
16.100	0.000	4.34	0.00	0.43	2.1	0.033
16.117	0.000	4.79	0.00	0.48	2.3	0.037
16.133	0.000	5.24	0.00	0.53	2.5	0.040
16.150	0.000	5.89	0.00	0.58	2.8	0.045
16.167	0.000	5.58	0.00	0.63	3.0	0.048
16.183	0.000	5.04	0.00	0.66	3.2	0.051
16.200	0.000	4.50	0.00	0.68	3.4	0.052
16.217	0.000	3.95	0.00	0.69	3.4	0.053
16.233	0.000	3.41	0.00	0.69	3.5	0.053
16.250	0.000	2.87	0.00	0.68	3.4	0.052
16.267	0.000	2.32	0.00	0.66	3.4	0.051
16.283	0.000	1.78	0.00	0.63	3.2	0.049
16.300	0.000	1.24	0.00	0.60	3.1	0.046
16.317	0.000	1.02	0.00	0.57	2.9	0.044
16.333	0.000	0.99	0.00	0.53	2.8	0.041
16.350	0.000	0.95	0.00	0.50	2.6	0.039
16.367	0.000	0.92	0.00	0.48	2.5	0.037
16.383	0.000	0.88	0.00	0.45	2.3	0.035
16.400	0.000	0.85	0.00	0.43	2.2	0.033
16.417	0.000	0.81	0.00	0.40	2.1	0.031
16.433	0.000	0.78	0.00	0.38	2.0	0.029
16.450	0.000	0.74	0.00	0.36	1.9	0.028
16.467	0.000	0.73	0.00	0.34	1.8	0.026
16.483	0.000	0.72	0.00	0.33	1.7	0.025
16.500	0.000	0.72	0.00	0.31	1.6	0.024
16.517	0.000	0.71	0.00	0.30	1.5	0.023
16.533	0.000	0.70	0.00	0.28	1.5	0.022
16.550	0.000	0.70	0.00	0.27	1.4	0.021
16.567	0.000	0.69	0.00	0.26	1.3	0.020
16.583	0.000	0.68	0.00	0.25	1.3	0.019

16.600	0.000	0.68	0.00	0.24	1.2	0.018
16.617	0.000	0.67	0.00	0.23	1.2	0.018
16.633	0.000	0.66	0.00	0.22	1.1	0.017
16.650	0.000	0.65	0.00	0.21	1.1	0.016
16.667	0.000	0.64	0.00	0.21	1.1	0.016
16.683	0.000	0.63	0.00	0.20	1.0	0.015
16.700	0.000	0.62	0.00	0.19	1.0	0.015
16.717	0.000	0.61	0.00	0.19	1.0	0.014
16.733	0.000	0.60	0.00	0.18	0.9	0.014
16.750	0.000	0.59	0.00	0.18	0.9	0.013
16.767	0.000	0.58	0.00	0.17	0.9	0.013
16.783	0.000	0.57	0.00	0.17	0.8	0.013
16.800	0.000	0.57	0.00	0.16	0.8	0.012
16.817	0.000	0.56	0.00	0.16	0.8	0.012
16.833	0.000	0.55	0.00	0.15	0.8	0.012
16.850	0.000	0.54	0.00	0.15	0.8	0.011
16.867	0.000	0.54	0.00	0.15	0.7	0.011
16.883	0.000	0.53	0.00	0.14	0.7	0.011
16.900	0.000	0.52	0.00	0.14	0.7	0.011
16.917	0.000	0.52	0.00	0.14	0.7	0.010
16.933	0.000	0.51	0.00	0.13	0.7	0.010
16.950	0.000	0.51	0.00	0.13	0.7	0.010
16.967	0.000	0.50	0.00	0.13	0.6	0.010
16.983	0.000	0.50	0.00	0.12	0.6	0.010
17.000	0.000	0.49	0.00	0.12	0.6	0.009
17.017	0.000	0.49	0.00	0.12	0.6	0.009
17.033	0.000	0.48	0.00	0.12	0.6	0.009
17.050	0.000	0.48	0.00	0.12	0.6	0.009
17.067	0.000	0.47	0.00	0.11	0.6	0.009
17.083	0.000	0.47	0.00	0.11	0.6	0.009
17.100	0.000	0.47	0.00	0.11	0.6	0.009
17.117	0.000	0.46	0.00	0.11	0.6	0.008
17.133	0.000	0.46	0.00	0.11	0.5	0.008
17.150	0.000	0.46	0.00	0.11	0.5	0.008
17.167	0.000	0.45	0.00	0.10	0.5	0.008
17.183	0.000	0.45	0.00	0.10	0.5	0.008
17.200	0.000	0.45	0.00	0.10	0.5	0.008
17.217	0.000	0.44	0.00	0.10	0.5	0.008
17.233	0.000	0.44	0.00	0.10	0.5	0.008
17.250	0.000	0.44	0.00	0.10	0.5	0.008
17.267	0.000	0.43	0.00	0.10	0.5	0.008
17.283	0.000	0.43	0.00	0.10	0.5	0.007
17.300	0.000	0.43	0.00	0.10	0.5	0.007
17.317	0.000	0.42	0.00	0.09	0.5	0.007
17.333	0.000	0.42	0.00	0.09	0.5	0.007
17.350	0.000	0.42	0.00	0.09	0.5	0.007
17.367	0.000	0.41	0.00	0.09	0.5	0.007
17.383	0.000	0.41	0.00	0.09	0.5	0.007
17.400	0.000	0.41	0.00	0.09	0.5	0.007
17.417	0.000	0.41	0.00	0.09	0.5	0.007

17.433	0.000	0.40	0.00	0.09	0.4	0.007
17.450	0.000	0.40	0.00	0.09	0.4	0.007
17.467	0.000	0.40	0.00	0.09	0.4	0.007
17.483	0.000	0.40	0.00	0.09	0.4	0.007
17.500	0.000	0.39	0.00	0.09	0.4	0.007
17.517	0.000	0.39	0.00	0.09	0.4	0.007
17.533	0.000	0.39	0.00	0.08	0.4	0.006
17.550	0.000	0.39	0.00	0.08	0.4	0.006
17.567	0.000	0.38	0.00	0.08	0.4	0.006
17.583	0.000	0.38	0.00	0.08	0.4	0.006
17.600	0.000	0.38	0.00	0.08	0.4	0.006
17.617	0.000	0.38	0.00	0.08	0.4	0.006
17.633	0.000	0.37	0.00	0.08	0.4	0.006
17.650	0.000	0.37	0.00	0.08	0.4	0.006
17.667	0.000	0.37	0.00	0.08	0.4	0.006
17.683	0.000	0.37	0.00	0.08	0.4	0.006
17.700	0.000	0.37	0.00	0.08	0.4	0.006
17.717	0.000	0.36	0.00	0.08	0.4	0.006
17.733	0.000	0.36	0.00	0.08	0.4	0.006
17.750	0.000	0.36	0.00	0.08	0.4	0.006
17.767	0.000	0.36	0.00	0.08	0.4	0.006
17.783	0.000	0.36	0.00	0.08	0.4	0.006
17.800	0.000	0.35	0.00	0.08	0.4	0.006
17.817	0.000	0.35	0.00	0.08	0.4	0.006
17.833	0.000	0.35	0.00	0.07	0.4	0.006
17.850	0.000	0.35	0.00	0.07	0.4	0.006
17.867	0.000	0.35	0.00	0.07	0.4	0.006
17.883	0.000	0.35	0.00	0.07	0.4	0.006
17.900	0.000	0.34	0.00	0.07	0.4	0.006
17.917	0.000	0.34	0.00	0.07	0.4	0.006
17.933	0.000	0.34	0.00	0.07	0.4	0.006
17.950	0.000	0.34	0.00	0.07	0.4	0.006
17.967	0.000	0.34	0.00	0.07	0.4	0.005
17.983	0.000	0.34	0.00	0.07	0.4	0.005
18.000	0.000	0.33	0.00	0.07	0.4	0.005
18.017	0.000	0.33	0.00	0.07	0.4	0.005
18.033	0.000	0.33	0.00	0.07	0.4	0.005
18.050	0.000	0.33	0.00	0.07	0.3	0.005
18.067	0.000	0.33	0.00	0.07	0.3	0.005
18.083	0.000	0.33	0.00	0.07	0.3	0.005
18.100	0.000	0.32	0.00	0.07	0.3	0.005
18.117	0.000	0.31	0.00	0.07	0.3	0.005
18.133	0.000	0.30	0.00	0.07	0.3	0.005
18.150	0.000	0.29	0.00	0.07	0.3	0.005
18.167	0.000	0.28	0.00	0.07	0.3	0.005
18.183	0.000	0.27	0.00	0.06	0.3	0.005
18.200	0.000	0.26	0.00	0.06	0.3	0.005
18.217	0.000	0.25	0.00	0.06	0.3	0.005
18.233	0.000	0.24	0.00	0.06	0.3	0.005
18.250	0.000	0.23	0.00	0.06	0.3	0.005

18.267	0.000	0.23	0.00	0.06	0.3	0.005
18.283	0.000	0.23	0.00	0.06	0.3	0.004
18.300	0.000	0.23	0.00	0.06	0.3	0.004
18.317	0.000	0.23	0.00	0.06	0.3	0.004
18.333	0.000	0.23	0.00	0.05	0.3	0.004
18.350	0.000	0.23	0.00	0.05	0.3	0.004
18.367	0.000	0.23	0.00	0.05	0.3	0.004
18.383	0.000	0.23	0.00	0.05	0.3	0.004
18.400	0.000	0.22	0.00	0.05	0.3	0.004
18.417	0.000	0.22	0.00	0.05	0.3	0.004
18.433	0.000	0.22	0.00	0.05	0.3	0.004
18.450	0.000	0.22	0.00	0.05	0.3	0.004
18.467	0.000	0.22	0.00	0.05	0.3	0.004
18.483	0.000	0.22	0.00	0.05	0.2	0.004
18.500	0.000	0.22	0.00	0.05	0.2	0.004
18.517	0.000	0.22	0.00	0.05	0.2	0.004
18.533	0.000	0.22	0.00	0.05	0.2	0.004
18.550	0.000	0.22	0.00	0.05	0.2	0.004
18.567	0.000	0.21	0.00	0.05	0.2	0.004
18.583	0.000	0.21	0.00	0.05	0.2	0.004
18.600	0.000	0.21	0.00	0.05	0.2	0.004
18.617	0.000	0.21	0.00	0.05	0.2	0.004
18.633	0.000	0.21	0.00	0.05	0.2	0.004
18.650	0.000	0.21	0.00	0.05	0.2	0.003
18.667	0.000	0.21	0.00	0.04	0.2	0.003
18.683	0.000	0.21	0.00	0.04	0.2	0.003
18.700	0.000	0.21	0.00	0.04	0.2	0.003
18.717	0.000	0.21	0.00	0.04	0.2	0.003
18.733	0.000	0.21	0.00	0.04	0.2	0.003
18.750	0.000	0.21	0.00	0.04	0.2	0.003
18.767	0.000	0.20	0.00	0.04	0.2	0.003
18.783	0.000	0.20	0.00	0.04	0.2	0.003
18.800	0.000	0.20	0.00	0.04	0.2	0.003
18.817	0.000	0.20	0.00	0.04	0.2	0.003
18.833	0.000	0.20	0.00	0.04	0.2	0.003
18.850	0.000	0.20	0.00	0.04	0.2	0.003
18.867	0.000	0.20	0.00	0.04	0.2	0.003
18.883	0.000	0.20	0.00	0.04	0.2	0.003
18.900	0.000	0.20	0.00	0.04	0.2	0.003
18.917	0.000	0.20	0.00	0.04	0.2	0.003
18.933	0.000	0.20	0.00	0.04	0.2	0.003
18.950	0.000	0.20	0.00	0.04	0.2	0.003
18.967	0.000	0.20	0.00	0.04	0.2	0.003
18.983	0.000	0.19	0.00	0.04	0.2	0.003
19.000	0.000	0.19	0.00	0.04	0.2	0.003
19.017	0.000	0.19	0.00	0.04	0.2	0.003
19.033	0.000	0.19	0.00	0.04	0.2	0.003
19.050	0.000	0.19	0.00	0.04	0.2	0.003
19.067	0.000	0.19	0.00	0.04	0.2	0.003
19.083	0.000	0.19	0.00	0.04	0.2	0.003

19.100	0.000	0.19	0.00	0.04	0.2	0.003
19.117	0.000	0.19	0.00	0.04	0.2	0.003
19.133	0.000	0.19	0.00	0.04	0.2	0.003
19.150	0.000	0.19	0.00	0.04	0.2	0.003
19.167	0.000	0.19	0.00	0.04	0.2	0.003
19.183	0.000	0.19	0.00	0.04	0.2	0.003
19.200	0.000	0.19	0.00	0.04	0.2	0.003
19.217	0.000	0.18	0.00	0.04	0.2	0.003
19.233	0.000	0.18	0.00	0.04	0.2	0.003
19.250	0.000	0.18	0.00	0.04	0.2	0.003
19.267	0.000	0.18	0.00	0.04	0.2	0.003
19.283	0.000	0.18	0.00	0.04	0.2	0.003
19.300	0.000	0.18	0.00	0.04	0.2	0.003
19.317	0.000	0.18	0.00	0.04	0.2	0.003
19.333	0.000	0.18	0.00	0.04	0.2	0.003
19.350	0.000	0.18	0.00	0.04	0.2	0.003
19.367	0.000	0.18	0.00	0.04	0.2	0.003
19.383	0.000	0.18	0.00	0.04	0.2	0.003
19.400	0.000	0.18	0.00	0.04	0.2	0.003
19.417	0.000	0.18	0.00	0.04	0.2	0.003
19.433	0.000	0.18	0.00	0.04	0.2	0.003
19.450	0.000	0.18	0.00	0.04	0.2	0.003
19.467	0.000	0.18	0.00	0.04	0.2	0.003
19.483	0.000	0.18	0.00	0.04	0.2	0.003
19.500	0.000	0.17	0.00	0.04	0.2	0.003
19.517	0.000	0.17	0.00	0.04	0.2	0.003
19.533	0.000	0.17	0.00	0.04	0.2	0.003
19.550	0.000	0.17	0.00	0.04	0.2	0.003
19.567	0.000	0.17	0.00	0.04	0.2	0.003
19.583	0.000	0.17	0.00	0.04	0.2	0.003
19.600	0.000	0.17	0.00	0.04	0.2	0.003
19.617	0.000	0.17	0.00	0.04	0.2	0.003
19.633	0.000	0.17	0.00	0.04	0.2	0.003
19.650	0.000	0.17	0.00	0.04	0.2	0.003
19.667	0.000	0.17	0.00	0.03	0.2	0.003
19.683	0.000	0.17	0.00	0.03	0.2	0.003
19.700	0.000	0.17	0.00	0.03	0.2	0.003
19.717	0.000	0.17	0.00	0.03	0.2	0.003
19.733	0.000	0.17	0.00	0.03	0.2	0.003
19.750	0.000	0.17	0.00	0.03	0.2	0.003
19.767	0.000	0.17	0.00	0.03	0.2	0.003
19.783	0.000	0.17	0.00	0.03	0.2	0.003
19.800	0.000	0.17	0.00	0.03	0.2	0.003
19.817	0.000	0.17	0.00	0.03	0.2	0.003
19.833	0.000	0.16	0.00	0.03	0.2	0.003
19.850	0.000	0.16	0.00	0.03	0.2	0.003
19.867	0.000	0.16	0.00	0.03	0.2	0.003
19.883	0.000	0.16	0.00	0.03	0.2	0.003
19.900	0.000	0.16	0.00	0.03	0.2	0.003
19.917	0.000	0.16	0.00	0.03	0.2	0.003

19.933	0.000	0.16	0.00	0.03	0.2	0.003
19.950	0.000	0.16	0.00	0.03	0.2	0.003
19.967	0.000	0.16	0.00	0.03	0.2	0.003
19.983	0.000	0.16	0.00	0.03	0.2	0.003
20.000	0.000	0.16	0.00	0.03	0.2	0.003
20.017	0.000	0.16	0.00	0.03	0.2	0.003
20.033	0.000	0.16	0.00	0.03	0.2	0.003
20.050	0.000	0.16	0.00	0.03	0.2	0.003
20.067	0.000	0.16	0.00	0.03	0.2	0.003
20.083	0.000	0.16	0.00	0.03	0.2	0.002
20.100	0.000	0.16	0.00	0.03	0.2	0.002
20.117	0.000	0.16	0.00	0.03	0.2	0.002
20.133	0.000	0.16	0.00	0.03	0.2	0.002
20.150	0.000	0.16	0.00	0.03	0.2	0.002
20.167	0.000	0.16	0.00	0.03	0.2	0.002
20.183	0.000	0.16	0.00	0.03	0.2	0.002
20.200	0.000	0.16	0.00	0.03	0.2	0.002
20.217	0.000	0.15	0.00	0.03	0.2	0.002
20.233	0.000	0.15	0.00	0.03	0.2	0.002
20.250	0.000	0.15	0.00	0.03	0.2	0.002
20.267	0.000	0.15	0.00	0.03	0.2	0.002
20.283	0.000	0.15	0.00	0.03	0.2	0.002
20.300	0.000	0.15	0.00	0.03	0.2	0.002
20.317	0.000	0.15	0.00	0.03	0.2	0.002
20.333	0.000	0.15	0.00	0.03	0.2	0.002
20.350	0.000	0.15	0.00	0.03	0.2	0.002
20.367	0.000	0.15	0.00	0.03	0.2	0.002
20.383	0.000	0.15	0.00	0.03	0.2	0.002
20.400	0.000	0.15	0.00	0.03	0.2	0.002
20.417	0.000	0.15	0.00	0.03	0.2	0.002
20.433	0.000	0.15	0.00	0.03	0.2	0.002
20.450	0.000	0.15	0.00	0.03	0.2	0.002
20.467	0.000	0.15	0.00	0.03	0.2	0.002
20.483	0.000	0.15	0.00	0.03	0.2	0.002
20.500	0.000	0.15	0.00	0.03	0.2	0.002
20.517	0.000	0.15	0.00	0.03	0.2	0.002
20.533	0.000	0.15	0.00	0.03	0.2	0.002
20.550	0.000	0.15	0.00	0.03	0.2	0.002
20.567	0.000	0.15	0.00	0.03	0.2	0.002
20.583	0.000	0.15	0.00	0.03	0.2	0.002
20.600	0.000	0.15	0.00	0.03	0.2	0.002
20.617	0.000	0.15	0.00	0.03	0.1	0.002
20.633	0.000	0.15	0.00	0.03	0.1	0.002
20.650	0.000	0.15	0.00	0.03	0.1	0.002
20.667	0.000	0.14	0.00	0.03	0.1	0.002
20.683	0.000	0.14	0.00	0.03	0.1	0.002
20.700	0.000	0.14	0.00	0.03	0.1	0.002
20.717	0.000	0.14	0.00	0.03	0.1	0.002
20.733	0.000	0.14	0.00	0.03	0.1	0.002
20.750	0.000	0.14	0.00	0.03	0.1	0.002

20.767	0.000	0.14	0.00	0.03	0.1	0.002
20.783	0.000	0.14	0.00	0.03	0.1	0.002
20.800	0.000	0.14	0.00	0.03	0.1	0.002
20.817	0.000	0.14	0.00	0.03	0.1	0.002
20.833	0.000	0.14	0.00	0.03	0.1	0.002
20.850	0.000	0.14	0.00	0.03	0.1	0.002
20.867	0.000	0.14	0.00	0.03	0.1	0.002
20.883	0.000	0.14	0.00	0.03	0.1	0.002
20.900	0.000	0.14	0.00	0.03	0.1	0.002
20.917	0.000	0.14	0.00	0.03	0.1	0.002
20.933	0.000	0.14	0.00	0.03	0.1	0.002
20.950	0.000	0.14	0.00	0.03	0.1	0.002
20.967	0.000	0.14	0.00	0.03	0.1	0.002
20.983	0.000	0.14	0.00	0.03	0.1	0.002
21.000	0.000	0.14	0.00	0.03	0.1	0.002
21.017	0.000	0.14	0.00	0.03	0.1	0.002
21.033	0.000	0.14	0.00	0.03	0.1	0.002
21.050	0.000	0.14	0.00	0.03	0.1	0.002
21.067	0.000	0.14	0.00	0.03	0.1	0.002
21.083	0.000	0.14	0.00	0.03	0.1	0.002
21.100	0.000	0.14	0.00	0.03	0.1	0.002
21.117	0.000	0.14	0.00	0.03	0.1	0.002
21.133	0.000	0.14	0.00	0.03	0.1	0.002
21.150	0.000	0.14	0.00	0.03	0.1	0.002
21.167	0.000	0.14	0.00	0.03	0.1	0.002
21.183	0.000	0.14	0.00	0.03	0.1	0.002
21.200	0.000	0.13	0.00	0.03	0.1	0.002
21.217	0.000	0.13	0.00	0.03	0.1	0.002
21.233	0.000	0.13	0.00	0.03	0.1	0.002
21.250	0.000	0.13	0.00	0.03	0.1	0.002
21.267	0.000	0.13	0.00	0.03	0.1	0.002
21.283	0.000	0.13	0.00	0.03	0.1	0.002
21.300	0.000	0.13	0.00	0.03	0.1	0.002
21.317	0.000	0.13	0.00	0.03	0.1	0.002
21.333	0.000	0.13	0.00	0.03	0.1	0.002
21.350	0.000	0.13	0.00	0.03	0.1	0.002
21.367	0.000	0.13	0.00	0.03	0.1	0.002
21.383	0.000	0.13	0.00	0.03	0.1	0.002
21.400	0.000	0.13	0.00	0.03	0.1	0.002
21.417	0.000	0.13	0.00	0.03	0.1	0.002
21.433	0.000	0.13	0.00	0.03	0.1	0.002
21.450	0.000	0.13	0.00	0.03	0.1	0.002
21.467	0.000	0.13	0.00	0.03	0.1	0.002
21.483	0.000	0.13	0.00	0.03	0.1	0.002
21.500	0.000	0.13	0.00	0.03	0.1	0.002
21.517	0.000	0.13	0.00	0.03	0.1	0.002
21.533	0.000	0.13	0.00	0.03	0.1	0.002
21.550	0.000	0.13	0.00	0.03	0.1	0.002
21.567	0.000	0.13	0.00	0.03	0.1	0.002
21.583	0.000	0.13	0.00	0.03	0.1	0.002

21.600	0.000	0.13	0.00	0.03	0.1	0.002
21.617	0.000	0.13	0.00	0.03	0.1	0.002
21.633	0.000	0.13	0.00	0.03	0.1	0.002
21.650	0.000	0.13	0.00	0.03	0.1	0.002
21.667	0.000	0.13	0.00	0.03	0.1	0.002
21.683	0.000	0.13	0.00	0.03	0.1	0.002
21.700	0.000	0.13	0.00	0.03	0.1	0.002
21.717	0.000	0.13	0.00	0.03	0.1	0.002
21.733	0.000	0.13	0.00	0.03	0.1	0.002
21.750	0.000	0.13	0.00	0.03	0.1	0.002
21.767	0.000	0.13	0.00	0.03	0.1	0.002
21.783	0.000	0.13	0.00	0.03	0.1	0.002
21.800	0.000	0.13	0.00	0.03	0.1	0.002
21.817	0.000	0.13	0.00	0.03	0.1	0.002
21.833	0.000	0.13	0.00	0.03	0.1	0.002
21.850	0.000	0.12	0.00	0.03	0.1	0.002
21.867	0.000	0.12	0.00	0.03	0.1	0.002
21.883	0.000	0.12	0.00	0.03	0.1	0.002
21.900	0.000	0.12	0.00	0.03	0.1	0.002
21.917	0.000	0.12	0.00	0.03	0.1	0.002
21.933	0.000	0.12	0.00	0.03	0.1	0.002
21.950	0.000	0.12	0.00	0.03	0.1	0.002
21.967	0.000	0.12	0.00	0.03	0.1	0.002
21.983	0.000	0.12	0.00	0.03	0.1	0.002
22.000	0.000	0.12	0.00	0.02	0.1	0.002
22.017	0.000	0.12	0.00	0.02	0.1	0.002
22.033	0.000	0.12	0.00	0.02	0.1	0.002
22.050	0.000	0.12	0.00	0.02	0.1	0.002
22.067	0.000	0.12	0.00	0.02	0.1	0.002
22.083	0.000	0.12	0.00	0.02	0.1	0.002
22.100	0.000	0.12	0.00	0.02	0.1	0.002
22.117	0.000	0.12	0.00	0.02	0.1	0.002
22.133	0.000	0.12	0.00	0.02	0.1	0.002
22.150	0.000	0.12	0.00	0.02	0.1	0.002
22.167	0.000	0.12	0.00	0.02	0.1	0.002
22.183	0.000	0.12	0.00	0.02	0.1	0.002
22.200	0.000	0.12	0.00	0.02	0.1	0.002
22.216	0.000	0.12	0.00	0.02	0.1	0.002
22.233	0.000	0.12	0.00	0.02	0.1	0.002
22.250	0.000	0.12	0.00	0.02	0.1	0.002
22.266	0.000	0.12	0.00	0.02	0.1	0.002
22.283	0.000	0.12	0.00	0.02	0.1	0.002
22.300	0.000	0.12	0.00	0.02	0.1	0.002
22.316	0.000	0.12	0.00	0.02	0.1	0.002
22.333	0.000	0.12	0.00	0.02	0.1	0.002
22.350	0.000	0.12	0.00	0.02	0.1	0.002
22.366	0.000	0.12	0.00	0.02	0.1	0.002
22.383	0.000	0.12	0.00	0.02	0.1	0.002
22.400	0.000	0.12	0.00	0.02	0.1	0.002
22.416	0.000	0.12	0.00	0.02	0.1	0.002

22.433	0.000	0.12	0.00	0.02	0.1	0.002
22.450	0.000	0.12	0.00	0.02	0.1	0.002
22.466	0.000	0.12	0.00	0.02	0.1	0.002
22.483	0.000	0.12	0.00	0.02	0.1	0.002
22.500	0.000	0.12	0.00	0.02	0.1	0.002
22.516	0.000	0.12	0.00	0.02	0.1	0.002
22.533	0.000	0.12	0.00	0.02	0.1	0.002
22.550	0.000	0.12	0.00	0.02	0.1	0.002
22.566	0.000	0.12	0.00	0.02	0.1	0.002
22.583	0.000	0.12	0.00	0.02	0.1	0.002
22.600	0.000	0.12	0.00	0.02	0.1	0.002
22.616	0.000	0.12	0.00	0.02	0.1	0.002
22.633	0.000	0.12	0.00	0.02	0.1	0.002
22.650	0.000	0.11	0.00	0.02	0.1	0.002
22.666	0.000	0.11	0.00	0.02	0.1	0.002
22.683	0.000	0.11	0.00	0.02	0.1	0.002
22.700	0.000	0.11	0.00	0.02	0.1	0.002
22.716	0.000	0.11	0.00	0.02	0.1	0.002
22.733	0.000	0.11	0.00	0.02	0.1	0.002
22.750	0.000	0.11	0.00	0.02	0.1	0.002
22.766	0.000	0.11	0.00	0.02	0.1	0.002
22.783	0.000	0.11	0.00	0.02	0.1	0.002
22.800	0.000	0.11	0.00	0.02	0.1	0.002
22.816	0.000	0.11	0.00	0.02	0.1	0.002
22.833	0.000	0.11	0.00	0.02	0.1	0.002
22.850	0.000	0.11	0.00	0.02	0.1	0.002
22.866	0.000	0.11	0.00	0.02	0.1	0.002
22.883	0.000	0.11	0.00	0.02	0.1	0.002
22.900	0.000	0.11	0.00	0.02	0.1	0.002
22.916	0.000	0.11	0.00	0.02	0.1	0.002
22.933	0.000	0.11	0.00	0.02	0.1	0.002
22.950	0.000	0.11	0.00	0.02	0.1	0.002
22.966	0.000	0.11	0.00	0.02	0.1	0.002
22.983	0.000	0.11	0.00	0.02	0.1	0.002
23.000	0.000	0.11	0.00	0.02	0.1	0.002
23.016	0.000	0.11	0.00	0.02	0.1	0.002
23.033	0.000	0.11	0.00	0.02	0.1	0.002
23.050	0.000	0.11	0.00	0.02	0.1	0.002
23.066	0.000	0.11	0.00	0.02	0.1	0.002
23.083	0.000	0.11	0.00	0.02	0.1	0.002
23.100	0.000	0.11	0.00	0.02	0.1	0.002
23.116	0.000	0.11	0.00	0.02	0.1	0.002
23.133	0.000	0.11	0.00	0.02	0.1	0.002
23.150	0.000	0.11	0.00	0.02	0.1	0.002
23.166	0.000	0.11	0.00	0.02	0.1	0.002
23.183	0.000	0.11	0.00	0.02	0.1	0.002
23.200	0.000	0.11	0.00	0.02	0.1	0.002
23.216	0.000	0.11	0.00	0.02	0.1	0.002
23.233	0.000	0.11	0.00	0.02	0.1	0.002
23.250	0.000	0.11	0.00	0.02	0.1	0.002

23.266	0.000	0.11	0.00	0.02	0.1	0.002
23.283	0.000	0.11	0.00	0.02	0.1	0.002
23.300	0.000	0.11	0.00	0.02	0.1	0.002
23.316	0.000	0.11	0.00	0.02	0.1	0.002
23.333	0.000	0.11	0.00	0.02	0.1	0.002
23.350	0.000	0.11	0.00	0.02	0.1	0.002
23.366	0.000	0.11	0.00	0.02	0.1	0.002
23.383	0.000	0.11	0.00	0.02	0.1	0.002
23.400	0.000	0.11	0.00	0.02	0.1	0.002
23.416	0.000	0.11	0.00	0.02	0.1	0.002
23.433	0.000	0.11	0.00	0.02	0.1	0.002
23.450	0.000	0.11	0.00	0.02	0.1	0.002
23.466	0.000	0.11	0.00	0.02	0.1	0.002
23.483	0.000	0.11	0.00	0.02	0.1	0.002
23.500	0.000	0.11	0.00	0.02	0.1	0.002
23.516	0.000	0.11	0.00	0.02	0.1	0.002
23.533	0.000	0.11	0.00	0.02	0.1	0.002
23.550	0.000	0.11	0.00	0.02	0.1	0.002
23.566	0.000	0.11	0.00	0.02	0.1	0.002
23.583	0.000	0.11	0.00	0.02	0.1	0.002
23.600	0.000	0.11	0.00	0.02	0.1	0.002
23.616	0.000	0.11	0.00	0.02	0.1	0.002
23.633	0.000	0.11	0.00	0.02	0.1	0.002
23.650	0.000	0.10	0.00	0.02	0.1	0.002
23.666	0.000	0.10	0.00	0.02	0.1	0.002
23.683	0.000	0.10	0.00	0.02	0.1	0.002
23.700	0.000	0.10	0.00	0.02	0.1	0.002
23.716	0.000	0.10	0.00	0.02	0.1	0.002
23.733	0.000	0.10	0.00	0.02	0.1	0.002
23.750	0.000	0.10	0.00	0.02	0.1	0.002
23.766	0.000	0.10	0.00	0.02	0.1	0.002
23.783	0.000	0.10	0.00	0.02	0.1	0.002
23.800	0.000	0.10	0.00	0.02	0.1	0.002
23.816	0.000	0.10	0.00	0.02	0.1	0.002
23.833	0.000	0.10	0.00	0.02	0.1	0.002
23.850	0.000	0.10	0.00	0.02	0.1	0.002
23.866	0.000	0.10	0.00	0.02	0.1	0.002
23.883	0.000	0.10	0.00	0.02	0.1	0.002
23.900	0.000	0.10	0.00	0.02	0.1	0.002
23.916	0.000	0.10	0.00	0.02	0.1	0.002
23.933	0.000	0.10	0.00	0.02	0.1	0.002
23.950	0.000	0.10	0.00	0.02	0.1	0.002
23.966	0.000	0.10	0.00	0.02	0.1	0.002
23.983	0.000	0.10	0.00	0.02	0.1	0.002
24.000	0.000	0.10	0.00	0.02	0.1	0.002
24.016	0.000	0.10	0.00	0.02	0.1	0.002
24.033	0.000	0.10	0.00	0.02	0.1	0.002
24.050	0.000	0.10	0.00	0.02	0.1	0.002
24.066	0.000	0.09	0.00	0.02	0.1	0.002
24.083	0.000	0.08	0.00	0.02	0.1	0.002

24.100	0.000	0.06	0.00	0.02	0.1	0.001
24.116	0.000	0.05	0.00	0.02	0.1	0.001
24.133	0.000	0.04	0.00	0.02	0.1	0.001
24.150	0.000	0.03	0.00	0.02	0.1	0.001
24.166	0.000	0.02	0.00	0.02	0.1	0.001
24.183	0.000	0.01	0.00	0.01	0.1	0.001
24.200	0.000	0.00	0.00	0.01	0.1	0.001
24.216	0.000	0.00	0.00	0.01	0.1	0.001
24.233	0.000	0.00	0.00	0.01	0.1	0.001
24.250	0.000	0.00	0.00	0.01	0.1	0.001
24.266	0.000	0.00	0.00	0.01	0.0	0.001
24.283	0.000	0.00	0.00	0.01	0.0	0.001
24.300	0.000	0.00	0.00	0.01	0.0	0.001
24.316	0.000	0.00	0.00	0.01	0.0	0.001
24.333	0.000	0.00	0.00	0.01	0.0	0.000
24.350	0.000	0.00	0.00	0.01	0.0	0.000
24.366	0.000	0.00	0.00	0.01	0.0	0.000
24.383	0.000	0.00	0.00	0.00	0.0	0.000
24.400	0.000	0.00	0.00	0.00	0.0	0.000
24.416	0.000	0.00	0.00	0.00	0.0	0.000
24.433	0.000	0.00	0.00	0.00	0.0	0.000
24.450	0.000	0.00	0.00	0.00	0.0	0.000
24.466	0.000	0.00	0.00	0.00	0.0	0.000
24.483	0.000	0.00	0.00	0.00	0.0	0.000
24.500	0.000	0.00	0.00	0.00	0.0	0.000
24.516	0.000	0.00	0.00	0.00	0.0	0.000
24.533	0.000	0.00	0.00	0.00	0.0	0.000
24.550	0.000	0.00	0.00	0.00	0.0	0.000
24.566	0.000	0.00	0.00	0.00	0.0	0.000
24.583	0.000	0.00	0.00	0.00	0.0	0.000
24.600	0.000	0.00	0.00	0.00	0.0	0.000
24.616	0.000	0.00	0.00	0.00	0.0	0.000
24.633	0.000	0.00	0.00	0.00	0.0	0.000
24.650	0.000	0.00	0.00	0.00	0.0	0.000
24.666	0.000	0.00	0.00	0.00	0.0	0.000
24.683	0.000	0.00	0.00	0.00	0.0	0.000
24.700	0.000	0.00	0.00	0.00	0.0	0.000
24.716	0.000	0.00	0.00	0.00	0.0	0.000
24.733	0.000	0.00	0.00	0.00	0.0	0.000
24.750	0.000	0.00	0.00	0.00	0.0	0.000
24.766	0.000	0.00	0.00	0.00	0.0	0.000
24.783	0.000	0.00	0.00	0.00	0.0	0.000
24.800	0.000	0.00	0.00	0.00	0.0	0.000
24.816	0.000	0.00	0.00	0.00	0.0	0.000
24.833	0.000	0.00	0.00	0.00	0.0	0.000
24.850	0.000	0.00	0.00	0.00	0.0	0.000
24.866	0.000	0.00	0.00	0.00	0.0	0.000
24.883	0.000	0.00	0.00	0.00	0.0	0.000
24.900	0.000	0.00	0.00	0.00	0.0	0.000
24.916	0.000	0.00	0.00	0.00	0.0	0.000

24.933	0.000	0.00	0.00	0.00	0.0	0.000
24.950	0.000	0.00	0.00	0.00	0.0	0.000
24.966	0.000	0.00	0.00	0.00	0.0	0.000
24.983	0.000	0.00	0.00	0.00	0.0	0.000
25.000	0.000	0.00	0.00	0.00	0.0	0.000
25.016	0.000	0.00	0.00	0.00	0.0	0.000
25.033	0.000	0.00	0.00	0.00	0.0	0.000
25.050	0.000	0.00	0.00	0.00	0.0	0.000
25.066	0.000	0.00	0.00	0.00	0.0	0.000
25.083	0.000	0.00	0.00	0.00	0.0	0.000
25.100	0.000	0.00	0.00	0.00	0.0	0.000
25.116	0.000	0.00	0.00	0.00	0.0	0.000
25.133	0.000	0.00	0.00	0.00	0.0	0.000
25.150	0.000	0.00	0.00	0.00	0.0	0.000
25.166	0.000	0.00	0.00	0.00	0.0	0.000
25.183	0.000	0.00	0.00	0.00	0.0	0.000
25.200	0.000	0.00	0.00	0.00	0.0	0.000
25.216	0.000	0.00	0.00	0.00	0.0	0.000
25.233	0.000	0.00	0.00	0.00	0.0	0.000
25.250	0.000	0.00	0.00	0.00	0.0	0.000
25.266	0.000	0.00	0.00	0.00	0.0	0.000
25.283	0.000	0.00	0.00	0.00	0.0	0.000
25.300	0.000	0.00	0.00	0.00	0.0	0.000
25.316	0.000	0.00	0.00	0.00	0.0	0.000
25.333	0.000	0.00	0.00	0.00	0.0	0.000
25.350	0.000	0.00	0.00	0.00	0.0	0.000
25.366	0.000	0.00	0.00	0.00	0.0	0.000
25.383	0.000	0.00	0.00	0.00	0.0	0.000
25.400	0.000	0.00	0.00	0.00	0.0	0.000
25.416	0.000	0.00	0.00	0.00	0.0	0.000
25.433	0.000	0.00	0.00	0.00	0.0	0.000
25.450	0.000	0.00	0.00	0.00	0.0	0.000
25.466	0.000	0.00	0.00	0.00	0.0	0.000
25.483	0.000	0.00	0.00	0.00	0.0	0.000
25.500	0.000	0.00	0.00	0.00	0.0	0.000
25.516	0.000	0.00	0.00	0.00	0.0	0.000
25.533	0.000	0.00	0.00	0.00	0.0	0.000
25.550	0.000	0.00	0.00	0.00	0.0	0.000
25.566	0.000	0.00	0.00	0.00	0.0	0.000
25.583	0.000	0.00	0.00	0.00	0.0	0.000
25.600	0.000	0.00	0.00	0.00	0.0	0.000
25.616	0.000	0.00	0.00	0.00	0.0	0.000
25.633	0.000	0.00	0.00	0.00	0.0	0.000
25.650	0.000	0.00	0.00	0.00	0.0	0.000
25.666	0.000	0.00	0.00	0.00	0.0	0.000
25.683	0.000	0.00	0.00	0.00	0.0	0.000
25.700	0.000	0.00	0.00	0.00	0.0	0.000
25.716	0.000	0.00	0.00	0.00	0.0	0.000
25.733	0.000	0.00	0.00	0.00	0.0	0.000
25.750	0.000	0.00	0.00	0.00	0.0	0.000

25.766	0.000	0.00	0.00	0.00	0.0	0.000
25.783	0.000	0.00	0.00	0.00	0.0	0.000
25.800	0.000	0.00	0.00	0.00	0.0	0.000
25.816	0.000	0.00	0.00	0.00	0.0	0.000
25.833	0.000	0.00	0.00	0.00	0.0	0.000
25.850	0.000	0.00	0.00	0.00	0.0	0.000
25.866	0.000	0.00	0.00	0.00	0.0	0.000
25.883	0.000	0.00	0.00	0.00	0.0	0.000
25.900	0.000	0.00	0.00	0.00	0.0	0.000
25.916	0.000	0.00	0.00	0.00	0.0	0.000
25.933	0.000	0.00	0.00	0.00	0.0	0.000
25.950	0.000	0.00	0.00	0.00	0.0	0.000
25.966	0.000	0.00	0.00	0.00	0.0	0.000
25.983	0.000	0.00	0.00	0.00	0.0	0.000
26.000	0.000	0.00	0.00	0.00	0.0	0.000
26.016	0.000	0.00	0.00	0.00	0.0	0.000
26.033	0.000	0.00	0.00	0.00	0.0	0.000
26.050	0.000	0.00	0.00	0.00	0.0	0.000
26.066	0.000	0.00	0.00	0.00	0.0	0.000
26.083	0.000	0.00	0.00	0.00	0.0	0.000
26.100	0.000	0.00	0.00	0.00	0.0	0.000
26.116	0.000	0.00	0.00	0.00	0.0	0.000
26.133	0.000	0.00	0.00	0.00	0.0	0.000
26.150	0.000	0.00	0.00	0.00	0.0	0.000
26.166	0.000	0.00	0.00	0.00	0.0	0.000
26.183	0.000	0.00	0.00	0.00	0.0	0.000
26.200	0.000	0.00	0.00	0.00	0.0	0.000
26.216	0.000	0.00	0.00	0.00	0.0	0.000
26.233	0.000	0.00	0.00	0.00	0.0	0.000
26.250	0.000	0.00	0.00	0.00	0.0	0.000
26.266	0.000	0.00	0.00	0.00	0.0	0.000
26.283	0.000	0.00	0.00	0.00	0.0	0.000
26.300	0.000	0.00	0.00	0.00	0.0	0.000
26.316	0.000	0.00	0.00	0.00	0.0	0.000
26.333	0.000	0.00	0.00	0.00	0.0	0.000
26.350	0.000	0.00	0.00	0.00	0.0	0.000
26.366	0.000	0.00	0.00	0.00	0.0	0.000
26.383	0.000	0.00	0.00	0.00	0.0	0.000
26.400	0.000	0.00	0.00	0.00	0.0	0.000
26.416	0.000	0.00	0.00	0.00	0.0	0.000
26.433	0.000	0.00	0.00	0.00	0.0	0.000
26.450	0.000	0.00	0.00	0.00	0.0	0.000
26.466	0.000	0.00	0.00	0.00	0.0	0.000
26.483	0.000	0.00	0.00	0.00	0.0	0.000
26.500	0.000	0.00	0.00	0.00	0.0	0.000
26.516	0.000	0.00	0.00	0.00	0.0	0.000
26.533	0.000	0.00	0.00	0.00	0.0	0.000
26.550	0.000	0.00	0.00	0.00	0.0	0.000
26.566	0.000	0.00	0.00	0.00	0.0	0.000
26.583	0.000	0.00	0.00	0.00	0.0	0.000

26.600	0.000	0.00	0.00	0.00	0.0	0.000
26.616	0.000	0.00	0.00	0.00	0.0	0.000
26.633	0.000	0.00	0.00	0.00	0.0	0.000
26.650	0.000	0.00	0.00	0.00	0.0	0.000
26.666	0.000	0.00	0.00	0.00	0.0	0.000
26.683	0.000	0.00	0.00	0.00	0.0	0.000
26.700	0.000	0.00	0.00	0.00	0.0	0.000
26.716	0.000	0.00	0.00	0.00	0.0	0.000
26.733	0.000	0.00	0.00	0.00	0.0	0.000
26.750	0.000	0.00	0.00	0.00	0.0	0.000
26.766	0.000	0.00	0.00	0.00	0.0	0.000
26.783	0.000	0.00	0.00	0.00	0.0	0.000
26.800	0.000	0.00	0.00	0.00	0.0	0.000
26.816	0.000	0.00	0.00	0.00	0.0	0.000
26.833	0.000	0.00	0.00	0.00	0.0	0.000
26.850	0.000	0.00	0.00	0.00	0.0	0.000
26.866	0.000	0.00	0.00	0.00	0.0	0.000
26.883	0.000	0.00	0.00	0.00	0.0	0.000
26.900	0.000	0.00	0.00	0.00	0.0	0.000
26.916	0.000	0.00	0.00	0.00	0.0	0.000
26.933	0.000	0.00	0.00	0.00	0.0	0.000
26.950	0.000	0.00	0.00	0.00	0.0	0.000
26.966	0.000	0.00	0.00	0.00	0.0	0.000
26.983	0.000	0.00	0.00	0.00	0.0	0.000
27.000	0.000	0.00	0.00	0.00	0.0	0.000
27.016	0.000	0.00	0.00	0.00	0.0	0.000
27.033	0.000	0.00	0.00	0.00	0.0	0.000
27.050	0.000	0.00	0.00	0.00	0.0	0.000
27.066	0.000	0.00	0.00	0.00	0.0	0.000
27.083	0.000	0.00	0.00	0.00	0.0	0.000
27.100	0.000	0.00	0.00	0.00	0.0	0.000
27.116	0.000	0.00	0.00	0.00	0.0	0.000
27.133	0.000	0.00	0.00	0.00	0.0	0.000
27.150	0.000	0.00	0.00	0.00	0.0	0.000
27.166	0.000	0.00	0.00	0.00	0.0	0.000
27.183	0.000	0.00	0.00	0.00	0.0	0.000
27.200	0.000	0.00	0.00	0.00	0.0	0.000
27.216	0.000	0.00	0.00	0.00	0.0	0.000
27.233	0.000	0.00	0.00	0.00	0.0	0.000
27.250	0.000	0.00	0.00	0.00	0.0	0.000
27.266	0.000	0.00	0.00	0.00	0.0	0.000
27.283	0.000	0.00	0.00	0.00	0.0	0.000
27.300	0.000	0.00	0.00	0.00	0.0	0.000
27.316	0.000	0.00	0.00	0.00	0.0	0.000
27.333	0.000	0.00	0.00	0.00	0.0	0.000
27.350	0.000	0.00	0.00	0.00	0.0	0.000
27.366	0.000	0.00	0.00	0.00	0.0	0.000
27.383	0.000	0.00	0.00	0.00	0.0	0.000
27.400	0.000	0.00	0.00	0.00	0.0	0.000
27.416	0.000	0.00	0.00	0.00	0.0	0.000

27.433	0.000	0.00	0.00	0.00	0.0	0.000
27.450	0.000	0.00	0.00	0.00	0.0	0.000
27.466	0.000	0.00	0.00	0.00	0.0	0.000
27.483	0.000	0.00	0.00	0.00	0.0	0.000
27.500	0.000	0.00	0.00	0.00	0.0	0.000
27.516	0.000	0.00	0.00	0.00	0.0	0.000
27.533	0.000	0.00	0.00	0.00	0.0	0.000
27.550	0.000	0.00	0.00	0.00	0.0	0.000
27.566	0.000	0.00	0.00	0.00	0.0	0.000
27.583	0.000	0.00	0.00	0.00	0.0	0.000
27.600	0.000	0.00	0.00	0.00	0.0	0.000
27.616	0.000	0.00	0.00	0.00	0.0	0.000
27.633	0.000	0.00	0.00	0.00	0.0	0.000
27.650	0.000	0.00	0.00	0.00	0.0	0.000
27.666	0.000	0.00	0.00	0.00	0.0	0.000
27.683	0.000	0.00	0.00	0.00	0.0	0.000
27.700	0.000	0.00	0.00	0.00	0.0	0.000
27.716	0.000	0.00	0.00	0.00	0.0	0.000
27.733	0.000	0.00	0.00	0.00	0.0	0.000
27.750	0.000	0.00	0.00	0.00	0.0	0.000
27.766	0.000	0.00	0.00	0.00	0.0	0.000
27.783	0.000	0.00	0.00	0.00	0.0	0.000
27.800	0.000	0.00	0.00	0.00	0.0	0.000
27.816	0.000	0.00	0.00	0.00	0.0	0.000
27.833	0.000	0.00	0.00	0.00	0.0	0.000
27.850	0.000	0.00	0.00	0.00	0.0	0.000
27.866	0.000	0.00	0.00	0.00	0.0	0.000
27.883	0.000	0.00	0.00	0.00	0.0	0.000
27.900	0.000	0.00	0.00	0.00	0.0	0.000
27.916	0.000	0.00	0.00	0.00	0.0	0.000
27.933	0.000	0.00	0.00	0.00	0.0	0.000
27.950	0.000	0.00	0.00	0.00	0.0	0.000
27.966	0.000	0.00	0.00	0.00	0.0	0.000
27.983	0.000	0.00	0.00	0.00	0.0	0.000
28.000	0.000	0.00	0.00	0.00	0.0	0.000
28.016	0.000	0.00	0.00	0.00	0.0	0.000
28.033	0.000	0.00	0.00	0.00	0.0	0.000
28.050	0.000	0.00	0.00	0.00	0.0	0.000
28.066	0.000	0.00	0.00	0.00	0.0	0.000
28.083	0.000	0.00	0.00	0.00	0.0	0.000
28.100	0.000	0.00	0.00	0.00	0.0	0.000
28.116	0.000	0.00	0.00	0.00	0.0	0.000
28.133	0.000	0.00	0.00	0.00	0.0	0.000
28.150	0.000	0.00	0.00	0.00	0.0	0.000
28.166	0.000	0.00	0.00	0.00	0.0	0.000
28.183	0.000	0.00	0.00	0.00	0.0	0.000
28.200	0.000	0.00	0.00	0.00	0.0	0.000
28.216	0.000	0.00	0.00	0.00	0.0	0.000
28.233	0.000	0.00	0.00	0.00	0.0	0.000
28.250	0.000	0.00	0.00	0.00	0.0	0.000

28.266	0.000	0.00	0.00	0.00	0.0	0.000
28.283	0.000	0.00	0.00	0.00	0.0	0.000
28.300	0.000	0.00	0.00	0.00	0.0	0.000
28.316	0.000	0.00	0.00	0.00	0.0	0.000
28.333	0.000	0.00	0.00	0.00	0.0	0.000
28.350	0.000	0.00	0.00	0.00	0.0	0.000
28.366	0.000	0.00	0.00	0.00	0.0	0.000
28.383	0.000	0.00	0.00	0.00	0.0	0.000
28.400	0.000	0.00	0.00	0.00	0.0	0.000
28.416	0.000	0.00	0.00	0.00	0.0	0.000
28.433	0.000	0.00	0.00	0.00	0.0	0.000
28.450	0.000	0.00	0.00	0.00	0.0	0.000
28.466	0.000	0.00	0.00	0.00	0.0	0.000
28.483	0.000	0.00	0.00	0.00	0.0	0.000
28.500	0.000	0.00	0.00	0.00	0.0	0.000
28.516	0.000	0.00	0.00	0.00	0.0	0.000
28.533	0.000	0.00	0.00	0.00	0.0	0.000
28.550	0.000	0.00	0.00	0.00	0.0	0.000
28.566	0.000	0.00	0.00	0.00	0.0	0.000
28.583	0.000	0.00	0.00	0.00	0.0	0.000
28.600	0.000	0.00	0.00	0.00	0.0	0.000
28.616	0.000	0.00	0.00	0.00	0.0	0.000
28.633	0.000	0.00	0.00	0.00	0.0	0.000
28.650	0.000	0.00	0.00	0.00	0.0	0.000
28.666	0.000	0.00	0.00	0.00	0.0	0.000
28.683	0.000	0.00	0.00	0.00	0.0	0.000
28.700	0.000	0.00	0.00	0.00	0.0	0.000
28.716	0.000	0.00	0.00	0.00	0.0	0.000
28.733	0.000	0.00	0.00	0.00	0.0	0.000
28.750	0.000	0.00	0.00	0.00	0.0	0.000
28.766	0.000	0.00	0.00	0.00	0.0	0.000
28.783	0.000	0.00	0.00	0.00	0.0	0.000
28.800	0.000	0.00	0.00	0.00	0.0	0.000
28.816	0.000	0.00	0.00	0.00	0.0	0.000
28.833	0.000	0.00	0.00	0.00	0.0	0.000
28.850	0.000	0.00	0.00	0.00	0.0	0.000
28.866	0.000	0.00	0.00	0.00	0.0	0.000
28.883	0.000	0.00	0.00	0.00	0.0	0.000
28.900	0.000	0.00	0.00	0.00	0.0	0.000
28.916	0.000	0.00	0.00	0.00	0.0	0.000
28.933	0.000	0.00	0.00	0.00	0.0	0.000
28.950	0.000	0.00	0.00	0.00	0.0	0.000
28.966	0.000	0.00	0.00	0.00	0.0	0.000
28.983	0.000	0.00	0.00	0.00	0.0	0.000
29.000	0.000	0.00	0.00	0.00	0.0	0.000
29.016	0.000	0.00	0.00	0.00	0.0	0.000
29.033	0.000	0.00	0.00	0.00	0.0	0.000
29.050	0.000	0.00	0.00	0.00	0.0	0.000
29.066	0.000	0.00	0.00	0.00	0.0	0.000
29.083	0.000	0.00	0.00	0.00	0.0	0.000

29.100	0.000	0.00	0.00	0.00	0.0	0.000
29.116	0.000	0.00	0.00	0.00	0.0	0.000
29.133	0.000	0.00	0.00	0.00	0.0	0.000
29.150	0.000	0.00	0.00	0.00	0.0	0.000
29.166	0.000	0.00	0.00	0.00	0.0	0.000
29.183	0.000	0.00	0.00	0.00	0.0	0.000
29.200	0.000	0.00	0.00	0.00	0.0	0.000
29.216	0.000	0.00	0.00	0.00	0.0	0.000
29.233	0.000	0.00	0.00	0.00	0.0	0.000
29.250	0.000	0.00	0.00	0.00	0.0	0.000
29.266	0.000	0.00	0.00	0.00	0.0	0.000
29.283	0.000	0.00	0.00	0.00	0.0	0.000
29.300	0.000	0.00	0.00	0.00	0.0	0.000
29.316	0.000	0.00	0.00	0.00	0.0	0.000
29.333	0.000	0.00	0.00	0.00	0.0	0.000
29.350	0.000	0.00	0.00	0.00	0.0	0.000
29.366	0.000	0.00	0.00	0.00	0.0	0.000
29.383	0.000	0.00	0.00	0.00	0.0	0.000
29.400	0.000	0.00	0.00	0.00	0.0	0.000
29.416	0.000	0.00	0.00	0.00	0.0	0.000
29.433	0.000	0.00	0.00	0.00	0.0	0.000
29.450	0.000	0.00	0.00	0.00	0.0	0.000
29.466	0.000	0.00	0.00	0.00	0.0	0.000
29.483	0.000	0.00	0.00	0.00	0.0	0.000
29.500	0.000	0.00	0.00	0.00	0.0	0.000
29.516	0.000	0.00	0.00	0.00	0.0	0.000
29.533	0.000	0.00	0.00	0.00	0.0	0.000
29.550	0.000	0.00	0.00	0.00	0.0	0.000
29.566	0.000	0.00	0.00	0.00	0.0	0.000
29.583	0.000	0.00	0.00	0.00	0.0	0.000
29.600	0.000	0.00	0.00	0.00	0.0	0.000
29.616	0.000	0.00	0.00	0.00	0.0	0.000
29.633	0.000	0.00	0.00	0.00	0.0	0.000
29.650	0.000	0.00	0.00	0.00	0.0	0.000
29.666	0.000	0.00	0.00	0.00	0.0	0.000
29.683	0.000	0.00	0.00	0.00	0.0	0.000
29.700	0.000	0.00	0.00	0.00	0.0	0.000
29.716	0.000	0.00	0.00	0.00	0.0	0.000
29.733	0.000	0.00	0.00	0.00	0.0	0.000
29.750	0.000	0.00	0.00	0.00	0.0	0.000
29.766	0.000	0.00	0.00	0.00	0.0	0.000
29.783	0.000	0.00	0.00	0.00	0.0	0.000
29.800	0.000	0.00	0.00	0.00	0.0	0.000
29.816	0.000	0.00	0.00	0.00	0.0	0.000
29.833	0.000	0.00	0.00	0.00	0.0	0.000
29.850	0.000	0.00	0.00	0.00	0.0	0.000
29.866	0.000	0.00	0.00	0.00	0.0	0.000
29.883	0.000	0.00	0.00	0.00	0.0	0.000
29.900	0.000	0.00	0.00	0.00	0.0	0.000
29.916	0.000	0.00	0.00	0.00	0.0	0.000

29.933	0.000	0.00	0.00	0.00	0.0	0.000
29.950	0.000	0.00	0.00	0.00	0.0	0.000
29.966	0.000	0.00	0.00	0.00	0.0	0.000
29.983	0.000	0.00	0.00	0.00	0.0	0.000
30.000	0.000	0.00	0.00	0.00	0.0	0.000
30.016	0.000	0.00	0.00	0.00	0.0	0.000
30.033	0.000	0.00	0.00	0.00	0.0	0.000
30.050	0.000	0.00	0.00	0.00	0.0	0.000
30.066	0.000	0.00	0.00	0.00	0.0	0.000
30.083	0.000	0.00	0.00	0.00	0.0	0.000
30.100	0.000	0.00	0.00	0.00	0.0	0.000
30.116	0.000	0.00	0.00	0.00	0.0	0.000
30.133	0.000	0.00	0.00	0.00	0.0	0.000
30.150	0.000	0.00	0.00	0.00	0.0	0.000
30.166	0.000	0.00	0.00	0.00	0.0	0.000
30.183	0.000	0.00	0.00	0.00	0.0	0.000
30.200	0.000	0.00	0.00	0.00	0.0	0.000
30.216	0.000	0.00	0.00	0.00	0.0	0.000
30.233	0.000	0.00	0.00	0.00	0.0	0.000
30.250	0.000	0.00	0.00	0.00	0.0	0.000
30.266	0.000	0.00	0.00	0.00	0.0	0.000
30.283	0.000	0.00	0.00	0.00	0.0	0.000
30.300	0.000	0.00	0.00	0.00	0.0	0.000
30.316	0.000	0.00	0.00	0.00	0.0	0.000
30.333	0.000	0.00	0.00	0.00	0.0	0.000
30.350	0.000	0.00	0.00	0.00	0.0	0.000
30.366	0.000	0.00	0.00	0.00	0.0	0.000
30.383	0.000	0.00	0.00	0.00	0.0	0.000
30.400	0.000	0.00	0.00	0.00	0.0	0.000
30.416	0.000	0.00	0.00	0.00	0.0	0.000
30.433	0.000	0.00	0.00	0.00	0.0	0.000
30.450	0.000	0.00	0.00	0.00	0.0	0.000
30.466	0.000	0.00	0.00	0.00	0.0	0.000
30.483	0.000	0.00	0.00	0.00	0.0	0.000
30.500	0.000	0.00	0.00	0.00	0.0	0.000
30.516	0.000	0.00	0.00	0.00	0.0	0.000
30.533	0.000	0.00	0.00	0.00	0.0	0.000
30.550	0.000	0.00	0.00	0.00	0.0	0.000
30.566	0.000	0.00	0.00	0.00	0.0	0.000
30.583	0.000	0.00	0.00	0.00	0.0	0.000
30.600	0.000	0.00	0.00	0.00	0.0	0.000
30.616	0.000	0.00	0.00	0.00	0.0	0.000
30.633	0.000	0.00	0.00	0.00	0.0	0.000
30.650	0.000	0.00	0.00	0.00	0.0	0.000
30.666	0.000	0.00	0.00	0.00	0.0	0.000
30.683	0.000	0.00	0.00	0.00	0.0	0.000
30.700	0.000	0.00	0.00	0.00	0.0	0.000
30.716	0.000	0.00	0.00	0.00	0.0	0.000
30.733	0.000	0.00	0.00	0.00	0.0	0.000
30.750	0.000	0.00	0.00	0.00	0.0	0.000

30.766	0.000	0.00	0.00	0.00	0.0	0.000
30.783	0.000	0.00	0.00	0.00	0.0	0.000
30.800	0.000	0.00	0.00	0.00	0.0	0.000
30.816	0.000	0.00	0.00	0.00	0.0	0.000
30.833	0.000	0.00	0.00	0.00	0.0	0.000
30.850	0.000	0.00	0.00	0.00	0.0	0.000
30.866	0.000	0.00	0.00	0.00	0.0	0.000
30.883	0.000	0.00	0.00	0.00	0.0	0.000
30.900	0.000	0.00	0.00	0.00	0.0	0.000
30.916	0.000	0.00	0.00	0.00	0.0	0.000
30.933	0.000	0.00	0.00	0.00	0.0	0.000
30.950	0.000	0.00	0.00	0.00	0.0	0.000
30.966	0.000	0.00	0.00	0.00	0.0	0.000
30.983	0.000	0.00	0.00	0.00	0.0	0.000
31.000	0.000	0.00	0.00	0.00	0.0	0.000
31.016	0.000	0.00	0.00	0.00	0.0	0.000
31.033	0.000	0.00	0.00	0.00	0.0	0.000
31.050	0.000	0.00	0.00	0.00	0.0	0.000
31.066	0.000	0.00	0.00	0.00	0.0	0.000
31.083	0.000	0.00	0.00	0.00	0.0	0.000
31.100	0.000	0.00	0.00	0.00	0.0	0.000
31.116	0.000	0.00	0.00	0.00	0.0	0.000
31.133	0.000	0.00	0.00	0.00	0.0	0.000
31.150	0.000	0.00	0.00	0.00	0.0	0.000
31.166	0.000	0.00	0.00	0.00	0.0	0.000
31.183	0.000	0.00	0.00	0.00	0.0	0.000
31.200	0.000	0.00	0.00	0.00	0.0	0.000
31.216	0.000	0.00	0.00	0.00	0.0	0.000
31.233	0.000	0.00	0.00	0.00	0.0	0.000
31.250	0.000	0.00	0.00	0.00	0.0	0.000
31.266	0.000	0.00	0.00	0.00	0.0	0.000
31.283	0.000	0.00	0.00	0.00	0.0	0.000
31.300	0.000	0.00	0.00	0.00	0.0	0.000
31.316	0.000	0.00	0.00	0.00	0.0	0.000
31.333	0.000	0.00	0.00	0.00	0.0	0.000
31.350	0.000	0.00	0.00	0.00	0.0	0.000
31.366	0.000	0.00	0.00	0.00	0.0	0.000
31.383	0.000	0.00	0.00	0.00	0.0	0.000
31.400	0.000	0.00	0.00	0.00	0.0	0.000
31.416	0.000	0.00	0.00	0.00	0.0	0.000
31.433	0.000	0.00	0.00	0.00	0.0	0.000
31.450	0.000	0.00	0.00	0.00	0.0	0.000
31.466	0.000	0.00	0.00	0.00	0.0	0.000
31.483	0.000	0.00	0.00	0.00	0.0	0.000
31.500	0.000	0.00	0.00	0.00	0.0	0.000
31.516	0.000	0.00	0.00	0.00	0.0	0.000
31.533	0.000	0.00	0.00	0.00	0.0	0.000
31.550	0.000	0.00	0.00	0.00	0.0	0.000
31.566	0.000	0.00	0.00	0.00	0.0	0.000
31.583	0.000	0.00	0.00	0.00	0.0	0.000

31.600	0.000	0.00	0.00	0.00	0.0	0.000
31.616	0.000	0.00	0.00	0.00	0.0	0.000
31.633	0.000	0.00	0.00	0.00	0.0	0.000
31.650	0.000	0.00	0.00	0.00	0.0	0.000
31.666	0.000	0.00	0.00	0.00	0.0	0.000
31.683	0.000	0.00	0.00	0.00	0.0	0.000
31.700	0.000	0.00	0.00	0.00	0.0	0.000
31.716	0.000	0.00	0.00	0.00	0.0	0.000
31.733	0.000	0.00	0.00	0.00	0.0	0.000
31.750	0.000	0.00	0.00	0.00	0.0	0.000
31.766	0.000	0.00	0.00	0.00	0.0	0.000
31.783	0.000	0.00	0.00	0.00	0.0	0.000
31.800	0.000	0.00	0.00	0.00	0.0	0.000
31.816	0.000	0.00	0.00	0.00	0.0	0.000
31.833	0.000	0.00	0.00	0.00	0.0	0.000
31.850	0.000	0.00	0.00	0.00	0.0	0.000
31.866	0.000	0.00	0.00	0.00	0.0	0.000
31.883	0.000	0.00	0.00	0.00	0.0	0.000
31.900	0.000	0.00	0.00	0.00	0.0	0.000
31.916	0.000	0.00	0.00	0.00	0.0	0.000
31.933	0.000	0.00	0.00	0.00	0.0	0.000
31.950	0.000	0.00	0.00	0.00	0.0	0.000
31.966	0.000	0.00	0.00	0.00	0.0	0.000
31.983	0.000	0.00	0.00	0.00	0.0	0.000
32.000	0.000	0.00	0.00	0.00	0.0	0.000
32.016	0.000	0.00	0.00	0.00	0.0	0.000
32.033	0.000	0.00	0.00	0.00	0.0	0.000
32.050	0.000	0.00	0.00	0.00	0.0	0.000
32.066	0.000	0.00	0.00	0.00	0.0	0.000
32.083	0.000	0.00	0.00	0.00	0.0	0.000
32.100	0.000	0.00	0.00	0.00	0.0	0.000
32.116	0.000	0.00	0.00	0.00	0.0	0.000
32.133	0.000	0.00	0.00	0.00	0.0	0.000
32.150	0.000	0.00	0.00	0.00	0.0	0.000
32.166	0.000	0.00	0.00	0.00	0.0	0.000
32.183	0.000	0.00	0.00	0.00	0.0	0.000
32.200	0.000	0.00	0.00	0.00	0.0	0.000
32.216	0.000	0.00	0.00	0.00	0.0	0.000
32.233	0.000	0.00	0.00	0.00	0.0	0.000
32.250	0.000	0.00	0.00	0.00	0.0	0.000
32.266	0.000	0.00	0.00	0.00	0.0	0.000
32.283	0.000	0.00	0.00	0.00	0.0	0.000
32.300	0.000	0.00	0.00	0.00	0.0	0.000
32.316	0.000	0.00	0.00	0.00	0.0	0.000
32.333	0.000	0.00	0.00	0.00	0.0	0.000
32.350	0.000	0.00	0.00	0.00	0.0	0.000
32.366	0.000	0.00	0.00	0.00	0.0	0.000
32.383	0.000	0.00	0.00	0.00	0.0	0.000
32.400	0.000	0.00	0.00	0.00	0.0	0.000
32.416	0.000	0.00	0.00	0.00	0.0	0.000

32.433	0.000	0.00	0.00	0.00	0.0	0.000
32.450	0.000	0.00	0.00	0.00	0.0	0.000
32.466	0.000	0.00	0.00	0.00	0.0	0.000
32.483	0.000	0.00	0.00	0.00	0.0	0.000
32.500	0.000	0.00	0.00	0.00	0.0	0.000
32.516	0.000	0.00	0.00	0.00	0.0	0.000
32.533	0.000	0.00	0.00	0.00	0.0	0.000
32.550	0.000	0.00	0.00	0.00	0.0	0.000
32.566	0.000	0.00	0.00	0.00	0.0	0.000
32.583	0.000	0.00	0.00	0.00	0.0	0.000
32.600	0.000	0.00	0.00	0.00	0.0	0.000
32.616	0.000	0.00	0.00	0.00	0.0	0.000
32.633	0.000	0.00	0.00	0.00	0.0	0.000
32.650	0.000	0.00	0.00	0.00	0.0	0.000
32.666	0.000	0.00	0.00	0.00	0.0	0.000
32.683	0.000	0.00	0.00	0.00	0.0	0.000
32.700	0.000	0.00	0.00	0.00	0.0	0.000
32.716	0.000	0.00	0.00	0.00	0.0	0.000
32.733	0.000	0.00	0.00	0.00	0.0	0.000
32.750	0.000	0.00	0.00	0.00	0.0	0.000
32.766	0.000	0.00	0.00	0.00	0.0	0.000
32.783	0.000	0.00	0.00	0.00	0.0	0.000
32.800	0.000	0.00	0.00	0.00	0.0	0.000
32.816	0.000	0.00	0.00	0.00	0.0	0.000
32.833	0.000	0.00	0.00	0.00	0.0	0.000
32.850	0.000	0.00	0.00	0.00	0.0	0.000
32.866	0.000	0.00	0.00	0.00	0.0	0.000
32.883	0.000	0.00	0.00	0.00	0.0	0.000
32.900	0.000	0.00	0.00	0.00	0.0	0.000
32.916	0.000	0.00	0.00	0.00	0.0	0.000
32.933	0.000	0.00	0.00	0.00	0.0	0.000
32.950	0.000	0.00	0.00	0.00	0.0	0.000
32.966	0.000	0.00	0.00	0.00	0.0	0.000
32.983	0.000	0.00	0.00	0.00	0.0	0.000
33.000	0.000	0.00	0.00	0.00	0.0	0.000
33.016	0.000	0.00	0.00	0.00	0.0	0.000
33.033	0.000	0.00	0.00	0.00	0.0	0.000
33.050	0.000	0.00	0.00	0.00	0.0	0.000
33.066	0.000	0.00	0.00	0.00	0.0	0.000
33.083	0.000	0.00	0.00	0.00	0.0	0.000
33.100	0.000	0.00	0.00	0.00	0.0	0.000
33.116	0.000	0.00	0.00	0.00	0.0	0.000
33.133	0.000	0.00	0.00	0.00	0.0	0.000
33.150	0.000	0.00	0.00	0.00	0.0	0.000
33.166	0.000	0.00	0.00	0.00	0.0	0.000
33.183	0.000	0.00	0.00	0.00	0.0	0.000
33.200	0.000	0.00	0.00	0.00	0.0	0.000
33.216	0.000	0.00	0.00	0.00	0.0	0.000
33.233	0.000	0.00	0.00	0.00	0.0	0.000
33.250	0.000	0.00	0.00	0.00	0.0	0.000

33.266	0.000	0.00	0.00	0.00	0.0	0.000
33.283	0.000	0.00	0.00	0.00	0.0	0.000
33.300	0.000	0.00	0.00	0.00	0.0	0.000
33.316	0.000	0.00	0.00	0.00	0.0	0.000
33.333	0.000	0.00	0.00	0.00	0.0	0.000
33.350	0.000	0.00	0.00	0.00	0.0	0.000
33.366	0.000	0.00	0.00	0.00	0.0	0.000
33.383	0.000	0.00	0.00	0.00	0.0	0.000
33.400	0.000	0.00	0.00	0.00	0.0	0.000
33.416	0.000	0.00	0.00	0.00	0.0	0.000
33.433	0.000	0.00	0.00	0.00	0.0	0.000
33.450	0.000	0.00	0.00	0.00	0.0	0.000
33.466	0.000	0.00	0.00	0.00	0.0	0.000
33.483	0.000	0.00	0.00	0.00	0.0	0.000
33.500	0.000	0.00	0.00	0.00	0.0	0.000
33.516	0.000	0.00	0.00	0.00	0.0	0.000
33.533	0.000	0.00	0.00	0.00	0.0	0.000
33.550	0.000	0.00	0.00	0.00	0.0	0.000
33.566	0.000	0.00	0.00	0.00	0.0	0.000
33.583	0.000	0.00	0.00	0.00	0.0	0.000
33.600	0.000	0.00	0.00	0.00	0.0	0.000
33.616	0.000	0.00	0.00	0.00	0.0	0.000
33.633	0.000	0.00	0.00	0.00	0.0	0.000
33.650	0.000	0.00	0.00	0.00	0.0	0.000
33.666	0.000	0.00	0.00	0.00	0.0	0.000
33.683	0.000	0.00	0.00	0.00	0.0	0.000
33.700	0.000	0.00	0.00	0.00	0.0	0.000
33.716	0.000	0.00	0.00	0.00	0.0	0.000
33.733	0.000	0.00	0.00	0.00	0.0	0.000
33.750	0.000	0.00	0.00	0.00	0.0	0.000
33.766	0.000	0.00	0.00	0.00	0.0	0.000
33.783	0.000	0.00	0.00	0.00	0.0	0.000
33.800	0.000	0.00	0.00	0.00	0.0	0.000
33.816	0.000	0.00	0.00	0.00	0.0	0.000
33.833	0.000	0.00	0.00	0.00	0.0	0.000
33.850	0.000	0.00	0.00	0.00	0.0	0.000
33.866	0.000	0.00	0.00	0.00	0.0	0.000
33.883	0.000	0.00	0.00	0.00	0.0	0.000
33.900	0.000	0.00	0.00	0.00	0.0	0.000
33.916	0.000	0.00	0.00	0.00	0.0	0.000
33.933	0.000	0.00	0.00	0.00	0.0	0.000
33.950	0.000	0.00	0.00	0.00	0.0	0.000
33.966	0.000	0.00	0.00	0.00	0.0	0.000
33.983	0.000	0.00	0.00	0.00	0.0	0.000
34.000	0.000	0.00	0.00	0.00	0.0	0.000
34.016	0.000	0.00	0.00	0.00	0.0	0.000
34.033	0.000	0.00	0.00	0.00	0.0	0.000
34.050	0.000	0.00	0.00	0.00	0.0	0.000
34.066	0.000	0.00	0.00	0.00	0.0	0.000
34.083	0.000	0.00	0.00	0.00	0.0	0.000

34.100	0.000	0.00	0.00	0.00	0.0	0.000
34.116	0.000	0.00	0.00	0.00	0.0	0.000
34.133	0.000	0.00	0.00	0.00	0.0	0.000
34.150	0.000	0.00	0.00	0.00	0.0	0.000
34.166	0.000	0.00	0.00	0.00	0.0	0.000
34.183	0.000	0.00	0.00	0.00	0.0	0.000
34.200	0.000	0.00	0.00	0.00	0.0	0.000
34.216	0.000	0.00	0.00	0.00	0.0	0.000
34.233	0.000	0.00	0.00	0.00	0.0	0.000
34.250	0.000	0.00	0.00	0.00	0.0	0.000
34.266	0.000	0.00	0.00	0.00	0.0	0.000
34.283	0.000	0.00	0.00	0.00	0.0	0.000
34.300	0.000	0.00	0.00	0.00	0.0	0.000
34.316	0.000	0.00	0.00	0.00	0.0	0.000
34.333	0.000	0.00	0.00	0.00	0.0	0.000
34.350	0.000	0.00	0.00	0.00	0.0	0.000
34.366	0.000	0.00	0.00	0.00	0.0	0.000
34.383	0.000	0.00	0.00	0.00	0.0	0.000
34.400	0.000	0.00	0.00	0.00	0.0	0.000
34.416	0.000	0.00	0.00	0.00	0.0	0.000
34.433	0.000	0.00	0.00	0.00	0.0	0.000
34.450	0.000	0.00	0.00	0.00	0.0	0.000
34.466	0.000	0.00	0.00	0.00	0.0	0.000
34.483	0.000	0.00	0.00	0.00	0.0	0.000
34.500	0.000	0.00	0.00	0.00	0.0	0.000
34.516	0.000	0.00	0.00	0.00	0.0	0.000
34.533	0.000	0.00	0.00	0.00	0.0	0.000
34.550	0.000	0.00	0.00	0.00	0.0	0.000
34.566	0.000	0.00	0.00	0.00	0.0	0.000
34.583	0.000	0.00	0.00	0.00	0.0	0.000
34.600	0.000	0.00	0.00	0.00	0.0	0.000
34.616	0.000	0.00	0.00	0.00	0.0	0.000
34.633	0.000	0.00	0.00	0.00	0.0	0.000
34.650	0.000	0.00	0.00	0.00	0.0	0.000
34.666	0.000	0.00	0.00	0.00	0.0	0.000
34.683	0.000	0.00	0.00	0.00	0.0	0.000
34.700	0.000	0.00	0.00	0.00	0.0	0.000
34.716	0.000	0.00	0.00	0.00	0.0	0.000
34.733	0.000	0.00	0.00	0.00	0.0	0.000
34.750	0.000	0.00	0.00	0.00	0.0	0.000
34.766	0.000	0.00	0.00	0.00	0.0	0.000
34.783	0.000	0.00	0.00	0.00	0.0	0.000
34.800	0.000	0.00	0.00	0.00	0.0	0.000
34.816	0.000	0.00	0.00	0.00	0.0	0.000
34.833	0.000	0.00	0.00	0.00	0.0	0.000
34.850	0.000	0.00	0.00	0.00	0.0	0.000
34.866	0.000	0.00	0.00	0.00	0.0	0.000
34.883	0.000	0.00	0.00	0.00	0.0	0.000
34.900	0.000	0.00	0.00	0.00	0.0	0.000
34.916	0.000	0.00	0.00	0.00	0.0	0.000

34.933	0.000	0.00	0.00	0.00	0.0	0.000
34.950	0.000	0.00	0.00	0.00	0.0	0.000
34.966	0.000	0.00	0.00	0.00	0.0	0.000
34.983	0.000	0.00	0.00	0.00	0.0	0.000
35.000	0.000	0.00	0.00	0.00	0.0	0.000
35.016	0.000	0.00	0.00	0.00	0.0	0.000
35.033	0.000	0.00	0.00	0.00	0.0	0.000
35.050	0.000	0.00	0.00	0.00	0.0	0.000
35.066	0.000	0.00	0.00	0.00	0.0	0.000
35.083	0.000	0.00	0.00	0.00	0.0	0.000
35.100	0.000	0.00	0.00	0.00	0.0	0.000
35.116	0.000	0.00	0.00	0.00	0.0	0.000
35.133	0.000	0.00	0.00	0.00	0.0	0.000
35.150	0.000	0.00	0.00	0.00	0.0	0.000
35.166	0.000	0.00	0.00	0.00	0.0	0.000
35.183	0.000	0.00	0.00	0.00	0.0	0.000
35.200	0.000	0.00	0.00	0.00	0.0	0.000
35.216	0.000	0.00	0.00	0.00	0.0	0.000
35.233	0.000	0.00	0.00	0.00	0.0	0.000
35.250	0.000	0.00	0.00	0.00	0.0	0.000
35.266	0.000	0.00	0.00	0.00	0.0	0.000
35.283	0.000	0.00	0.00	0.00	0.0	0.000
35.300	0.000	0.00	0.00	0.00	0.0	0.000
35.316	0.000	0.00	0.00	0.00	0.0	0.000
35.333	0.000	0.00	0.00	0.00	0.0	0.000
35.350	0.000	0.00	0.00	0.00	0.0	0.000
35.366	0.000	0.00	0.00	0.00	0.0	0.000
35.383	0.000	0.00	0.00	0.00	0.0	0.000
35.400	0.000	0.00	0.00	0.00	0.0	0.000
35.416	0.000	0.00	0.00	0.00	0.0	0.000
35.433	0.000	0.00	0.00	0.00	0.0	0.000
35.450	0.000	0.00	0.00	0.00	0.0	0.000
35.466	0.000	0.00	0.00	0.00	0.0	0.000
35.483	0.000	0.00	0.00	0.00	0.0	0.000
35.500	0.000	0.00	0.00	0.00	0.0	0.000
35.516	0.000	0.00	0.00	0.00	0.0	0.000
35.533	0.000	0.00	0.00	0.00	0.0	0.000
35.550	0.000	0.00	0.00	0.00	0.0	0.000
35.566	0.000	0.00	0.00	0.00	0.0	0.000
35.583	0.000	0.00	0.00	0.00	0.0	0.000
35.600	0.000	0.00	0.00	0.00	0.0	0.000
35.616	0.000	0.00	0.00	0.00	0.0	0.000
35.633	0.000	0.00	0.00	0.00	0.0	0.000
35.650	0.000	0.00	0.00	0.00	0.0	0.000
35.666	0.000	0.00	0.00	0.00	0.0	0.000
35.683	0.000	0.00	0.00	0.00	0.0	0.000
35.700	0.000	0.00	0.00	0.00	0.0	0.000
35.716	0.000	0.00	0.00	0.00	0.0	0.000
35.733	0.000	0.00	0.00	0.00	0.0	0.000
35.750	0.000	0.00	0.00	0.00	0.0	0.000

35.766	0.000	0.00	0.00	0.00	0.0	0.000
35.783	0.000	0.00	0.00	0.00	0.0	0.000
35.800	0.000	0.00	0.00	0.00	0.0	0.000
35.816	0.000	0.00	0.00	0.00	0.0	0.000
35.833	0.000	0.00	0.00	0.00	0.0	0.000
35.850	0.000	0.00	0.00	0.00	0.0	0.000
35.866	0.000	0.00	0.00	0.00	0.0	0.000
35.883	0.000	0.00	0.00	0.00	0.0	0.000
35.900	0.000	0.00	0.00	0.00	0.0	0.000
35.916	0.000	0.00	0.00	0.00	0.0	0.000
35.933	0.000	0.00	0.00	0.00	0.0	0.000
35.950	0.000	0.00	0.00	0.00	0.0	0.000
35.966	0.000	0.00	0.00	0.00	0.0	0.000
35.983	0.000	0.00	0.00	0.00	0.0	0.000
36.000	0.000	0.00	0.00	0.00	0.0	0.000
36.016	0.000	0.00	0.00	0.00	0.0	0.000
36.033	0.000	0.00	0.00	0.00	0.0	0.000
36.050	0.000	0.00	0.00	0.00	0.0	0.000
36.066	0.000	0.00	0.00	0.00	0.0	0.000
36.083	0.000	0.00	0.00	0.00	0.0	0.000
36.100	0.000	0.00	0.00	0.00	0.0	0.000
36.116	0.000	0.00	0.00	0.00	0.0	0.000
36.133	0.000	0.00	0.00	0.00	0.0	0.000
36.150	0.000	0.00	0.00	0.00	0.0	0.000
36.166	0.000	0.00	0.00	0.00	0.0	0.000
36.183	0.000	0.00	0.00	0.00	0.0	0.000
36.200	0.000	0.00	0.00	0.00	0.0	0.000
36.216	0.000	0.00	0.00	0.00	0.0	0.000
36.233	0.000	0.00	0.00	0.00	0.0	0.000
36.250	0.000	0.00	0.00	0.00	0.0	0.000
36.266	0.000	0.00	0.00	0.00	0.0	0.000
36.283	0.000	0.00	0.00	0.00	0.0	0.000
36.300	0.000	0.00	0.00	0.00	0.0	0.000
36.316	0.000	0.00	0.00	0.00	0.0	0.000
36.333	0.000	0.00	0.00	0.00	0.0	0.000
36.350	0.000	0.00	0.00	0.00	0.0	0.000
36.366	0.000	0.00	0.00	0.00	0.0	0.000
36.383	0.000	0.00	0.00	0.00	0.0	0.000
36.400	0.000	0.00	0.00	0.00	0.0	0.000
36.416	0.000	0.00	0.00	0.00	0.0	0.000
36.433	0.000	0.00	0.00	0.00	0.0	0.000
36.450	0.000	0.00	0.00	0.00	0.0	0.000
36.466	0.000	0.00	0.00	0.00	0.0	0.000
36.483	0.000	0.00	0.00	0.00	0.0	0.000
36.500	0.000	0.00	0.00	0.00	0.0	0.000
36.516	0.000	0.00	0.00	0.00	0.0	0.000
36.533	0.000	0.00	0.00	0.00	0.0	0.000
36.550	0.000	0.00	0.00	0.00	0.0	0.000
36.566	0.000	0.00	0.00	0.00	0.0	0.000
36.583	0.000	0.00	0.00	0.00	0.0	0.000

36.600	0.000	0.00	0.00	0.00	0.0	0.000
36.616	0.000	0.00	0.00	0.00	0.0	0.000
36.633	0.000	0.00	0.00	0.00	0.0	0.000
36.650	0.000	0.00	0.00	0.00	0.0	0.000
36.666	0.000	0.00	0.00	0.00	0.0	0.000
36.683	0.000	0.00	0.00	0.00	0.0	0.000
36.700	0.000	0.00	0.00	0.00	0.0	0.000
36.716	0.000	0.00	0.00	0.00	0.0	0.000
36.733	0.000	0.00	0.00	0.00	0.0	0.000
36.750	0.000	0.00	0.00	0.00	0.0	0.000
36.766	0.000	0.00	0.00	0.00	0.0	0.000
36.783	0.000	0.00	0.00	0.00	0.0	0.000
36.800	0.000	0.00	0.00	0.00	0.0	0.000
36.816	0.000	0.00	0.00	0.00	0.0	0.000
36.833	0.000	0.00	0.00	0.00	0.0	0.000
36.850	0.000	0.00	0.00	0.00	0.0	0.000
36.866	0.000	0.00	0.00	0.00	0.0	0.000
36.883	0.000	0.00	0.00	0.00	0.0	0.000
36.900	0.000	0.00	0.00	0.00	0.0	0.000
36.916	0.000	0.00	0.00	0.00	0.0	0.000
36.933	0.000	0.00	0.00	0.00	0.0	0.000
36.950	0.000	0.00	0.00	0.00	0.0	0.000
36.966	0.000	0.00	0.00	0.00	0.0	0.000
36.983	0.000	0.00	0.00	0.00	0.0	0.000
37.000	0.000	0.00	0.00	0.00	0.0	0.000
37.016	0.000	0.00	0.00	0.00	0.0	0.000
37.033	0.000	0.00	0.00	0.00	0.0	0.000
37.050	0.000	0.00	0.00	0.00	0.0	0.000
37.066	0.000	0.00	0.00	0.00	0.0	0.000
37.083	0.000	0.00	0.00	0.00	0.0	0.000
37.100	0.000	0.00	0.00	0.00	0.0	0.000
37.116	0.000	0.00	0.00	0.00	0.0	0.000
37.133	0.000	0.00	0.00	0.00	0.0	0.000
37.150	0.000	0.00	0.00	0.00	0.0	0.000
37.166	0.000	0.00	0.00	0.00	0.0	0.000
37.183	0.000	0.00	0.00	0.00	0.0	0.000
37.200	0.000	0.00	0.00	0.00	0.0	0.000
37.216	0.000	0.00	0.00	0.00	0.0	0.000
37.233	0.000	0.00	0.00	0.00	0.0	0.000
37.250	0.000	0.00	0.00	0.00	0.0	0.000
37.266	0.000	0.00	0.00	0.00	0.0	0.000
37.283	0.000	0.00	0.00	0.00	0.0	0.000
37.300	0.000	0.00	0.00	0.00	0.0	0.000
37.316	0.000	0.00	0.00	0.00	0.0	0.000
37.333	0.000	0.00	0.00	0.00	0.0	0.000
37.350	0.000	0.00	0.00	0.00	0.0	0.000
37.366	0.000	0.00	0.00	0.00	0.0	0.000
37.383	0.000	0.00	0.00	0.00	0.0	0.000
37.400	0.000	0.00	0.00	0.00	0.0	0.000
37.416	0.000	0.00	0.00	0.00	0.0	0.000

37.433	0.000	0.00	0.00	0.00	0.0	0.000
37.450	0.000	0.00	0.00	0.00	0.0	0.000
37.466	0.000	0.00	0.00	0.00	0.0	0.000
37.483	0.000	0.00	0.00	0.00	0.0	0.000
37.500	0.000	0.00	0.00	0.00	0.0	0.000
37.516	0.000	0.00	0.00	0.00	0.0	0.000
37.533	0.000	0.00	0.00	0.00	0.0	0.000
37.550	0.000	0.00	0.00	0.00	0.0	0.000
37.566	0.000	0.00	0.00	0.00	0.0	0.000
37.583	0.000	0.00	0.00	0.00	0.0	0.000
37.600	0.000	0.00	0.00	0.00	0.0	0.000
37.616	0.000	0.00	0.00	0.00	0.0	0.000
37.633	0.000	0.00	0.00	0.00	0.0	0.000
37.650	0.000	0.00	0.00	0.00	0.0	0.000
37.666	0.000	0.00	0.00	0.00	0.0	0.000
37.683	0.000	0.00	0.00	0.00	0.0	0.000
37.700	0.000	0.00	0.00	0.00	0.0	0.000
37.716	0.000	0.00	0.00	0.00	0.0	0.000
37.733	0.000	0.00	0.00	0.00	0.0	0.000
37.750	0.000	0.00	0.00	0.00	0.0	0.000
37.766	0.000	0.00	0.00	0.00	0.0	0.000
37.783	0.000	0.00	0.00	0.00	0.0	0.000
37.800	0.000	0.00	0.00	0.00	0.0	0.000
37.816	0.000	0.00	0.00	0.00	0.0	0.000
37.833	0.000	0.00	0.00	0.00	0.0	0.000
37.850	0.000	0.00	0.00	0.00	0.0	0.000
37.866	0.000	0.00	0.00	0.00	0.0	0.000
37.883	0.000	0.00	0.00	0.00	0.0	0.000
37.900	0.000	0.00	0.00	0.00	0.0	0.000
37.916	0.000	0.00	0.00	0.00	0.0	0.000
37.933	0.000	0.00	0.00	0.00	0.0	0.000
37.950	0.000	0.00	0.00	0.00	0.0	0.000
37.966	0.000	0.00	0.00	0.00	0.0	0.000
37.983	0.000	0.00	0.00	0.00	0.0	0.000
38.000	0.000	0.00	0.00	0.00	0.0	0.000
38.016	0.000	0.00	0.00	0.00	0.0	0.000
38.033	0.000	0.00	0.00	0.00	0.0	0.000
38.050	0.000	0.00	0.00	0.00	0.0	0.000
38.066	0.000	0.00	0.00	0.00	0.0	0.000
38.083	0.000	0.00	0.00	0.00	0.0	0.000
38.100	0.000	0.00	0.00	0.00	0.0	0.000
38.116	0.000	0.00	0.00	0.00	0.0	0.000
38.133	0.000	0.00	0.00	0.00	0.0	0.000
38.150	0.000	0.00	0.00	0.00	0.0	0.000
38.166	0.000	0.00	0.00	0.00	0.0	0.000
38.183	0.000	0.00	0.00	0.00	0.0	0.000
38.200	0.000	0.00	0.00	0.00	0.0	0.000
38.216	0.000	0.00	0.00	0.00	0.0	0.000
38.233	0.000	0.00	0.00	0.00	0.0	0.000
38.250	0.000	0.00	0.00	0.00	0.0	0.000

38.266	0.000	0.00	0.00	0.00	0.0	0.000
38.283	0.000	0.00	0.00	0.00	0.0	0.000
38.300	0.000	0.00	0.00	0.00	0.0	0.000
38.316	0.000	0.00	0.00	0.00	0.0	0.000
38.333	0.000	0.00	0.00	0.00	0.0	0.000
38.350	0.000	0.00	0.00	0.00	0.0	0.000
38.366	0.000	0.00	0.00	0.00	0.0	0.000
38.383	0.000	0.00	0.00	0.00	0.0	0.000
38.400	0.000	0.00	0.00	0.00	0.0	0.000
38.416	0.000	0.00	0.00	0.00	0.0	0.000
38.433	0.000	0.00	0.00	0.00	0.0	0.000
38.450	0.000	0.00	0.00	0.00	0.0	0.000
38.466	0.000	0.00	0.00	0.00	0.0	0.000
38.483	0.000	0.00	0.00	0.00	0.0	0.000
38.500	0.000	0.00	0.00	0.00	0.0	0.000
38.516	0.000	0.00	0.00	0.00	0.0	0.000
38.533	0.000	0.00	0.00	0.00	0.0	0.000
38.550	0.000	0.00	0.00	0.00	0.0	0.000
38.566	0.000	0.00	0.00	0.00	0.0	0.000
38.583	0.000	0.00	0.00	0.00	0.0	0.000
38.600	0.000	0.00	0.00	0.00	0.0	0.000
38.616	0.000	0.00	0.00	0.00	0.0	0.000
38.633	0.000	0.00	0.00	0.00	0.0	0.000
38.650	0.000	0.00	0.00	0.00	0.0	0.000
38.666	0.000	0.00	0.00	0.00	0.0	0.000
38.683	0.000	0.00	0.00	0.00	0.0	0.000
38.700	0.000	0.00	0.00	0.00	0.0	0.000
38.716	0.000	0.00	0.00	0.00	0.0	0.000
38.733	0.000	0.00	0.00	0.00	0.0	0.000
38.750	0.000	0.00	0.00	0.00	0.0	0.000
38.766	0.000	0.00	0.00	0.00	0.0	0.000
38.783	0.000	0.00	0.00	0.00	0.0	0.000
38.800	0.000	0.00	0.00	0.00	0.0	0.000
38.816	0.000	0.00	0.00	0.00	0.0	0.000
38.833	0.000	0.00	0.00	0.00	0.0	0.000
38.850	0.000	0.00	0.00	0.00	0.0	0.000
38.866	0.000	0.00	0.00	0.00	0.0	0.000
38.883	0.000	0.00	0.00	0.00	0.0	0.000
38.900	0.000	0.00	0.00	0.00	0.0	0.000
38.916	0.000	0.00	0.00	0.00	0.0	0.000
38.933	0.000	0.00	0.00	0.00	0.0	0.000
38.950	0.000	0.00	0.00	0.00	0.0	0.000
38.966	0.000	0.00	0.00	0.00	0.0	0.000
38.983	0.000	0.00	0.00	0.00	0.0	0.000
39.000	0.000	0.00	0.00	0.00	0.0	0.000
39.016	0.000	0.00	0.00	0.00	0.0	0.000
39.033	0.000	0.00	0.00	0.00	0.0	0.000
39.050	0.000	0.00	0.00	0.00	0.0	0.000
39.066	0.000	0.00	0.00	0.00	0.0	0.000
39.083	0.000	0.00	0.00	0.00	0.0	0.000

39.100	0.000	0.00	0.00	0.00	0.0	0.000
39.116	0.000	0.00	0.00	0.00	0.0	0.000
39.133	0.000	0.00	0.00	0.00	0.0	0.000
39.150	0.000	0.00	0.00	0.00	0.0	0.000
39.166	0.000	0.00	0.00	0.00	0.0	0.000
39.183	0.000	0.00	0.00	0.00	0.0	0.000
39.200	0.000	0.00	0.00	0.00	0.0	0.000
39.216	0.000	0.00	0.00	0.00	0.0	0.000
39.233	0.000	0.00	0.00	0.00	0.0	0.000
39.250	0.000	0.00	0.00	0.00	0.0	0.000
39.266	0.000	0.00	0.00	0.00	0.0	0.000
39.283	0.000	0.00	0.00	0.00	0.0	0.000
39.300	0.000	0.00	0.00	0.00	0.0	0.000
39.316	0.000	0.00	0.00	0.00	0.0	0.000
39.333	0.000	0.00	0.00	0.00	0.0	0.000
39.350	0.000	0.00	0.00	0.00	0.0	0.000
39.366	0.000	0.00	0.00	0.00	0.0	0.000
39.383	0.000	0.00	0.00	0.00	0.0	0.000
39.400	0.000	0.00	0.00	0.00	0.0	0.000
39.416	0.000	0.00	0.00	0.00	0.0	0.000
39.433	0.000	0.00	0.00	0.00	0.0	0.000
39.450	0.000	0.00	0.00	0.00	0.0	0.000
39.466	0.000	0.00	0.00	0.00	0.0	0.000
39.483	0.000	0.00	0.00	0.00	0.0	0.000
39.500	0.000	0.00	0.00	0.00	0.0	0.000
39.516	0.000	0.00	0.00	0.00	0.0	0.000
39.533	0.000	0.00	0.00	0.00	0.0	0.000
39.550	0.000	0.00	0.00	0.00	0.0	0.000
39.566	0.000	0.00	0.00	0.00	0.0	0.000
39.583	0.000	0.00	0.00	0.00	0.0	0.000
39.600	0.000	0.00	0.00	0.00	0.0	0.000
39.616	0.000	0.00	0.00	0.00	0.0	0.000
39.633	0.000	0.00	0.00	0.00	0.0	0.000
39.650	0.000	0.00	0.00	0.00	0.0	0.000
39.666	0.000	0.00	0.00	0.00	0.0	0.000
39.683	0.000	0.00	0.00	0.00	0.0	0.000
39.700	0.000	0.00	0.00	0.00	0.0	0.000
39.716	0.000	0.00	0.00	0.00	0.0	0.000
39.733	0.000	0.00	0.00	0.00	0.0	0.000
39.750	0.000	0.00	0.00	0.00	0.0	0.000
39.766	0.000	0.00	0.00	0.00	0.0	0.000
39.783	0.000	0.00	0.00	0.00	0.0	0.000
39.800	0.000	0.00	0.00	0.00	0.0	0.000
39.816	0.000	0.00	0.00	0.00	0.0	0.000
39.833	0.000	0.00	0.00	0.00	0.0	0.000
39.850	0.000	0.00	0.00	0.00	0.0	0.000
39.866	0.000	0.00	0.00	0.00	0.0	0.000
39.883	0.000	0.00	0.00	0.00	0.0	0.000
39.900	0.000	0.00	0.00	0.00	0.0	0.000
39.916	0.000	0.00	0.00	0.00	0.0	0.000

39.933	0.000	0.00	0.00	0.00	0.0	0.000
39.950	0.000	0.00	0.00	0.00	0.0	0.000
39.966	0.000	0.00	0.00	0.00	0.0	0.000
39.983	0.000	0.00	0.00	0.00	0.0	0.000
40.000	0.000	0.00	0.00	0.00	0.0	0.000
40.016	0.000	0.00	0.00	0.00	0.0	0.000
40.033	0.000	0.00	0.00	0.00	0.0	0.000
40.050	0.000	0.00	0.00	0.00	0.0	0.000
40.066	0.000	0.00	0.00	0.00	0.0	0.000
40.083	0.000	0.00	0.00	0.00	0.0	0.000
40.100	0.000	0.00	0.00	0.00	0.0	0.000
40.116	0.000	0.00	0.00	0.00	0.0	0.000
40.133	0.000	0.00	0.00	0.00	0.0	0.000
40.150	0.000	0.00	0.00	0.00	0.0	0.000
40.166	0.000	0.00	0.00	0.00	0.0	0.000
40.183	0.000	0.00	0.00	0.00	0.0	0.000
40.200	0.000	0.00	0.00	0.00	0.0	0.000
40.216	0.000	0.00	0.00	0.00	0.0	0.000
40.233	0.000	0.00	0.00	0.00	0.0	0.000
40.250	0.000	0.00	0.00	0.00	0.0	0.000
40.266	0.000	0.00	0.00	0.00	0.0	0.000
40.283	0.000	0.00	0.00	0.00	0.0	0.000
40.300	0.000	0.00	0.00	0.00	0.0	0.000
40.316	0.000	0.00	0.00	0.00	0.0	0.000
40.333	0.000	0.00	0.00	0.00	0.0	0.000
40.350	0.000	0.00	0.00	0.00	0.0	0.000
40.366	0.000	0.00	0.00	0.00	0.0	0.000
40.383	0.000	0.00	0.00	0.00	0.0	0.000
40.400	0.000	0.00	0.00	0.00	0.0	0.000
40.416	0.000	0.00	0.00	0.00	0.0	0.000
40.433	0.000	0.00	0.00	0.00	0.0	0.000
40.450	0.000	0.00	0.00	0.00	0.0	0.000
40.466	0.000	0.00	0.00	0.00	0.0	0.000
40.483	0.000	0.00	0.00	0.00	0.0	0.000
40.500	0.000	0.00	0.00	0.00	0.0	0.000
40.516	0.000	0.00	0.00	0.00	0.0	0.000
40.533	0.000	0.00	0.00	0.00	0.0	0.000
40.550	0.000	0.00	0.00	0.00	0.0	0.000
40.566	0.000	0.00	0.00	0.00	0.0	0.000
40.583	0.000	0.00	0.00	0.00	0.0	0.000
40.600	0.000	0.00	0.00	0.00	0.0	0.000
40.616	0.000	0.00	0.00	0.00	0.0	0.000
40.633	0.000	0.00	0.00	0.00	0.0	0.000
40.650	0.000	0.00	0.00	0.00	0.0	0.000
40.666	0.000	0.00	0.00	0.00	0.0	0.000
40.683	0.000	0.00	0.00	0.00	0.0	0.000
40.700	0.000	0.00	0.00	0.00	0.0	0.000
40.716	0.000	0.00	0.00	0.00	0.0	0.000
40.733	0.000	0.00	0.00	0.00	0.0	0.000
40.750	0.000	0.00	0.00	0.00	0.0	0.000

40.766	0.000	0.00	0.00	0.00	0.0	0.000
40.783	0.000	0.00	0.00	0.00	0.0	0.000
40.800	0.000	0.00	0.00	0.00	0.0	0.000
40.816	0.000	0.00	0.00	0.00	0.0	0.000
40.833	0.000	0.00	0.00	0.00	0.0	0.000
40.850	0.000	0.00	0.00	0.00	0.0	0.000
40.866	0.000	0.00	0.00	0.00	0.0	0.000
40.883	0.000	0.00	0.00	0.00	0.0	0.000
40.900	0.000	0.00	0.00	0.00	0.0	0.000
40.916	0.000	0.00	0.00	0.00	0.0	0.000
40.933	0.000	0.00	0.00	0.00	0.0	0.000
40.950	0.000	0.00	0.00	0.00	0.0	0.000
40.966	0.000	0.00	0.00	0.00	0.0	0.000
40.983	0.000	0.00	0.00	0.00	0.0	0.000
41.000	0.000	0.00	0.00	0.00	0.0	0.000
41.016	0.000	0.00	0.00	0.00	0.0	0.000
41.033	0.000	0.00	0.00	0.00	0.0	0.000
41.050	0.000	0.00	0.00	0.00	0.0	0.000
41.066	0.000	0.00	0.00	0.00	0.0	0.000
41.083	0.000	0.00	0.00	0.00	0.0	0.000
41.100	0.000	0.00	0.00	0.00	0.0	0.000
41.116	0.000	0.00	0.00	0.00	0.0	0.000
41.133	0.000	0.00	0.00	0.00	0.0	0.000
41.150	0.000	0.00	0.00	0.00	0.0	0.000
41.166	0.000	0.00	0.00	0.00	0.0	0.000
41.183	0.000	0.00	0.00	0.00	0.0	0.000
41.200	0.000	0.00	0.00	0.00	0.0	0.000
41.216	0.000	0.00	0.00	0.00	0.0	0.000
41.233	0.000	0.00	0.00	0.00	0.0	0.000
41.250	0.000	0.00	0.00	0.00	0.0	0.000
41.266	0.000	0.00	0.00	0.00	0.0	0.000
41.283	0.000	0.00	0.00	0.00	0.0	0.000
41.300	0.000	0.00	0.00	0.00	0.0	0.000
41.316	0.000	0.00	0.00	0.00	0.0	0.000
41.333	0.000	0.00	0.00	0.00	0.0	0.000
41.350	0.000	0.00	0.00	0.00	0.0	0.000
41.366	0.000	0.00	0.00	0.00	0.0	0.000
41.383	0.000	0.00	0.00	0.00	0.0	0.000
41.400	0.000	0.00	0.00	0.00	0.0	0.000
41.416	0.000	0.00	0.00	0.00	0.0	0.000
41.433	0.000	0.00	0.00	0.00	0.0	0.000
41.450	0.000	0.00	0.00	0.00	0.0	0.000
41.466	0.000	0.00	0.00	0.00	0.0	0.000
41.483	0.000	0.00	0.00	0.00	0.0	0.000
41.500	0.000	0.00	0.00	0.00	0.0	0.000
41.516	0.000	0.00	0.00	0.00	0.0	0.000
41.533	0.000	0.00	0.00	0.00	0.0	0.000
41.550	0.000	0.00	0.00	0.00	0.0	0.000
41.566	0.000	0.00	0.00	0.00	0.0	0.000
41.583	0.000	0.00	0.00	0.00	0.0	0.000

41.600	0.000	0.00	0.00	0.00	0.0	0.000
41.616	0.000	0.00	0.00	0.00	0.0	0.000
41.633	0.000	0.00	0.00	0.00	0.0	0.000
41.650	0.000	0.00	0.00	0.00	0.0	0.000
41.666	0.000	0.00	0.00	0.00	0.0	0.000
41.683	0.000	0.00	0.00	0.00	0.0	0.000
41.700	0.000	0.00	0.00	0.00	0.0	0.000
41.716	0.000	0.00	0.00	0.00	0.0	0.000
41.733	0.000	0.00	0.00	0.00	0.0	0.000
41.750	0.000	0.00	0.00	0.00	0.0	0.000
41.766	0.000	0.00	0.00	0.00	0.0	0.000
41.783	0.000	0.00	0.00	0.00	0.0	0.000
41.800	0.000	0.00	0.00	0.00	0.0	0.000
41.816	0.000	0.00	0.00	0.00	0.0	0.000
41.833	0.000	0.00	0.00	0.00	0.0	0.000
41.850	0.000	0.00	0.00	0.00	0.0	0.000
41.866	0.000	0.00	0.00	0.00	0.0	0.000
41.883	0.000	0.00	0.00	0.00	0.0	0.000
41.900	0.000	0.00	0.00	0.00	0.0	0.000
41.916	0.000	0.00	0.00	0.00	0.0	0.000
41.933	0.000	0.00	0.00	0.00	0.0	0.000
41.950	0.000	0.00	0.00	0.00	0.0	0.000
41.966	0.000	0.00	0.00	0.00	0.0	0.000
41.983	0.000	0.00	0.00	0.00	0.0	0.000
42.000	0.000	0.00	0.00	0.00	0.0	0.000
42.016	0.000	0.00	0.00	0.00	0.0	0.000
42.033	0.000	0.00	0.00	0.00	0.0	0.000
42.050	0.000	0.00	0.00	0.00	0.0	0.000
42.066	0.000	0.00	0.00	0.00	0.0	0.000
42.083	0.000	0.00	0.00	0.00	0.0	0.000
42.100	0.000	0.00	0.00	0.00	0.0	0.000
42.116	0.000	0.00	0.00	0.00	0.0	0.000
42.133	0.000	0.00	0.00	0.00	0.0	0.000
42.150	0.000	0.00	0.00	0.00	0.0	0.000
42.166	0.000	0.00	0.00	0.00	0.0	0.000
42.183	0.000	0.00	0.00	0.00	0.0	0.000
42.200	0.000	0.00	0.00	0.00	0.0	0.000
42.216	0.000	0.00	0.00	0.00	0.0	0.000
42.233	0.000	0.00	0.00	0.00	0.0	0.000
42.250	0.000	0.00	0.00	0.00	0.0	0.000
42.266	0.000	0.00	0.00	0.00	0.0	0.000
42.283	0.000	0.00	0.00	0.00	0.0	0.000
42.300	0.000	0.00	0.00	0.00	0.0	0.000
42.316	0.000	0.00	0.00	0.00	0.0	0.000
42.333	0.000	0.00	0.00	0.00	0.0	0.000
42.350	0.000	0.00	0.00	0.00	0.0	0.000
42.366	0.000	0.00	0.00	0.00	0.0	0.000
42.383	0.000	0.00	0.00	0.00	0.0	0.000
42.400	0.000	0.00	0.00	0.00	0.0	0.000
42.416	0.000	0.00	0.00	0.00	0.0	0.000

42.433	0.000	0.00	0.00	0.00	0.0	0.000
42.450	0.000	0.00	0.00	0.00	0.0	0.000
42.466	0.000	0.00	0.00	0.00	0.0	0.000
42.483	0.000	0.00	0.00	0.00	0.0	0.000
42.500	0.000	0.00	0.00	0.00	0.0	0.000
42.516	0.000	0.00	0.00	0.00	0.0	0.000
42.533	0.000	0.00	0.00	0.00	0.0	0.000
42.550	0.000	0.00	0.00	0.00	0.0	0.000
42.566	0.000	0.00	0.00	0.00	0.0	0.000
42.583	0.000	0.00	0.00	0.00	0.0	0.000
42.600	0.000	0.00	0.00	0.00	0.0	0.000
42.616	0.000	0.00	0.00	0.00	0.0	0.000
42.633	0.000	0.00	0.00	0.00	0.0	0.000
42.650	0.000	0.00	0.00	0.00	0.0	0.000
42.666	0.000	0.00	0.00	0.00	0.0	0.000
42.683	0.000	0.00	0.00	0.00	0.0	0.000
42.700	0.000	0.00	0.00	0.00	0.0	0.000
42.716	0.000	0.00	0.00	0.00	0.0	0.000
42.733	0.000	0.00	0.00	0.00	0.0	0.000
42.750	0.000	0.00	0.00	0.00	0.0	0.000
42.766	0.000	0.00	0.00	0.00	0.0	0.000
42.783	0.000	0.00	0.00	0.00	0.0	0.000
42.800	0.000	0.00	0.00	0.00	0.0	0.000
42.816	0.000	0.00	0.00	0.00	0.0	0.000
42.833	0.000	0.00	0.00	0.00	0.0	0.000
42.850	0.000	0.00	0.00	0.00	0.0	0.000
42.866	0.000	0.00	0.00	0.00	0.0	0.000
42.883	0.000	0.00	0.00	0.00	0.0	0.000
42.900	0.000	0.00	0.00	0.00	0.0	0.000
42.916	0.000	0.00	0.00	0.00	0.0	0.000
42.933	0.000	0.00	0.00	0.00	0.0	0.000
42.950	0.000	0.00	0.00	0.00	0.0	0.000
42.966	0.000	0.00	0.00	0.00	0.0	0.000
42.983	0.000	0.00	0.00	0.00	0.0	0.000
43.000	0.000	0.00	0.00	0.00	0.0	0.000
43.016	0.000	0.00	0.00	0.00	0.0	0.000
43.033	0.000	0.00	0.00	0.00	0.0	0.000
43.050	0.000	0.00	0.00	0.00	0.0	0.000
43.066	0.000	0.00	0.00	0.00	0.0	0.000
43.083	0.000	0.00	0.00	0.00	0.0	0.000
43.100	0.000	0.00	0.00	0.00	0.0	0.000
43.116	0.000	0.00	0.00	0.00	0.0	0.000
43.133	0.000	0.00	0.00	0.00	0.0	0.000
43.150	0.000	0.00	0.00	0.00	0.0	0.000
43.166	0.000	0.00	0.00	0.00	0.0	0.000
43.183	0.000	0.00	0.00	0.00	0.0	0.000
43.200	0.000	0.00	0.00	0.00	0.0	0.000
43.216	0.000	0.00	0.00	0.00	0.0	0.000
43.233	0.000	0.00	0.00	0.00	0.0	0.000
43.250	0.000	0.00	0.00	0.00	0.0	0.000

43.266	0.000	0.00	0.00	0.00	0.0	0.000
43.283	0.000	0.00	0.00	0.00	0.0	0.000
43.300	0.000	0.00	0.00	0.00	0.0	0.000
43.316	0.000	0.00	0.00	0.00	0.0	0.000
43.333	0.000	0.00	0.00	0.00	0.0	0.000
43.350	0.000	0.00	0.00	0.00	0.0	0.000
43.366	0.000	0.00	0.00	0.00	0.0	0.000
43.383	0.000	0.00	0.00	0.00	0.0	0.000
43.400	0.000	0.00	0.00	0.00	0.0	0.000
43.416	0.000	0.00	0.00	0.00	0.0	0.000
43.433	0.000	0.00	0.00	0.00	0.0	0.000
43.450	0.000	0.00	0.00	0.00	0.0	0.000
43.466	0.000	0.00	0.00	0.00	0.0	0.000
43.483	0.000	0.00	0.00	0.00	0.0	0.000
43.500	0.000	0.00	0.00	0.00	0.0	0.000
43.516	0.000	0.00	0.00	0.00	0.0	0.000
43.533	0.000	0.00	0.00	0.00	0.0	0.000
43.550	0.000	0.00	0.00	0.00	0.0	0.000
43.566	0.000	0.00	0.00	0.00	0.0	0.000
43.583	0.000	0.00	0.00	0.00	0.0	0.000
43.600	0.000	0.00	0.00	0.00	0.0	0.000
43.616	0.000	0.00	0.00	0.00	0.0	0.000
43.633	0.000	0.00	0.00	0.00	0.0	0.000
43.650	0.000	0.00	0.00	0.00	0.0	0.000
43.666	0.000	0.00	0.00	0.00	0.0	0.000
43.683	0.000	0.00	0.00	0.00	0.0	0.000
43.700	0.000	0.00	0.00	0.00	0.0	0.000
43.716	0.000	0.00	0.00	0.00	0.0	0.000
43.733	0.000	0.00	0.00	0.00	0.0	0.000
43.750	0.000	0.00	0.00	0.00	0.0	0.000
43.766	0.000	0.00	0.00	0.00	0.0	0.000
43.783	0.000	0.00	0.00	0.00	0.0	0.000
43.800	0.000	0.00	0.00	0.00	0.0	0.000
43.816	0.000	0.00	0.00	0.00	0.0	0.000
43.833	0.000	0.00	0.00	0.00	0.0	0.000
43.850	0.000	0.00	0.00	0.00	0.0	0.000
43.866	0.000	0.00	0.00	0.00	0.0	0.000
43.883	0.000	0.00	0.00	0.00	0.0	0.000
43.900	0.000	0.00	0.00	0.00	0.0	0.000
43.916	0.000	0.00	0.00	0.00	0.0	0.000
43.933	0.000	0.00	0.00	0.00	0.0	0.000
43.950	0.000	0.00	0.00	0.00	0.0	0.000
43.966	0.000	0.00	0.00	0.00	0.0	0.000
43.983	0.000	0.00	0.00	0.00	0.0	0.000
44.000	0.000	0.00	0.00	0.00	0.0	0.000
44.016	0.000	0.00	0.00	0.00	0.0	0.000
44.033	0.000	0.00	0.00	0.00	0.0	0.000
44.049	0.000	0.00	0.00	0.00	0.0	0.000
44.066	0.000	0.00	0.00	0.00	0.0	0.000
44.083	0.000	0.00	0.00	0.00	0.0	0.000

44.099	0.000	0.00	0.00	0.00	0.0	0.000
44.116	0.000	0.00	0.00	0.00	0.0	0.000
44.133	0.000	0.00	0.00	0.00	0.0	0.000
44.149	0.000	0.00	0.00	0.00	0.0	0.000
44.166	0.000	0.00	0.00	0.00	0.0	0.000
44.183	0.000	0.00	0.00	0.00	0.0	0.000
44.199	0.000	0.00	0.00	0.00	0.0	0.000
44.216	0.000	0.00	0.00	0.00	0.0	0.000
44.233	0.000	0.00	0.00	0.00	0.0	0.000
44.249	0.000	0.00	0.00	0.00	0.0	0.000
44.266	0.000	0.00	0.00	0.00	0.0	0.000
44.283	0.000	0.00	0.00	0.00	0.0	0.000
44.299	0.000	0.00	0.00	0.00	0.0	0.000
44.316	0.000	0.00	0.00	0.00	0.0	0.000
44.333	0.000	0.00	0.00	0.00	0.0	0.000
44.349	0.000	0.00	0.00	0.00	0.0	0.000
44.366	0.000	0.00	0.00	0.00	0.0	0.000
44.383	0.000	0.00	0.00	0.00	0.0	0.000
44.399	0.000	0.00	0.00	0.00	0.0	0.000
44.416	0.000	0.00	0.00	0.00	0.0	0.000
44.433	0.000	0.00	0.00	0.00	0.0	0.000
44.449	0.000	0.00	0.00	0.00	0.0	0.000
44.466	0.000	0.00	0.00	0.00	0.0	0.000
44.483	0.000	0.00	0.00	0.00	0.0	0.000
44.499	0.000	0.00	0.00	0.00	0.0	0.000
44.516	0.000	0.00	0.00	0.00	0.0	0.000
44.533	0.000	0.00	0.00	0.00	0.0	0.000
44.549	0.000	0.00	0.00	0.00	0.0	0.000
44.566	0.000	0.00	0.00	0.00	0.0	0.000
44.583	0.000	0.00	0.00	0.00	0.0	0.000
44.599	0.000	0.00	0.00	0.00	0.0	0.000
44.616	0.000	0.00	0.00	0.00	0.0	0.000
44.633	0.000	0.00	0.00	0.00	0.0	0.000
44.649	0.000	0.00	0.00	0.00	0.0	0.000
44.666	0.000	0.00	0.00	0.00	0.0	0.000
44.683	0.000	0.00	0.00	0.00	0.0	0.000
44.699	0.000	0.00	0.00	0.00	0.0	0.000
44.716	0.000	0.00	0.00	0.00	0.0	0.000
44.733	0.000	0.00	0.00	0.00	0.0	0.000
44.749	0.000	0.00	0.00	0.00	0.0	0.000
44.766	0.000	0.00	0.00	0.00	0.0	0.000
44.783	0.000	0.00	0.00	0.00	0.0	0.000
44.799	0.000	0.00	0.00	0.00	0.0	0.000
44.816	0.000	0.00	0.00	0.00	0.0	0.000
44.833	0.000	0.00	0.00	0.00	0.0	0.000
44.849	0.000	0.00	0.00	0.00	0.0	0.000
44.866	0.000	0.00	0.00	0.00	0.0	0.000
44.883	0.000	0.00	0.00	0.00	0.0	0.000
44.899	0.000	0.00	0.00	0.00	0.0	0.000
44.916	0.000	0.00	0.00	0.00	0.0	0.000

44.933	0.000	0.00	0.00	0.00	0.0	0.000
44.949	0.000	0.00	0.00	0.00	0.0	0.000
44.966	0.000	0.00	0.00	0.00	0.0	0.000
44.983	0.000	0.00	0.00	0.00	0.0	0.000
44.999	0.000	0.00	0.00	0.00	0.0	0.000
45.016	0.000	0.00	0.00	0.00	0.0	0.000
45.033	0.000	0.00	0.00	0.00	0.0	0.000
45.049	0.000	0.00	0.00	0.00	0.0	0.000
45.066	0.000	0.00	0.00	0.00	0.0	0.000
45.083	0.000	0.00	0.00	0.00	0.0	0.000
45.099	0.000	0.00	0.00	0.00	0.0	0.000
45.116	0.000	0.00	0.00	0.00	0.0	0.000
45.133	0.000	0.00	0.00	0.00	0.0	0.000
45.149	0.000	0.00	0.00	0.00	0.0	0.000
45.166	0.000	0.00	0.00	0.00	0.0	0.000
45.183	0.000	0.00	0.00	0.00	0.0	0.000
45.199	0.000	0.00	0.00	0.00	0.0	0.000
45.216	0.000	0.00	0.00	0.00	0.0	0.000
45.233	0.000	0.00	0.00	0.00	0.0	0.000
45.249	0.000	0.00	0.00	0.00	0.0	0.000
45.266	0.000	0.00	0.00	0.00	0.0	0.000
45.283	0.000	0.00	0.00	0.00	0.0	0.000
45.299	0.000	0.00	0.00	0.00	0.0	0.000
45.316	0.000	0.00	0.00	0.00	0.0	0.000
45.333	0.000	0.00	0.00	0.00	0.0	0.000
45.349	0.000	0.00	0.00	0.00	0.0	0.000
45.366	0.000	0.00	0.00	0.00	0.0	0.000
45.383	0.000	0.00	0.00	0.00	0.0	0.000
45.399	0.000	0.00	0.00	0.00	0.0	0.000
45.416	0.000	0.00	0.00	0.00	0.0	0.000
45.433	0.000	0.00	0.00	0.00	0.0	0.000
45.449	0.000	0.00	0.00	0.00	0.0	0.000
45.466	0.000	0.00	0.00	0.00	0.0	0.000
45.483	0.000	0.00	0.00	0.00	0.0	0.000
45.499	0.000	0.00	0.00	0.00	0.0	0.000
45.516	0.000	0.00	0.00	0.00	0.0	0.000
45.533	0.000	0.00	0.00	0.00	0.0	0.000
45.549	0.000	0.00	0.00	0.00	0.0	0.000
45.566	0.000	0.00	0.00	0.00	0.0	0.000
45.583	0.000	0.00	0.00	0.00	0.0	0.000
45.599	0.000	0.00	0.00	0.00	0.0	0.000
45.616	0.000	0.00	0.00	0.00	0.0	0.000
45.633	0.000	0.00	0.00	0.00	0.0	0.000
45.649	0.000	0.00	0.00	0.00	0.0	0.000
45.666	0.000	0.00	0.00	0.00	0.0	0.000
45.683	0.000	0.00	0.00	0.00	0.0	0.000
45.699	0.000	0.00	0.00	0.00	0.0	0.000
45.716	0.000	0.00	0.00	0.00	0.0	0.000
45.733	0.000	0.00	0.00	0.00	0.0	0.000
45.749	0.000	0.00	0.00	0.00	0.0	0.000

45.766	0.000	0.00	0.00	0.00	0.0	0.000
45.783	0.000	0.00	0.00	0.00	0.0	0.000
45.799	0.000	0.00	0.00	0.00	0.0	0.000
45.816	0.000	0.00	0.00	0.00	0.0	0.000
45.833	0.000	0.00	0.00	0.00	0.0	0.000
45.849	0.000	0.00	0.00	0.00	0.0	0.000
45.866	0.000	0.00	0.00	0.00	0.0	0.000
45.883	0.000	0.00	0.00	0.00	0.0	0.000
45.899	0.000	0.00	0.00	0.00	0.0	0.000
45.916	0.000	0.00	0.00	0.00	0.0	0.000
45.933	0.000	0.00	0.00	0.00	0.0	0.000
45.949	0.000	0.00	0.00	0.00	0.0	0.000
45.966	0.000	0.00	0.00	0.00	0.0	0.000
45.983	0.000	0.00	0.00	0.00	0.0	0.000
45.999	0.000	0.00	0.00	0.00	0.0	0.000
46.016	0.000	0.00	0.00	0.00	0.0	0.000
46.033	0.000	0.00	0.00	0.00	0.0	0.000
46.049	0.000	0.00	0.00	0.00	0.0	0.000
46.066	0.000	0.00	0.00	0.00	0.0	0.000
46.083	0.000	0.00	0.00	0.00	0.0	0.000
46.099	0.000	0.00	0.00	0.00	0.0	0.000
46.116	0.000	0.00	0.00	0.00	0.0	0.000
46.133	0.000	0.00	0.00	0.00	0.0	0.000
46.149	0.000	0.00	0.00	0.00	0.0	0.000
46.166	0.000	0.00	0.00	0.00	0.0	0.000
46.183	0.000	0.00	0.00	0.00	0.0	0.000
46.199	0.000	0.00	0.00	0.00	0.0	0.000
46.216	0.000	0.00	0.00	0.00	0.0	0.000
46.233	0.000	0.00	0.00	0.00	0.0	0.000
46.249	0.000	0.00	0.00	0.00	0.0	0.000
46.266	0.000	0.00	0.00	0.00	0.0	0.000
46.283	0.000	0.00	0.00	0.00	0.0	0.000
46.299	0.000	0.00	0.00	0.00	0.0	0.000
46.316	0.000	0.00	0.00	0.00	0.0	0.000
46.333	0.000	0.00	0.00	0.00	0.0	0.000
46.349	0.000	0.00	0.00	0.00	0.0	0.000
46.366	0.000	0.00	0.00	0.00	0.0	0.000
46.383	0.000	0.00	0.00	0.00	0.0	0.000
46.399	0.000	0.00	0.00	0.00	0.0	0.000
46.416	0.000	0.00	0.00	0.00	0.0	0.000
46.433	0.000	0.00	0.00	0.00	0.0	0.000
46.449	0.000	0.00	0.00	0.00	0.0	0.000
46.466	0.000	0.00	0.00	0.00	0.0	0.000
46.483	0.000	0.00	0.00	0.00	0.0	0.000
46.499	0.000	0.00	0.00	0.00	0.0	0.000
46.516	0.000	0.00	0.00	0.00	0.0	0.000
46.533	0.000	0.00	0.00	0.00	0.0	0.000
46.549	0.000	0.00	0.00	0.00	0.0	0.000
46.566	0.000	0.00	0.00	0.00	0.0	0.000
46.583	0.000	0.00	0.00	0.00	0.0	0.000

46.599	0.000	0.00	0.00	0.00	0.0	0.000
46.616	0.000	0.00	0.00	0.00	0.0	0.000
46.633	0.000	0.00	0.00	0.00	0.0	0.000
46.649	0.000	0.00	0.00	0.00	0.0	0.000
46.666	0.000	0.00	0.00	0.00	0.0	0.000
46.683	0.000	0.00	0.00	0.00	0.0	0.000
46.699	0.000	0.00	0.00	0.00	0.0	0.000
46.716	0.000	0.00	0.00	0.00	0.0	0.000
46.733	0.000	0.00	0.00	0.00	0.0	0.000
46.749	0.000	0.00	0.00	0.00	0.0	0.000
46.766	0.000	0.00	0.00	0.00	0.0	0.000
46.783	0.000	0.00	0.00	0.00	0.0	0.000
46.799	0.000	0.00	0.00	0.00	0.0	0.000
46.816	0.000	0.00	0.00	0.00	0.0	0.000
46.833	0.000	0.00	0.00	0.00	0.0	0.000
46.849	0.000	0.00	0.00	0.00	0.0	0.000
46.866	0.000	0.00	0.00	0.00	0.0	0.000
46.883	0.000	0.00	0.00	0.00	0.0	0.000
46.899	0.000	0.00	0.00	0.00	0.0	0.000
46.916	0.000	0.00	0.00	0.00	0.0	0.000
46.933	0.000	0.00	0.00	0.00	0.0	0.000
46.949	0.000	0.00	0.00	0.00	0.0	0.000
46.966	0.000	0.00	0.00	0.00	0.0	0.000
46.983	0.000	0.00	0.00	0.00	0.0	0.000
46.999	0.000	0.00	0.00	0.00	0.0	0.000
47.016	0.000	0.00	0.00	0.00	0.0	0.000
47.033	0.000	0.00	0.00	0.00	0.0	0.000
47.049	0.000	0.00	0.00	0.00	0.0	0.000
47.066	0.000	0.00	0.00	0.00	0.0	0.000
47.083	0.000	0.00	0.00	0.00	0.0	0.000
47.099	0.000	0.00	0.00	0.00	0.0	0.000
47.116	0.000	0.00	0.00	0.00	0.0	0.000
47.133	0.000	0.00	0.00	0.00	0.0	0.000
47.149	0.000	0.00	0.00	0.00	0.0	0.000
47.166	0.000	0.00	0.00	0.00	0.0	0.000
47.183	0.000	0.00	0.00	0.00	0.0	0.000
47.199	0.000	0.00	0.00	0.00	0.0	0.000
47.216	0.000	0.00	0.00	0.00	0.0	0.000
47.233	0.000	0.00	0.00	0.00	0.0	0.000
47.249	0.000	0.00	0.00	0.00	0.0	0.000
47.266	0.000	0.00	0.00	0.00	0.0	0.000
47.283	0.000	0.00	0.00	0.00	0.0	0.000
47.299	0.000	0.00	0.00	0.00	0.0	0.000
47.316	0.000	0.00	0.00	0.00	0.0	0.000
47.333	0.000	0.00	0.00	0.00	0.0	0.000
47.349	0.000	0.00	0.00	0.00	0.0	0.000
47.366	0.000	0.00	0.00	0.00	0.0	0.000
47.383	0.000	0.00	0.00	0.00	0.0	0.000
47.399	0.000	0.00	0.00	0.00	0.0	0.000
47.416	0.000	0.00	0.00	0.00	0.0	0.000

47.433	0.000	0.00	0.00	0.00	0.0	0.000
47.449	0.000	0.00	0.00	0.00	0.0	0.000
47.466	0.000	0.00	0.00	0.00	0.0	0.000
47.483	0.000	0.00	0.00	0.00	0.0	0.000
47.499	0.000	0.00	0.00	0.00	0.0	0.000
47.516	0.000	0.00	0.00	0.00	0.0	0.000
47.533	0.000	0.00	0.00	0.00	0.0	0.000
47.549	0.000	0.00	0.00	0.00	0.0	0.000
47.566	0.000	0.00	0.00	0.00	0.0	0.000
47.583	0.000	0.00	0.00	0.00	0.0	0.000
47.599	0.000	0.00	0.00	0.00	0.0	0.000
47.616	0.000	0.00	0.00	0.00	0.0	0.000
47.633	0.000	0.00	0.00	0.00	0.0	0.000
47.649	0.000	0.00	0.00	0.00	0.0	0.000
47.666	0.000	0.00	0.00	0.00	0.0	0.000
47.683	0.000	0.00	0.00	0.00	0.0	0.000
47.699	0.000	0.00	0.00	0.00	0.0	0.000
47.716	0.000	0.00	0.00	0.00	0.0	0.000
47.733	0.000	0.00	0.00	0.00	0.0	0.000
47.749	0.000	0.00	0.00	0.00	0.0	0.000
47.766	0.000	0.00	0.00	0.00	0.0	0.000
47.783	0.000	0.00	0.00	0.00	0.0	0.000
47.799	0.000	0.00	0.00	0.00	0.0	0.000
47.816	0.000	0.00	0.00	0.00	0.0	0.000
47.833	0.000	0.00	0.00	0.00	0.0	0.000
47.849	0.000	0.00	0.00	0.00	0.0	0.000
47.866	0.000	0.00	0.00	0.00	0.0	0.000
47.883	0.000	0.00	0.00	0.00	0.0	0.000
47.899	0.000	0.00	0.00	0.00	0.0	0.000
47.916	0.000	0.00	0.00	0.00	0.0	0.000
47.933	0.000	0.00	0.00	0.00	0.0	0.000
47.949	0.000	0.00	0.00	0.00	0.0	0.000
47.966	0.000	0.00	0.00	0.00	0.0	0.000
47.983	0.000	0.00	0.00	0.00	0.0	0.000
47.999	0.000	0.00	0.00	0.00	0.0	0.000

PROCESS SUMMARY OF STORAGE:
INFLOW VOLUME = 0.560 AF
BASIN STORAGE = 0.000 AF (WITH 0.000 AF INITIALLY FILLED)
OUTFLOW VOLUME = 0.560 AF
LOSS VOLUME = 0.000 AF

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FLOW PROCESS FROM NODE 405.00 TO NODE 104.00 IS CODE = 4

>>>>>MODEL PIPEFLOW ROUTING OF STREAM #1<<<<<

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MODEL PIPEFLOW ROUTING OF STREAM 1 WHERE
STORAGE EFFECTS ARE NEGLECTED WITHIN THE PIPE, FLOW
VELOCITIES ARE ESTIMATED BY ASSUMING STEADY FLOW FOR
EACH UNIT INTERVAL(NORMAL DEPTH, Dn), AND FLOWS IN EXCESS
OF (.82)(DIAMETER) ARE PONDED AT THE UPSTREAM INLET:
UNIT INTERVAL FLOW VELOCITY COMPUTED USING Dn UP TO
(0.938)(DIAMETER):

PIPELENGTH(FT) = 114.00 MANNINGS FACTOR = 0.011
UPSTREAM ELEVATION(FT) = 614.00
DOWNSTREAM ELEVATION(FT) = 613.00
PIPE DIAMETER(FT) = 2.00

NORMAL DEPTH VELOCITY PIPE ROUTING RESULTS:

TIME (HRS)	INFLOW (CFS)	VELOCITY (FPS)	OUTFLOW (CFS)	UPSTREAM PONDING(AF)
0.017	0.00	0.00	0.00	0.000
0.033	0.00	0.50	0.00	0.000
0.050	0.01	0.50	0.00	0.000
0.067	0.01	0.50	0.00	0.000
0.083	0.02	0.50	0.00	0.000
0.100	0.02	0.50	0.00	0.000
0.117	0.03	0.50	0.01	0.000
0.133	0.04	0.50	0.01	0.000
0.150	0.04	0.50	0.02	0.000
0.167	0.05	0.50	0.03	0.000
0.183	0.05	0.50	0.03	0.000
0.200	0.06	0.50	0.04	0.000
0.217	0.06	0.50	0.04	0.000
0.233	0.06	0.50	0.05	0.000
0.250	0.07	0.50	0.05	0.000
0.267	0.07	0.50	0.06	0.000
0.283	0.07	0.50	0.06	0.000
0.300	0.08	0.50	0.06	0.000
0.317	0.08	0.50	0.07	0.000
0.333	0.08	0.50	0.07	0.000
0.350	0.08	0.50	0.07	0.000
0.367	0.08	0.50	0.08	0.000
0.383	0.08	0.50	0.08	0.000
0.400	0.09	0.50	0.08	0.000
0.417	0.09	0.50	0.08	0.000
0.433	0.09	0.50	0.08	0.000
0.450	0.09	0.50	0.09	0.000
0.467	0.09	0.50	0.09	0.000
0.483	0.09	0.50	0.09	0.000
0.500	0.09	0.50	0.09	0.000

0.517	0.09	0.50	0.09	0.000
0.533	0.09	0.50	0.09	0.000
0.550	0.10	0.50	0.09	0.000
0.567	0.10	0.50	0.09	0.000
0.583	0.10	0.50	0.09	0.000
0.600	0.10	0.50	0.09	0.000
0.617	0.10	0.50	0.10	0.000
0.633	0.10	0.50	0.10	0.000
0.650	0.10	0.50	0.10	0.000
0.667	0.10	0.50	0.10	0.000
0.683	0.10	0.50	0.10	0.000
0.700	0.10	0.50	0.10	0.000
0.717	0.10	0.50	0.10	0.000
0.733	0.10	0.50	0.10	0.000
0.750	0.10	0.50	0.10	0.000
0.767	0.10	0.50	0.10	0.000
0.783	0.10	0.50	0.10	0.000
0.800	0.10	0.50	0.10	0.000
0.817	0.10	0.50	0.10	0.000
0.833	0.10	0.50	0.10	0.000
0.850	0.10	0.50	0.10	0.000
0.867	0.10	0.50	0.10	0.000
0.883	0.10	0.50	0.10	0.000
0.900	0.10	0.50	0.10	0.000
0.917	0.10	0.50	0.10	0.000
0.933	0.10	0.50	0.10	0.000
0.950	0.10	0.50	0.10	0.000
0.967	0.10	0.50	0.10	0.000
0.983	0.10	0.50	0.10	0.000
1.000	0.10	0.50	0.10	0.000
1.017	0.10	0.50	0.10	0.000
1.033	0.10	0.50	0.10	0.000
1.050	0.10	0.50	0.10	0.000
1.067	0.10	0.50	0.10	0.000
1.083	0.10	0.50	0.10	0.000
1.100	0.10	0.50	0.10	0.000
1.117	0.10	0.50	0.10	0.000
1.133	0.10	0.50	0.10	0.000
1.150	0.10	0.50	0.10	0.000
1.167	0.10	0.50	0.10	0.000
1.183	0.10	0.50	0.10	0.000
1.200	0.10	0.50	0.10	0.000
1.217	0.10	0.50	0.10	0.000
1.233	0.10	0.50	0.10	0.000
1.250	0.10	0.50	0.10	0.000
1.267	0.10	0.50	0.10	0.000
1.283	0.10	0.50	0.10	0.000
1.300	0.10	0.50	0.10	0.000
1.317	0.10	0.50	0.10	0.000
1.333	0.11	0.50	0.10	0.000

1.350	0.11	0.50	0.10	0.000
1.367	0.11	0.50	0.10	0.000
1.383	0.11	0.50	0.10	0.000
1.400	0.11	0.50	0.11	0.000
1.417	0.11	0.50	0.11	0.000
1.433	0.11	0.50	0.11	0.000
1.450	0.11	0.50	0.11	0.000
1.467	0.11	0.50	0.11	0.000
1.483	0.11	0.50	0.11	0.000
1.500	0.11	0.50	0.11	0.000
1.517	0.11	0.50	0.11	0.000
1.533	0.11	0.50	0.11	0.000
1.550	0.11	0.50	0.11	0.000
1.567	0.11	0.50	0.11	0.000
1.583	0.11	0.50	0.11	0.000
1.600	0.11	0.50	0.11	0.000
1.617	0.11	0.50	0.11	0.000
1.633	0.11	0.50	0.11	0.000
1.650	0.11	0.50	0.11	0.000
1.667	0.11	0.50	0.11	0.000
1.683	0.11	0.50	0.11	0.000
1.700	0.11	0.50	0.11	0.000
1.717	0.11	0.50	0.11	0.000
1.733	0.11	0.50	0.11	0.000
1.750	0.11	0.50	0.11	0.000
1.767	0.11	0.50	0.11	0.000
1.783	0.11	0.50	0.11	0.000
1.800	0.11	0.50	0.11	0.000
1.817	0.11	0.50	0.11	0.000
1.833	0.11	0.50	0.11	0.000
1.850	0.11	0.50	0.11	0.000
1.867	0.11	0.50	0.11	0.000
1.883	0.11	0.50	0.11	0.000
1.900	0.11	0.50	0.11	0.000
1.917	0.11	0.50	0.11	0.000
1.933	0.11	0.50	0.11	0.000
1.950	0.11	0.50	0.11	0.000
1.967	0.11	0.50	0.11	0.000
1.983	0.11	0.50	0.11	0.000
2.000	0.11	0.50	0.11	0.000
2.017	0.11	0.50	0.11	0.000
2.033	0.11	0.50	0.11	0.000
2.050	0.11	0.50	0.11	0.000
2.067	0.11	0.50	0.11	0.000
2.083	0.11	0.50	0.11	0.000
2.100	0.11	0.50	0.11	0.000
2.117	0.11	0.50	0.11	0.000
2.133	0.11	0.50	0.11	0.000
2.150	0.11	0.50	0.11	0.000
2.167	0.11	0.50	0.11	0.000

2.183	0.11	0.50	0.11	0.000
2.200	0.11	0.50	0.11	0.000
2.217	0.11	0.50	0.11	0.000
2.233	0.11	0.50	0.11	0.000
2.250	0.11	0.50	0.11	0.000
2.267	0.11	0.50	0.11	0.000
2.283	0.11	0.50	0.11	0.000
2.300	0.11	0.50	0.11	0.000
2.317	0.11	0.50	0.11	0.000
2.333	0.11	0.50	0.11	0.000
2.350	0.11	0.50	0.11	0.000
2.367	0.11	0.50	0.11	0.000
2.383	0.11	0.50	0.11	0.000
2.400	0.11	0.50	0.11	0.000
2.417	0.11	0.50	0.11	0.000
2.433	0.11	0.50	0.11	0.000
2.450	0.11	0.50	0.11	0.000
2.467	0.11	0.50	0.11	0.000
2.483	0.11	0.50	0.11	0.000
2.500	0.11	0.50	0.11	0.000
2.517	0.11	0.50	0.11	0.000
2.533	0.11	0.50	0.11	0.000
2.550	0.11	0.50	0.11	0.000
2.567	0.11	0.50	0.11	0.000
2.583	0.11	0.50	0.11	0.000
2.600	0.11	0.50	0.11	0.000
2.617	0.11	0.50	0.11	0.000
2.633	0.11	0.50	0.11	0.000
2.650	0.11	0.50	0.11	0.000
2.667	0.11	0.50	0.11	0.000
2.683	0.11	0.50	0.11	0.000
2.700	0.11	0.50	0.11	0.000
2.717	0.11	0.50	0.11	0.000
2.733	0.11	0.50	0.11	0.000
2.750	0.11	0.50	0.11	0.000
2.767	0.11	0.50	0.11	0.000
2.783	0.11	0.50	0.11	0.000
2.800	0.11	0.50	0.11	0.000
2.817	0.11	0.50	0.11	0.000
2.833	0.11	0.50	0.11	0.000
2.850	0.11	0.50	0.11	0.000
2.867	0.11	0.50	0.11	0.000
2.883	0.11	0.50	0.11	0.000
2.900	0.11	0.50	0.11	0.000
2.917	0.11	0.50	0.11	0.000
2.933	0.11	0.50	0.11	0.000
2.950	0.11	0.50	0.11	0.000
2.967	0.11	0.50	0.11	0.000
2.983	0.11	0.50	0.11	0.000
3.000	0.11	0.50	0.11	0.000

3.017	0.11	0.50	0.11	0.000
3.033	0.11	0.50	0.11	0.000
3.050	0.11	0.50	0.11	0.000
3.067	0.11	0.50	0.11	0.000
3.083	0.11	0.50	0.11	0.000
3.100	0.11	0.50	0.11	0.000
3.117	0.11	0.50	0.11	0.000
3.133	0.11	0.50	0.11	0.000
3.150	0.11	0.50	0.11	0.000
3.167	0.11	0.50	0.11	0.000
3.183	0.11	0.50	0.11	0.000
3.200	0.11	0.50	0.11	0.000
3.217	0.11	0.50	0.11	0.000
3.233	0.11	0.50	0.11	0.000
3.250	0.11	0.50	0.11	0.000
3.267	0.11	0.50	0.11	0.000
3.283	0.11	0.50	0.11	0.000
3.300	0.11	0.50	0.11	0.000
3.317	0.12	0.50	0.11	0.000
3.333	0.12	0.50	0.11	0.000
3.350	0.12	0.50	0.11	0.000
3.367	0.12	0.50	0.11	0.000
3.383	0.12	0.50	0.12	0.000
3.400	0.12	0.50	0.12	0.000
3.417	0.12	0.50	0.12	0.000
3.433	0.12	0.50	0.12	0.000
3.450	0.12	0.50	0.12	0.000
3.467	0.12	0.50	0.12	0.000
3.483	0.12	0.50	0.12	0.000
3.500	0.12	0.50	0.12	0.000
3.517	0.12	0.50	0.12	0.000
3.533	0.12	0.50	0.12	0.000
3.550	0.12	0.50	0.12	0.000
3.567	0.12	0.50	0.12	0.000
3.583	0.12	0.50	0.12	0.000
3.600	0.12	0.50	0.12	0.000
3.617	0.12	0.50	0.12	0.000
3.633	0.12	0.50	0.12	0.000
3.650	0.12	0.50	0.12	0.000
3.667	0.12	0.50	0.12	0.000
3.683	0.12	0.50	0.12	0.000
3.700	0.12	0.50	0.12	0.000
3.717	0.12	0.50	0.12	0.000
3.733	0.12	0.50	0.12	0.000
3.750	0.12	0.50	0.12	0.000
3.767	0.12	0.50	0.12	0.000
3.783	0.12	0.50	0.12	0.000
3.800	0.12	0.50	0.12	0.000
3.817	0.12	0.50	0.12	0.000
3.833	0.12	0.50	0.12	0.000

3.850	0.12	0.50	0.12	0.000
3.867	0.12	0.50	0.12	0.000
3.883	0.12	0.50	0.12	0.000
3.900	0.12	0.50	0.12	0.000
3.917	0.12	0.50	0.12	0.000
3.933	0.12	0.50	0.12	0.000
3.950	0.12	0.50	0.12	0.000
3.967	0.12	0.50	0.12	0.000
3.983	0.12	0.50	0.12	0.000
4.000	0.12	0.50	0.12	0.000
4.017	0.12	0.50	0.12	0.000
4.033	0.12	0.50	0.12	0.000
4.050	0.12	0.50	0.12	0.000
4.067	0.12	0.50	0.12	0.000
4.083	0.12	0.50	0.12	0.000
4.100	0.12	0.50	0.12	0.000
4.117	0.12	0.50	0.12	0.000
4.133	0.12	0.50	0.12	0.000
4.150	0.12	0.50	0.12	0.000
4.167	0.12	0.50	0.12	0.000
4.183	0.12	0.50	0.12	0.000
4.200	0.12	0.50	0.12	0.000
4.217	0.12	0.50	0.12	0.000
4.233	0.12	0.50	0.12	0.000
4.250	0.12	0.50	0.12	0.000
4.267	0.12	0.50	0.12	0.000
4.283	0.12	0.50	0.12	0.000
4.300	0.12	0.50	0.12	0.000
4.317	0.12	0.50	0.12	0.000
4.333	0.12	0.50	0.12	0.000
4.350	0.12	0.50	0.12	0.000
4.367	0.12	0.50	0.12	0.000
4.383	0.12	0.50	0.12	0.000
4.400	0.12	0.50	0.12	0.000
4.417	0.12	0.50	0.12	0.000
4.433	0.12	0.50	0.12	0.000
4.450	0.12	0.50	0.12	0.000
4.467	0.12	0.50	0.12	0.000
4.483	0.12	0.50	0.12	0.000
4.500	0.12	0.50	0.12	0.000
4.517	0.12	0.50	0.12	0.000
4.533	0.12	0.50	0.12	0.000
4.550	0.12	0.50	0.12	0.000
4.567	0.12	0.50	0.12	0.000
4.583	0.12	0.50	0.12	0.000
4.600	0.12	0.50	0.12	0.000
4.617	0.12	0.50	0.12	0.000
4.633	0.12	0.50	0.12	0.000
4.650	0.12	0.50	0.12	0.000
4.667	0.12	0.50	0.12	0.000

4.683	0.12	0.50	0.12	0.000
4.700	0.12	0.50	0.12	0.000
4.717	0.12	0.50	0.12	0.000
4.733	0.12	0.50	0.12	0.000
4.750	0.12	0.50	0.12	0.000
4.767	0.12	0.50	0.12	0.000
4.783	0.12	0.50	0.12	0.000
4.800	0.12	0.50	0.12	0.000
4.817	0.12	0.50	0.12	0.000
4.833	0.12	0.50	0.12	0.000
4.850	0.12	0.50	0.12	0.000
4.867	0.12	0.50	0.12	0.000
4.883	0.12	0.50	0.12	0.000
4.900	0.12	0.50	0.12	0.000
4.917	0.13	0.50	0.12	0.000
4.933	0.13	0.50	0.12	0.000
4.950	0.13	0.50	0.12	0.000
4.967	0.13	0.50	0.13	0.000
4.983	0.13	0.50	0.13	0.000
5.000	0.13	0.50	0.13	0.000
5.017	0.13	0.50	0.13	0.000
5.033	0.13	0.50	0.13	0.000
5.050	0.13	0.50	0.13	0.000
5.067	0.13	0.50	0.13	0.000
5.083	0.13	0.50	0.13	0.000
5.100	0.13	0.50	0.13	0.000
5.117	0.13	0.50	0.13	0.000
5.133	0.13	0.50	0.13	0.000
5.150	0.13	0.50	0.13	0.000
5.167	0.13	0.50	0.13	0.000
5.183	0.13	0.50	0.13	0.000
5.200	0.13	0.50	0.13	0.000
5.217	0.13	0.50	0.13	0.000
5.233	0.13	0.50	0.13	0.000
5.250	0.13	0.50	0.13	0.000
5.267	0.13	0.50	0.13	0.000
5.283	0.13	0.50	0.13	0.000
5.300	0.13	0.50	0.13	0.000
5.317	0.13	0.50	0.13	0.000
5.333	0.13	0.50	0.13	0.000
5.350	0.13	0.50	0.13	0.000
5.367	0.13	0.50	0.13	0.000
5.383	0.13	0.50	0.13	0.000
5.400	0.13	0.50	0.13	0.000
5.417	0.13	0.50	0.13	0.000
5.433	0.13	0.50	0.13	0.000
5.450	0.13	0.50	0.13	0.000
5.467	0.13	0.50	0.13	0.000
5.483	0.13	0.50	0.13	0.000
5.500	0.13	0.50	0.13	0.000

5.517	0.13	0.50	0.13	0.000
5.533	0.13	0.50	0.13	0.000
5.550	0.13	0.50	0.13	0.000
5.567	0.13	0.50	0.13	0.000
5.583	0.13	0.50	0.13	0.000
5.600	0.13	0.50	0.13	0.000
5.617	0.13	0.50	0.13	0.000
5.633	0.13	0.50	0.13	0.000
5.650	0.13	0.50	0.13	0.000
5.667	0.13	0.50	0.13	0.000
5.683	0.13	0.50	0.13	0.000
5.700	0.13	0.50	0.13	0.000
5.717	0.13	0.50	0.13	0.000
5.733	0.13	0.50	0.13	0.000
5.750	0.13	0.50	0.13	0.000
5.767	0.13	0.50	0.13	0.000
5.783	0.13	0.50	0.13	0.000
5.800	0.13	0.50	0.13	0.000
5.817	0.13	0.50	0.13	0.000
5.833	0.13	0.50	0.13	0.000
5.850	0.13	0.50	0.13	0.000
5.867	0.13	0.50	0.13	0.000
5.883	0.13	0.50	0.13	0.000
5.900	0.13	0.50	0.13	0.000
5.917	0.13	0.50	0.13	0.000
5.933	0.13	0.50	0.13	0.000
5.950	0.13	0.50	0.13	0.000
5.967	0.13	0.50	0.13	0.000
5.983	0.13	0.50	0.13	0.000
6.000	0.13	0.50	0.13	0.000
6.017	0.13	0.50	0.13	0.000
6.033	0.13	0.50	0.13	0.000
6.050	0.13	0.50	0.13	0.000
6.067	0.13	0.50	0.13	0.000
6.083	0.13	0.50	0.13	0.000
6.100	0.13	0.50	0.13	0.000
6.117	0.13	0.50	0.13	0.000
6.133	0.13	0.50	0.13	0.000
6.150	0.13	0.50	0.13	0.000
6.167	0.13	0.50	0.13	0.000
6.183	0.13	0.50	0.13	0.000
6.200	0.13	0.50	0.13	0.000
6.217	0.14	0.50	0.13	0.000
6.233	0.14	0.50	0.13	0.000
6.250	0.14	0.50	0.13	0.000
6.267	0.14	0.50	0.13	0.000
6.283	0.14	0.50	0.14	0.000
6.300	0.14	0.50	0.14	0.000
6.317	0.14	0.50	0.14	0.000
6.333	0.14	0.50	0.14	0.000

6.350	0.14	0.50	0.14	0.000
6.367	0.14	0.50	0.14	0.000
6.383	0.14	0.50	0.14	0.000
6.400	0.14	0.50	0.14	0.000
6.417	0.14	0.50	0.14	0.000
6.433	0.14	0.50	0.14	0.000
6.450	0.14	0.50	0.14	0.000
6.467	0.14	0.50	0.14	0.000
6.483	0.14	0.50	0.14	0.000
6.500	0.14	0.50	0.14	0.000
6.517	0.14	0.50	0.14	0.000
6.533	0.14	0.50	0.14	0.000
6.550	0.14	0.50	0.14	0.000
6.567	0.14	0.50	0.14	0.000
6.583	0.14	0.50	0.14	0.000
6.600	0.14	0.50	0.14	0.000
6.617	0.14	0.50	0.14	0.000
6.633	0.14	0.50	0.14	0.000
6.650	0.14	0.50	0.14	0.000
6.667	0.14	0.50	0.14	0.000
6.683	0.14	0.50	0.14	0.000
6.700	0.14	0.50	0.14	0.000
6.717	0.14	0.50	0.14	0.000
6.733	0.14	0.50	0.14	0.000
6.750	0.14	0.50	0.14	0.000
6.767	0.14	0.50	0.14	0.000
6.783	0.14	0.50	0.14	0.000
6.800	0.14	0.50	0.14	0.000
6.817	0.14	0.50	0.14	0.000
6.833	0.14	0.50	0.14	0.000
6.850	0.14	0.50	0.14	0.000
6.867	0.14	0.50	0.14	0.000
6.883	0.14	0.50	0.14	0.000
6.900	0.14	0.50	0.14	0.000
6.917	0.14	0.50	0.14	0.000
6.933	0.14	0.50	0.14	0.000
6.950	0.14	0.50	0.14	0.000
6.967	0.14	0.50	0.14	0.000
6.983	0.14	0.50	0.14	0.000
7.000	0.14	0.50	0.14	0.000
7.017	0.14	0.50	0.14	0.000
7.033	0.14	0.50	0.14	0.000
7.050	0.14	0.50	0.14	0.000
7.067	0.14	0.50	0.14	0.000
7.083	0.14	0.50	0.14	0.000
7.100	0.14	0.50	0.14	0.000
7.117	0.14	0.50	0.14	0.000
7.133	0.14	0.50	0.14	0.000
7.150	0.14	0.50	0.14	0.000
7.167	0.14	0.50	0.14	0.000

7.183	0.14	0.50	0.14	0.000
7.200	0.14	0.50	0.14	0.000
7.217	0.14	0.50	0.14	0.000
7.233	0.14	0.50	0.14	0.000
7.250	0.14	0.50	0.14	0.000
7.267	0.14	0.50	0.14	0.000
7.283	0.15	0.50	0.14	0.000
7.300	0.15	0.50	0.14	0.000
7.317	0.15	0.50	0.14	0.000
7.333	0.15	0.50	0.14	0.000
7.350	0.15	0.50	0.15	0.000
7.367	0.15	0.50	0.15	0.000
7.383	0.15	0.50	0.15	0.000
7.400	0.15	0.50	0.15	0.000
7.417	0.15	0.50	0.15	0.000
7.433	0.15	0.50	0.15	0.000
7.450	0.15	0.50	0.15	0.000
7.467	0.15	0.50	0.15	0.000
7.483	0.15	0.50	0.15	0.000
7.500	0.15	0.50	0.15	0.000
7.517	0.15	0.50	0.15	0.000
7.533	0.15	0.50	0.15	0.000
7.550	0.15	0.50	0.15	0.000
7.567	0.15	0.50	0.15	0.000
7.583	0.15	0.50	0.15	0.000
7.600	0.15	0.50	0.15	0.000
7.617	0.15	0.50	0.15	0.000
7.633	0.15	0.50	0.15	0.000
7.650	0.15	0.50	0.15	0.000
7.667	0.15	0.50	0.15	0.000
7.683	0.15	0.50	0.15	0.000
7.700	0.15	0.50	0.15	0.000
7.717	0.15	0.50	0.15	0.000
7.733	0.15	0.50	0.15	0.000
7.750	0.15	0.50	0.15	0.000
7.767	0.15	0.50	0.15	0.000
7.783	0.15	0.50	0.15	0.000
7.800	0.15	0.50	0.15	0.000
7.817	0.15	0.50	0.15	0.000
7.833	0.15	0.50	0.15	0.000
7.850	0.15	0.50	0.15	0.000
7.867	0.15	0.50	0.15	0.000
7.883	0.15	0.50	0.15	0.000
7.900	0.15	0.50	0.15	0.000
7.917	0.15	0.50	0.15	0.000
7.933	0.15	0.50	0.15	0.000
7.950	0.15	0.50	0.15	0.000
7.967	0.15	0.50	0.15	0.000
7.983	0.15	0.51	0.15	0.000
8.000	0.15	0.51	0.15	0.000

8.017	0.15	0.51	0.15	0.000
8.033	0.15	0.51	0.15	0.000
8.050	0.15	0.51	0.15	0.000
8.067	0.15	0.51	0.15	0.000
8.083	0.15	0.51	0.15	0.000
8.100	0.15	0.51	0.15	0.000
8.117	0.15	0.51	0.15	0.000
8.133	0.15	0.51	0.15	0.000
8.150	0.15	0.51	0.15	0.000
8.167	0.15	0.51	0.15	0.000
8.183	0.16	0.51	0.16	0.000
8.200	0.16	0.51	0.16	0.000
8.217	0.16	0.51	0.16	0.000
8.233	0.16	0.52	0.16	0.000
8.250	0.16	0.52	0.16	0.000
8.267	0.16	0.52	0.16	0.000
8.283	0.16	0.52	0.16	0.000
8.300	0.16	0.52	0.16	0.000
8.317	0.16	0.52	0.16	0.000
8.333	0.16	0.52	0.16	0.000
8.350	0.16	0.52	0.16	0.000
8.367	0.16	0.52	0.16	0.000
8.383	0.16	0.52	0.16	0.000
8.400	0.16	0.52	0.16	0.000
8.417	0.16	0.52	0.16	0.000
8.433	0.16	0.52	0.16	0.000
8.450	0.16	0.52	0.16	0.000
8.467	0.16	0.53	0.16	0.000
8.483	0.16	0.53	0.16	0.000
8.500	0.16	0.53	0.16	0.000
8.517	0.16	0.53	0.16	0.000
8.533	0.16	0.53	0.16	0.000
8.550	0.16	0.53	0.16	0.000
8.567	0.16	0.53	0.16	0.000
8.583	0.16	0.53	0.16	0.000
8.600	0.16	0.53	0.16	0.000
8.617	0.16	0.53	0.16	0.000
8.633	0.16	0.53	0.16	0.000
8.650	0.16	0.53	0.16	0.000
8.667	0.16	0.53	0.16	0.000
8.683	0.16	0.53	0.16	0.000
8.700	0.16	0.54	0.16	0.000
8.717	0.16	0.54	0.16	0.000
8.733	0.16	0.54	0.16	0.000
8.750	0.16	0.54	0.16	0.000
8.767	0.16	0.54	0.16	0.000
8.783	0.16	0.54	0.16	0.000
8.800	0.16	0.54	0.16	0.000
8.817	0.16	0.54	0.16	0.000
8.833	0.16	0.54	0.16	0.000

8.850	0.16	0.54	0.16	0.000
8.867	0.16	0.54	0.16	0.000
8.883	0.16	0.54	0.16	0.000
8.900	0.16	0.54	0.16	0.000
8.917	0.16	0.54	0.16	0.000
8.933	0.16	0.55	0.16	0.000
8.950	0.17	0.55	0.17	0.000
8.967	0.17	0.55	0.17	0.000
8.983	0.17	0.55	0.17	0.000
9.000	0.17	0.55	0.17	0.000
9.017	0.17	0.55	0.17	0.000
9.033	0.17	0.55	0.17	0.000
9.050	0.17	0.55	0.17	0.000
9.067	0.17	0.55	0.17	0.000
9.083	0.17	0.55	0.17	0.000
9.100	0.17	0.55	0.17	0.000
9.117	0.17	0.55	0.17	0.000
9.133	0.17	0.56	0.17	0.000
9.150	0.17	0.56	0.17	0.000
9.167	0.17	0.56	0.17	0.000
9.183	0.17	0.56	0.17	0.000
9.200	0.17	0.56	0.17	0.000
9.217	0.17	0.56	0.17	0.000
9.233	0.17	0.56	0.17	0.000
9.250	0.17	0.56	0.17	0.000
9.267	0.17	0.56	0.17	0.000
9.283	0.17	0.56	0.17	0.000
9.300	0.17	0.56	0.17	0.000
9.317	0.17	0.56	0.17	0.000
9.333	0.17	0.57	0.17	0.000
9.350	0.17	0.57	0.17	0.000
9.367	0.17	0.57	0.17	0.000
9.383	0.17	0.57	0.17	0.000
9.400	0.17	0.57	0.17	0.000
9.417	0.17	0.57	0.17	0.000
9.433	0.17	0.57	0.17	0.000
9.450	0.17	0.57	0.17	0.000
9.467	0.17	0.57	0.17	0.000
9.483	0.17	0.57	0.17	0.000
9.500	0.17	0.57	0.17	0.000
9.517	0.17	0.57	0.17	0.000
9.533	0.17	0.58	0.17	0.000
9.550	0.17	0.58	0.17	0.000
9.567	0.17	0.58	0.17	0.000
9.583	0.17	0.58	0.17	0.000
9.600	0.18	0.58	0.18	0.000
9.617	0.18	0.58	0.18	0.000
9.633	0.18	0.58	0.18	0.000
9.650	0.18	0.58	0.18	0.000
9.667	0.18	0.58	0.18	0.000

9.683	0.18	0.58	0.18	0.000
9.700	0.18	0.59	0.18	0.000
9.717	0.18	0.59	0.18	0.000
9.733	0.18	0.59	0.18	0.000
9.750	0.18	0.59	0.18	0.000
9.767	0.18	0.59	0.18	0.000
9.783	0.18	0.59	0.18	0.000
9.800	0.18	0.59	0.18	0.000
9.817	0.18	0.59	0.18	0.000
9.833	0.18	0.59	0.18	0.000
9.850	0.18	0.59	0.18	0.000
9.867	0.18	0.59	0.18	0.000
9.883	0.18	0.60	0.18	0.000
9.900	0.18	0.60	0.18	0.000
9.917	0.18	0.60	0.18	0.000
9.933	0.18	0.60	0.18	0.000
9.950	0.18	0.60	0.18	0.000
9.967	0.18	0.60	0.18	0.000
9.983	0.18	0.60	0.18	0.000
10.000	0.18	0.60	0.18	0.000
10.017	0.18	0.60	0.18	0.000
10.033	0.18	0.60	0.18	0.000
10.050	0.18	0.61	0.18	0.000
10.067	0.18	0.61	0.18	0.000
10.083	0.18	0.61	0.18	0.000
10.100	0.18	0.61	0.18	0.000
10.117	0.18	0.61	0.18	0.000
10.133	0.18	0.61	0.18	0.000
10.150	0.18	0.61	0.18	0.000
10.167	0.19	0.61	0.19	0.000
10.183	0.19	0.61	0.19	0.000
10.200	0.19	0.62	0.19	0.000
10.217	0.19	0.62	0.19	0.000
10.233	0.19	0.62	0.19	0.000
10.250	0.19	0.62	0.19	0.000
10.267	0.19	0.62	0.19	0.000
10.283	0.19	0.62	0.19	0.000
10.300	0.19	0.62	0.19	0.000
10.317	0.19	0.62	0.19	0.000
10.333	0.19	0.62	0.19	0.000
10.350	0.19	0.63	0.19	0.000
10.367	0.19	0.63	0.19	0.000
10.383	0.19	0.63	0.19	0.000
10.400	0.19	0.63	0.19	0.000
10.417	0.19	0.63	0.19	0.000
10.433	0.19	0.63	0.19	0.000
10.450	0.19	0.63	0.19	0.000
10.467	0.19	0.63	0.19	0.000
10.483	0.19	0.63	0.19	0.000
10.500	0.19	0.64	0.19	0.000

10.517	0.19	0.64	0.19	0.000
10.533	0.19	0.64	0.19	0.000
10.550	0.19	0.64	0.19	0.000
10.567	0.19	0.64	0.19	0.000
10.583	0.19	0.64	0.19	0.000
10.600	0.19	0.64	0.19	0.000
10.617	0.19	0.64	0.19	0.000
10.633	0.19	0.64	0.19	0.000
10.650	0.20	0.65	0.20	0.000
10.667	0.20	0.65	0.20	0.000
10.683	0.20	0.65	0.20	0.000
10.700	0.20	0.65	0.20	0.000
10.717	0.20	0.65	0.20	0.000
10.733	0.20	0.65	0.20	0.000
10.750	0.20	0.65	0.20	0.000
10.767	0.20	0.65	0.20	0.000
10.783	0.20	0.66	0.20	0.000
10.800	0.20	0.66	0.20	0.000
10.817	0.20	0.66	0.20	0.000
10.833	0.20	0.66	0.20	0.000
10.850	0.20	0.66	0.20	0.000
10.867	0.20	0.66	0.20	0.000
10.883	0.20	0.66	0.20	0.000
10.900	0.20	0.67	0.20	0.000
10.917	0.20	0.67	0.20	0.000
10.933	0.20	0.67	0.20	0.000
10.950	0.20	0.67	0.20	0.000
10.967	0.20	0.67	0.20	0.000
10.983	0.20	0.67	0.20	0.000
11.000	0.20	0.67	0.20	0.000
11.017	0.20	0.67	0.20	0.000
11.033	0.20	0.68	0.20	0.000
11.050	0.20	0.68	0.20	0.000
11.067	0.20	0.68	0.20	0.000
11.083	0.21	0.68	0.21	0.000
11.100	0.21	0.68	0.21	0.000
11.117	0.21	0.68	0.21	0.000
11.133	0.21	0.68	0.21	0.000
11.150	0.21	0.69	0.21	0.000
11.167	0.21	0.69	0.21	0.000
11.183	0.21	0.69	0.21	0.000
11.200	0.21	0.69	0.21	0.000
11.217	0.21	0.69	0.21	0.000
11.233	0.21	0.69	0.21	0.000
11.250	0.21	0.69	0.21	0.000
11.267	0.21	0.69	0.21	0.000
11.283	0.21	0.70	0.21	0.000
11.300	0.21	0.70	0.21	0.000
11.317	0.21	0.70	0.21	0.000
11.333	0.21	0.70	0.21	0.000

11.350	0.21	0.70	0.21	0.000
11.367	0.21	0.70	0.21	0.000
11.383	0.21	0.71	0.21	0.000
11.400	0.21	0.71	0.21	0.000
11.417	0.21	0.71	0.21	0.000
11.433	0.21	0.71	0.21	0.000
11.450	0.22	0.71	0.22	0.000
11.467	0.22	0.71	0.22	0.000
11.483	0.22	0.72	0.22	0.000
11.500	0.22	0.72	0.22	0.000
11.517	0.22	0.72	0.22	0.000
11.533	0.22	0.72	0.22	0.000
11.550	0.22	0.72	0.22	0.000
11.567	0.22	0.72	0.22	0.000
11.583	0.22	0.72	0.22	0.000
11.600	0.22	0.73	0.22	0.000
11.617	0.22	0.73	0.22	0.000
11.633	0.22	0.73	0.22	0.000
11.650	0.22	0.73	0.22	0.000
11.667	0.22	0.73	0.22	0.000
11.683	0.22	0.73	0.22	0.000
11.700	0.22	0.74	0.22	0.000
11.717	0.22	0.74	0.22	0.000
11.733	0.22	0.74	0.22	0.000
11.750	0.22	0.74	0.22	0.000
11.767	0.22	0.74	0.22	0.000
11.783	0.23	0.75	0.23	0.000
11.800	0.23	0.75	0.23	0.000
11.817	0.23	0.75	0.23	0.000
11.833	0.23	0.75	0.23	0.000
11.850	0.23	0.75	0.23	0.000
11.867	0.23	0.75	0.23	0.000
11.883	0.23	0.75	0.23	0.000
11.900	0.23	0.76	0.23	0.000
11.917	0.23	0.76	0.23	0.000
11.933	0.23	0.76	0.23	0.000
11.950	0.23	0.76	0.23	0.000
11.967	0.23	0.76	0.23	0.000
11.983	0.23	0.77	0.23	0.000
12.000	0.23	0.77	0.23	0.000
12.017	0.23	0.77	0.23	0.000
12.033	0.23	0.78	0.23	0.000
12.050	0.24	0.78	0.23	0.000
12.067	0.24	0.78	0.24	0.000
12.083	0.24	0.79	0.24	0.000
12.100	0.24	0.80	0.24	0.000
12.117	0.24	0.80	0.24	0.000
12.133	0.24	0.81	0.24	0.000
12.150	0.25	0.81	0.25	0.000
12.167	0.25	0.82	0.25	0.000

12.183	0.25	0.83	0.25	0.000
12.200	0.25	0.84	0.25	0.000
12.217	0.26	0.86	0.26	0.000
12.233	0.26	0.87	0.26	0.000
12.250	0.27	0.88	0.27	0.000
12.267	0.27	0.90	0.27	0.000
12.283	0.28	0.91	0.27	0.000
12.300	0.28	0.93	0.28	0.000
12.317	0.28	0.94	0.28	0.000
12.333	0.29	0.96	0.29	0.000
12.350	0.29	0.97	0.30	0.000
12.367	0.30	0.98	0.30	0.000
12.383	0.30	0.99	0.30	0.000
12.400	0.30	1.00	0.30	0.000
12.417	0.30	1.01	0.30	0.000
12.433	0.31	1.02	0.31	0.000
12.450	0.31	1.02	0.31	0.000
12.467	0.31	1.03	0.31	0.000
12.483	0.31	1.04	0.31	0.000
12.500	0.32	1.05	0.32	0.000
12.517	0.32	1.05	0.32	0.000
12.533	0.32	1.06	0.32	0.000
12.550	0.32	1.07	0.32	0.000
12.567	0.32	1.07	0.32	0.000
12.583	0.33	1.08	0.33	0.000
12.600	0.33	1.08	0.33	0.000
12.617	0.33	1.09	0.33	0.000
12.633	0.33	1.09	0.33	0.000
12.650	0.33	1.10	0.33	0.000
12.667	0.33	1.10	0.33	0.000
12.683	0.33	1.11	0.33	0.000
12.700	0.34	1.11	0.34	0.000
12.717	0.34	1.11	0.34	0.000
12.733	0.34	1.12	0.34	0.000
12.750	0.34	1.12	0.34	0.000
12.767	0.34	1.12	0.34	0.000
12.783	0.34	1.13	0.34	0.000
12.800	0.34	1.13	0.34	0.000
12.817	0.34	1.14	0.34	0.000
12.833	0.34	1.14	0.34	0.000
12.850	0.35	1.14	0.35	0.000
12.867	0.35	1.15	0.35	0.000
12.883	0.35	1.15	0.35	0.000
12.900	0.35	1.15	0.35	0.000
12.917	0.35	1.16	0.35	0.000
12.933	0.35	1.16	0.35	0.000
12.950	0.35	1.16	0.35	0.000
12.967	0.35	1.17	0.35	0.000
12.983	0.35	1.17	0.35	0.000
13.000	0.35	1.17	0.35	0.000

13.017	0.36	1.18	0.36	0.000
13.033	0.36	1.18	0.36	0.000
13.050	0.36	1.18	0.36	0.000
13.067	0.36	1.19	0.36	0.000
13.083	0.36	1.19	0.36	0.000
13.100	0.36	1.19	0.36	0.000
13.117	0.36	1.20	0.36	0.000
13.133	0.36	1.20	0.36	0.000
13.150	0.36	1.20	0.36	0.000
13.167	0.36	1.21	0.36	0.000
13.183	0.37	1.21	0.37	0.000
13.200	0.37	1.22	0.37	0.000
13.217	0.37	1.22	0.37	0.000
13.233	0.37	1.22	0.37	0.000
13.250	0.37	1.23	0.37	0.000
13.267	0.37	1.23	0.37	0.000
13.283	0.37	1.23	0.37	0.000
13.300	0.37	1.24	0.37	0.000
13.317	0.37	1.24	0.37	0.000
13.333	0.38	1.24	0.38	0.000
13.350	0.38	1.25	0.38	0.000
13.367	0.38	1.25	0.38	0.000
13.383	0.38	1.25	0.38	0.000
13.400	0.38	1.26	0.38	0.000
13.417	0.38	1.26	0.38	0.000
13.433	0.38	1.26	0.38	0.000
13.450	0.38	1.27	0.38	0.000
13.467	0.38	1.27	0.38	0.000
13.483	0.39	1.28	0.39	0.000
13.500	0.39	1.28	0.39	0.000
13.517	0.39	1.29	0.39	0.000
13.533	0.39	1.29	0.39	0.000
13.550	0.39	1.29	0.39	0.000
13.567	0.39	1.30	0.39	0.000
13.583	0.39	1.30	0.39	0.000
13.600	0.39	1.31	0.39	0.000
13.617	0.40	1.31	0.40	0.000
13.633	0.40	1.31	0.40	0.000
13.650	0.40	1.32	0.40	0.000
13.667	0.40	1.32	0.40	0.000
13.683	0.40	1.33	0.40	0.000
13.700	0.40	1.33	0.40	0.000
13.717	0.40	1.33	0.40	0.000
13.733	0.40	1.34	0.40	0.000
13.750	0.41	1.34	0.41	0.000
13.767	0.41	1.35	0.41	0.000
13.783	0.41	1.35	0.41	0.000
13.800	0.41	1.36	0.41	0.000
13.817	0.41	1.36	0.41	0.000
13.833	0.41	1.37	0.41	0.000

13.850	0.42	1.37	0.42	0.000
13.867	0.42	1.38	0.42	0.000
13.883	0.42	1.38	0.42	0.000
13.900	0.42	1.39	0.42	0.000
13.917	0.42	1.39	0.42	0.000
13.933	0.42	1.40	0.42	0.000
13.950	0.42	1.40	0.42	0.000
13.967	0.42	1.41	0.42	0.000
13.983	0.43	1.41	0.43	0.000
14.000	0.43	1.42	0.43	0.000
14.017	0.43	1.42	0.43	0.000
14.033	0.43	1.43	0.43	0.000
14.050	0.43	1.43	0.43	0.000
14.067	0.44	1.44	0.43	0.000
14.083	0.44	1.45	0.44	0.000
14.100	0.44	1.45	0.44	0.000
14.117	0.44	1.46	0.44	0.000
14.133	0.44	1.46	0.44	0.000
14.150	0.44	1.47	0.44	0.000
14.167	0.44	1.47	0.44	0.000
14.183	0.45	1.48	0.45	0.000
14.200	0.45	1.48	0.45	0.000
14.217	0.45	1.49	0.45	0.000
14.233	0.45	1.49	0.45	0.000
14.250	0.45	1.50	0.45	0.000
14.267	0.45	1.50	0.45	0.000
14.283	0.45	1.51	0.45	0.000
14.300	0.46	1.51	0.46	0.000
14.317	0.46	1.52	0.46	0.000
14.333	0.46	1.53	0.46	0.000
14.350	0.46	1.53	0.46	0.000
14.367	0.46	1.54	0.46	0.000
14.383	0.47	1.55	0.47	0.000
14.400	0.47	1.55	0.47	0.000
14.417	0.47	1.56	0.47	0.000
14.433	0.47	1.57	0.47	0.000
14.450	0.48	1.57	0.48	0.000
14.467	0.48	1.58	0.48	0.000
14.483	0.48	1.59	0.48	0.000
14.500	0.48	1.59	0.48	0.000
14.517	0.48	1.60	0.48	0.000
14.533	0.49	1.61	0.49	0.000
14.550	0.49	1.62	0.49	0.000
14.567	0.49	1.62	0.49	0.000
14.583	0.49	1.63	0.49	0.000
14.600	0.50	1.64	0.50	0.000
14.617	0.50	1.65	0.50	0.000
14.633	0.50	1.66	0.50	0.000
14.650	0.50	1.67	0.50	0.000
14.667	0.51	1.68	0.51	0.000

14.683	0.51	1.69	0.51	0.000
14.700	0.51	1.70	0.51	0.000
14.717	0.52	1.71	0.52	0.000
14.733	0.52	1.72	0.52	0.000
14.750	0.52	1.73	0.52	0.000
14.767	0.52	1.74	0.52	0.000
14.783	0.53	1.74	0.53	0.000
14.800	0.53	1.75	0.53	0.000
14.817	0.53	1.76	0.53	0.000
14.833	0.54	1.77	0.53	0.000
14.850	0.54	1.78	0.54	0.000
14.867	0.54	1.79	0.54	0.000
14.883	0.54	1.80	0.54	0.000
14.900	0.55	1.82	0.55	0.000
14.917	0.55	1.83	0.55	0.000
14.933	0.56	1.84	0.56	0.000
14.950	0.56	1.85	0.56	0.000
14.967	0.56	1.87	0.56	0.000
14.983	0.57	1.88	0.57	0.000
15.000	0.57	1.90	0.57	0.000
15.017	0.58	1.91	0.58	0.000
15.033	0.58	1.92	0.58	0.000
15.050	0.58	1.93	0.58	0.000
15.067	0.59	1.95	0.59	0.000
15.083	0.59	1.96	0.59	0.000
15.100	0.60	1.97	0.60	0.000
15.117	0.60	1.99	0.60	0.000
15.133	0.60	2.00	0.60	0.000
15.150	0.61	2.01	0.61	0.000
15.167	0.61	2.03	0.61	0.000
15.183	0.62	2.05	0.62	0.000
15.200	0.62	2.06	0.62	0.000
15.217	0.63	2.08	0.63	0.000
15.233	0.63	2.10	0.63	0.000
15.250	0.64	2.12	0.64	0.000
15.267	0.65	2.14	0.65	0.000
15.283	0.65	2.16	0.65	0.000
15.300	0.66	2.18	0.66	0.000
15.317	0.67	2.20	0.67	0.000
15.333	0.67	2.22	0.67	0.000
15.350	0.68	2.24	0.68	0.000
15.367	0.68	2.26	0.68	0.000
15.383	0.69	2.28	0.69	0.000
15.400	0.70	2.30	0.70	0.000
15.417	0.70	2.32	0.70	0.000
15.433	0.71	2.34	0.71	0.000
15.450	0.71	2.36	0.71	0.000
15.467	0.72	2.37	0.72	0.000
15.483	0.72	2.39	0.72	0.000
15.500	0.73	2.40	0.73	0.000

15.517	0.73	2.41	0.73	0.000
15.533	0.73	2.43	0.73	0.000
15.550	0.74	2.44	0.74	0.000
15.567	0.74	2.45	0.74	0.000
15.583	0.74	2.46	0.74	0.000
15.600	0.75	2.47	0.75	0.000
15.617	0.75	2.49	0.75	0.000
15.633	0.76	2.51	0.76	0.000
15.650	0.76	2.53	0.76	0.000
15.667	0.77	2.55	0.77	0.000
15.683	0.78	2.57	0.78	0.000
15.700	0.78	2.59	0.78	0.000
15.717	0.79	2.62	0.79	0.000
15.733	0.80	2.66	0.80	0.000
15.750	0.82	2.70	0.82	0.000
15.767	0.83	2.76	0.83	0.000
15.783	0.85	2.83	0.85	0.000
15.800	0.88	2.90	0.88	0.000
15.817	0.90	2.99	0.90	0.000
15.833	0.93	3.08	0.93	0.000
15.850	0.96	3.18	0.96	0.000
15.867	0.99	3.28	0.99	0.000
15.883	1.02	3.39	1.02	0.000
15.900	1.06	3.51	1.06	0.000
15.917	1.10	3.63	1.10	0.000
15.933	1.14	3.77	1.14	0.000
15.950	1.18	3.90	1.18	0.000
15.967	1.22	4.04	1.22	0.000
15.983	1.27	4.15	1.26	0.000
16.000	1.31	4.19	1.29	0.000
16.017	1.37	4.22	1.35	0.000
16.033	1.45	4.28	1.42	0.000
16.050	1.56	4.36	1.52	0.000
16.067	1.70	4.46	1.65	0.000
16.083	1.87	4.58	1.82	0.000
16.100	2.06	4.71	2.01	0.000
16.117	2.28	4.86	2.22	0.000
16.133	2.51	5.03	2.45	0.000
16.150	2.77	5.17	2.70	0.000
16.167	3.03	5.31	2.96	0.000
16.183	3.23	5.41	3.18	0.000
16.200	3.36	5.48	3.33	0.000
16.217	3.43	5.52	3.42	0.000
16.233	3.45	5.54	3.45	0.000
16.250	3.43	5.52	3.43	0.000
16.267	3.36	5.48	3.37	0.000
16.283	3.24	5.42	3.27	0.000
16.300	3.09	5.34	3.13	0.000
16.317	2.93	5.25	2.97	0.000
16.333	2.76	5.16	2.80	0.000

16.350	2.61	5.08	2.65	0.000
16.367	2.46	4.99	2.50	0.000
16.383	2.33	4.90	2.36	0.000
16.400	2.20	4.81	2.24	0.000
16.417	2.08	4.73	2.12	0.000
16.433	1.97	4.65	2.01	0.000
16.450	1.87	4.58	1.90	0.000
16.467	1.77	4.51	1.80	0.000
16.483	1.68	4.45	1.71	0.000
16.500	1.60	4.39	1.63	0.000
16.517	1.52	4.33	1.55	0.000
16.533	1.45	4.29	1.48	0.000
16.550	1.39	4.24	1.41	0.000
16.567	1.33	4.20	1.35	0.000
16.583	1.27	4.16	1.29	0.000
16.600	1.22	4.05	1.23	0.000
16.617	1.18	3.89	1.18	0.000
16.633	1.13	3.75	1.13	0.000
16.650	1.09	3.61	1.09	0.000
16.667	1.05	3.48	1.05	0.000
16.683	1.02	3.36	1.02	0.000
16.700	0.98	3.25	0.98	0.000
16.717	0.95	3.15	0.95	0.000
16.733	0.92	3.05	0.92	0.000
16.750	0.89	2.95	0.89	0.000
16.767	0.87	2.86	0.87	0.000
16.783	0.84	2.78	0.84	0.000
16.800	0.82	2.70	0.82	0.000
16.817	0.80	2.63	0.80	0.000
16.833	0.77	2.56	0.77	0.000
16.850	0.75	2.50	0.75	0.000
16.867	0.74	2.44	0.74	0.000
16.883	0.72	2.38	0.72	0.000
16.900	0.70	2.33	0.70	0.000
16.917	0.69	2.27	0.69	0.000
16.933	0.67	2.23	0.67	0.000
16.950	0.66	2.18	0.66	0.000
16.967	0.65	2.14	0.65	0.000
16.983	0.63	2.09	0.63	0.000
17.000	0.62	2.05	0.62	0.000
17.017	0.61	2.02	0.61	0.000
17.033	0.60	1.98	0.60	0.000
17.050	0.59	1.95	0.59	0.000
17.067	0.58	1.92	0.58	0.000
17.083	0.57	1.89	0.57	0.000
17.100	0.56	1.86	0.56	0.000
17.117	0.55	1.83	0.55	0.000
17.133	0.54	1.80	0.54	0.000
17.150	0.54	1.78	0.54	0.000
17.167	0.53	1.75	0.53	0.000

17.183	0.52	1.73	0.52	0.000
17.200	0.52	1.71	0.52	0.000
17.217	0.51	1.69	0.51	0.000
17.233	0.50	1.67	0.50	0.000
17.250	0.50	1.65	0.50	0.000
17.267	0.49	1.63	0.49	0.000
17.283	0.49	1.62	0.49	0.000
17.300	0.48	1.60	0.48	0.000
17.317	0.48	1.58	0.48	0.000
17.333	0.47	1.57	0.47	0.000
17.350	0.47	1.55	0.47	0.000
17.367	0.46	1.54	0.46	0.000
17.383	0.46	1.52	0.46	0.000
17.400	0.46	1.51	0.46	0.000
17.417	0.45	1.49	0.45	0.000
17.433	0.45	1.48	0.45	0.000
17.450	0.44	1.47	0.44	0.000
17.467	0.44	1.45	0.44	0.000
17.483	0.44	1.44	0.44	0.000
17.500	0.43	1.43	0.43	0.000
17.517	0.43	1.42	0.43	0.000
17.533	0.43	1.41	0.43	0.000
17.550	0.42	1.40	0.42	0.000
17.567	0.42	1.39	0.42	0.000
17.583	0.42	1.38	0.42	0.000
17.600	0.41	1.37	0.41	0.000
17.617	0.41	1.36	0.41	0.000
17.633	0.41	1.35	0.41	0.000
17.650	0.40	1.34	0.40	0.000
17.667	0.40	1.33	0.40	0.000
17.683	0.40	1.32	0.40	0.000
17.700	0.40	1.31	0.40	0.000
17.717	0.39	1.30	0.39	0.000
17.733	0.39	1.29	0.39	0.000
17.750	0.39	1.28	0.39	0.000
17.767	0.39	1.28	0.39	0.000
17.783	0.38	1.27	0.38	0.000
17.800	0.38	1.26	0.38	0.000
17.817	0.38	1.25	0.38	0.000
17.833	0.38	1.24	0.38	0.000
17.850	0.37	1.24	0.37	0.000
17.867	0.37	1.23	0.37	0.000
17.883	0.37	1.22	0.37	0.000
17.900	0.37	1.22	0.37	0.000
17.917	0.37	1.21	0.36	0.000
17.933	0.36	1.20	0.36	0.000
17.950	0.36	1.19	0.36	0.000
17.967	0.36	1.19	0.36	0.000
17.983	0.36	1.18	0.36	0.000
18.000	0.36	1.18	0.36	0.000

18.017	0.35	1.17	0.35	0.000
18.033	0.35	1.16	0.35	0.000
18.050	0.35	1.16	0.35	0.000
18.067	0.35	1.15	0.35	0.000
18.083	0.35	1.15	0.35	0.000
18.100	0.34	1.14	0.34	0.000
18.117	0.34	1.13	0.34	0.000
18.133	0.34	1.12	0.34	0.000
18.150	0.33	1.11	0.34	0.000
18.167	0.33	1.09	0.33	0.000
18.183	0.33	1.08	0.33	0.000
18.200	0.32	1.06	0.32	0.000
18.217	0.32	1.04	0.32	0.000
18.233	0.31	1.02	0.31	0.000
18.250	0.30	1.00	0.30	0.000
18.267	0.30	0.98	0.30	0.000
18.283	0.29	0.96	0.29	0.000
18.300	0.29	0.95	0.29	0.000
18.317	0.28	0.93	0.28	0.000
18.333	0.28	0.92	0.29	0.000
18.350	0.27	0.90	0.27	0.000
18.367	0.27	0.89	0.27	0.000
18.383	0.27	0.88	0.26	0.000
18.400	0.26	0.87	0.26	0.000
18.417	0.26	0.86	0.26	0.000
18.433	0.26	0.85	0.26	0.000
18.450	0.25	0.84	0.25	0.000
18.467	0.25	0.83	0.25	0.000
18.483	0.25	0.82	0.25	0.000
18.500	0.25	0.81	0.24	0.000
18.517	0.24	0.80	0.24	0.000
18.533	0.24	0.80	0.24	0.000
18.550	0.24	0.79	0.24	0.000
18.567	0.24	0.78	0.24	0.000
18.583	0.23	0.78	0.23	0.000
18.600	0.23	0.77	0.23	0.000
18.617	0.23	0.76	0.23	0.000
18.633	0.23	0.76	0.23	0.000
18.650	0.23	0.75	0.23	0.000
18.667	0.23	0.75	0.23	0.000
18.683	0.22	0.74	0.22	0.000
18.700	0.22	0.74	0.22	0.000
18.717	0.22	0.73	0.22	0.000
18.733	0.22	0.73	0.22	0.000
18.750	0.22	0.73	0.22	0.000
18.767	0.22	0.72	0.22	0.000
18.783	0.22	0.72	0.22	0.000
18.800	0.22	0.71	0.22	0.000
18.817	0.21	0.71	0.21	0.000
18.833	0.21	0.71	0.21	0.000

18.850	0.21	0.70	0.21	0.000
18.867	0.21	0.70	0.21	0.000
18.883	0.21	0.70	0.21	0.000
18.900	0.21	0.69	0.21	0.000
18.917	0.21	0.69	0.21	0.000
18.933	0.21	0.69	0.21	0.000
18.950	0.21	0.68	0.21	0.000
18.967	0.21	0.68	0.21	0.000
18.983	0.20	0.68	0.20	0.000
19.000	0.20	0.67	0.20	0.000
19.017	0.20	0.67	0.20	0.000
19.033	0.20	0.67	0.20	0.000
19.050	0.20	0.67	0.20	0.000
19.067	0.20	0.66	0.20	0.000
19.083	0.20	0.66	0.20	0.000
19.100	0.20	0.66	0.20	0.000
19.117	0.20	0.65	0.20	0.000
19.133	0.20	0.65	0.20	0.000
19.150	0.20	0.65	0.20	0.000
19.167	0.20	0.65	0.20	0.000
19.183	0.19	0.64	0.19	0.000
19.200	0.19	0.64	0.19	0.000
19.217	0.19	0.64	0.19	0.000
19.233	0.19	0.64	0.19	0.000
19.250	0.19	0.63	0.19	0.000
19.267	0.19	0.63	0.19	0.000
19.283	0.19	0.63	0.19	0.000
19.300	0.19	0.63	0.19	0.000
19.317	0.19	0.62	0.19	0.000
19.333	0.19	0.62	0.19	0.000
19.350	0.19	0.62	0.19	0.000
19.367	0.19	0.62	0.19	0.000
19.383	0.19	0.62	0.19	0.000
19.400	0.19	0.61	0.19	0.000
19.417	0.18	0.61	0.18	0.000
19.433	0.18	0.61	0.18	0.000
19.450	0.18	0.61	0.18	0.000
19.467	0.18	0.61	0.18	0.000
19.483	0.18	0.60	0.18	0.000
19.500	0.18	0.60	0.18	0.000
19.517	0.18	0.60	0.18	0.000
19.533	0.18	0.60	0.18	0.000
19.550	0.18	0.60	0.18	0.000
19.567	0.18	0.59	0.18	0.000
19.583	0.18	0.59	0.18	0.000
19.600	0.18	0.59	0.18	0.000
19.617	0.18	0.59	0.18	0.000
19.633	0.18	0.59	0.18	0.000
19.650	0.18	0.58	0.18	0.000
19.667	0.18	0.58	0.18	0.000

19.683	0.18	0.58	0.18	0.000
19.700	0.17	0.58	0.17	0.000
19.717	0.17	0.58	0.17	0.000
19.733	0.17	0.57	0.17	0.000
19.750	0.17	0.57	0.17	0.000
19.767	0.17	0.57	0.17	0.000
19.783	0.17	0.57	0.17	0.000
19.800	0.17	0.57	0.17	0.000
19.817	0.17	0.57	0.17	0.000
19.833	0.17	0.56	0.17	0.000
19.850	0.17	0.56	0.17	0.000
19.867	0.17	0.56	0.17	0.000
19.883	0.17	0.56	0.17	0.000
19.900	0.17	0.56	0.17	0.000
19.917	0.17	0.56	0.17	0.000
19.933	0.17	0.55	0.17	0.000
19.950	0.17	0.55	0.17	0.000
19.967	0.17	0.55	0.17	0.000
19.983	0.17	0.55	0.17	0.000
20.000	0.17	0.55	0.17	0.000
20.017	0.16	0.55	0.16	0.000
20.033	0.16	0.54	0.16	0.000
20.050	0.16	0.54	0.16	0.000
20.067	0.16	0.54	0.16	0.000
20.083	0.16	0.54	0.16	0.000
20.100	0.16	0.54	0.16	0.000
20.117	0.16	0.54	0.16	0.000
20.133	0.16	0.54	0.16	0.000
20.150	0.16	0.53	0.16	0.000
20.167	0.16	0.53	0.16	0.000
20.183	0.16	0.53	0.16	0.000
20.200	0.16	0.53	0.16	0.000
20.217	0.16	0.53	0.16	0.000
20.233	0.16	0.53	0.16	0.000
20.250	0.16	0.53	0.16	0.000
20.267	0.16	0.52	0.16	0.000
20.283	0.16	0.52	0.16	0.000
20.300	0.16	0.52	0.16	0.000
20.317	0.16	0.52	0.16	0.000
20.333	0.16	0.52	0.16	0.000
20.350	0.16	0.52	0.16	0.000
20.367	0.16	0.52	0.16	0.000
20.383	0.16	0.51	0.16	0.000
20.400	0.15	0.51	0.15	0.000
20.417	0.15	0.51	0.15	0.000
20.433	0.15	0.51	0.15	0.000
20.450	0.15	0.51	0.15	0.000
20.467	0.15	0.51	0.15	0.000
20.483	0.15	0.51	0.15	0.000
20.500	0.15	0.50	0.15	0.000

20.517	0.15	0.50	0.15	0.000
20.533	0.15	0.50	0.15	0.000
20.550	0.15	0.50	0.15	0.000
20.567	0.15	0.50	0.15	0.000
20.583	0.15	0.50	0.15	0.000
20.600	0.15	0.50	0.15	0.000
20.617	0.15	0.50	0.15	0.000
20.633	0.15	0.50	0.15	0.000
20.650	0.15	0.50	0.15	0.000
20.667	0.15	0.50	0.15	0.000
20.683	0.15	0.50	0.15	0.000
20.700	0.15	0.50	0.15	0.000
20.717	0.15	0.50	0.15	0.000
20.733	0.15	0.50	0.15	0.000
20.750	0.15	0.50	0.15	0.000
20.767	0.15	0.50	0.15	0.000
20.783	0.15	0.50	0.15	0.000
20.800	0.15	0.50	0.15	0.000
20.817	0.15	0.50	0.15	0.000
20.833	0.15	0.50	0.15	0.000
20.850	0.14	0.50	0.15	0.000
20.867	0.14	0.50	0.15	0.000
20.883	0.14	0.50	0.15	0.000
20.900	0.14	0.50	0.15	0.000
20.917	0.14	0.50	0.14	0.000
20.933	0.14	0.50	0.14	0.000
20.950	0.14	0.50	0.14	0.000
20.967	0.14	0.50	0.14	0.000
20.983	0.14	0.50	0.14	0.000
21.000	0.14	0.50	0.14	0.000
21.017	0.14	0.50	0.14	0.000
21.033	0.14	0.50	0.14	0.000
21.050	0.14	0.50	0.14	0.000
21.067	0.14	0.50	0.14	0.000
21.083	0.14	0.50	0.14	0.000
21.100	0.14	0.50	0.14	0.000
21.117	0.14	0.50	0.14	0.000
21.133	0.14	0.50	0.14	0.000
21.150	0.14	0.50	0.14	0.000
21.167	0.14	0.50	0.14	0.000
21.183	0.14	0.50	0.14	0.000
21.200	0.14	0.50	0.14	0.000
21.217	0.14	0.50	0.14	0.000
21.233	0.14	0.50	0.14	0.000
21.250	0.14	0.50	0.14	0.000
21.267	0.14	0.50	0.14	0.000
21.283	0.14	0.50	0.14	0.000
21.300	0.14	0.50	0.14	0.000
21.317	0.14	0.50	0.14	0.000
21.333	0.14	0.50	0.14	0.000

21.350	0.14	0.50	0.14	0.000
21.367	0.14	0.50	0.14	0.000
21.383	0.13	0.50	0.14	0.000
21.400	0.13	0.50	0.14	0.000
21.417	0.13	0.50	0.14	0.000
21.433	0.13	0.50	0.14	0.000
21.450	0.13	0.50	0.13	0.000
21.467	0.13	0.50	0.13	0.000
21.483	0.13	0.50	0.13	0.000
21.500	0.13	0.50	0.13	0.000
21.517	0.13	0.50	0.13	0.000
21.533	0.13	0.50	0.13	0.000
21.550	0.13	0.50	0.13	0.000
21.567	0.13	0.50	0.13	0.000
21.583	0.13	0.50	0.13	0.000
21.600	0.13	0.50	0.13	0.000
21.617	0.13	0.50	0.13	0.000
21.633	0.13	0.50	0.13	0.000
21.650	0.13	0.50	0.13	0.000
21.667	0.13	0.50	0.13	0.000
21.683	0.13	0.50	0.13	0.000
21.700	0.13	0.50	0.13	0.000
21.717	0.13	0.50	0.13	0.000
21.733	0.13	0.50	0.13	0.000
21.750	0.13	0.50	0.13	0.000
21.767	0.13	0.50	0.13	0.000
21.783	0.13	0.50	0.13	0.000
21.800	0.13	0.50	0.13	0.000
21.817	0.13	0.50	0.13	0.000
21.833	0.13	0.50	0.13	0.000
21.850	0.13	0.50	0.13	0.000
21.867	0.13	0.50	0.13	0.000
21.883	0.13	0.50	0.13	0.000
21.900	0.13	0.50	0.13	0.000
21.917	0.13	0.50	0.13	0.000
21.933	0.13	0.50	0.13	0.000
21.950	0.13	0.50	0.13	0.000
21.967	0.13	0.50	0.13	0.000
21.983	0.13	0.50	0.13	0.000
22.000	0.13	0.50	0.13	0.000
22.017	0.13	0.50	0.13	0.000
22.033	0.12	0.50	0.13	0.000
22.050	0.12	0.50	0.13	0.000
22.067	0.12	0.50	0.13	0.000
22.083	0.12	0.50	0.13	0.000
22.100	0.12	0.50	0.12	0.000
22.117	0.12	0.50	0.12	0.000
22.133	0.12	0.50	0.12	0.000
22.150	0.12	0.50	0.12	0.000
22.167	0.12	0.50	0.12	0.000

22.183	0.12	0.50	0.12	0.000
22.200	0.12	0.50	0.12	0.000
22.217	0.12	0.50	0.12	0.000
22.233	0.12	0.50	0.12	0.000
22.250	0.12	0.50	0.12	0.000
22.267	0.12	0.50	0.12	0.000
22.283	0.12	0.50	0.12	0.000
22.300	0.12	0.50	0.12	0.000
22.317	0.12	0.50	0.12	0.000
22.333	0.12	0.50	0.12	0.000
22.350	0.12	0.50	0.12	0.000
22.367	0.12	0.50	0.12	0.000
22.383	0.12	0.50	0.12	0.000
22.400	0.12	0.50	0.12	0.000
22.417	0.12	0.50	0.12	0.000
22.433	0.12	0.50	0.12	0.000
22.450	0.12	0.50	0.12	0.000
22.467	0.12	0.50	0.12	0.000
22.483	0.12	0.50	0.12	0.000
22.500	0.12	0.50	0.12	0.000
22.517	0.12	0.50	0.12	0.000
22.533	0.12	0.50	0.12	0.000
22.550	0.12	0.50	0.12	0.000
22.567	0.12	0.50	0.12	0.000
22.583	0.12	0.50	0.12	0.000
22.600	0.12	0.50	0.12	0.000
22.617	0.12	0.50	0.12	0.000
22.633	0.12	0.50	0.12	0.000
22.650	0.12	0.50	0.12	0.000
22.667	0.12	0.50	0.12	0.000
22.683	0.12	0.50	0.12	0.000
22.700	0.12	0.50	0.12	0.000
22.717	0.12	0.50	0.12	0.000
22.733	0.12	0.50	0.12	0.000
22.750	0.12	0.50	0.12	0.000
22.767	0.12	0.50	0.12	0.000
22.783	0.12	0.50	0.12	0.000
22.800	0.12	0.50	0.12	0.000
22.817	0.12	0.50	0.12	0.000
22.833	0.11	0.50	0.12	0.000
22.850	0.11	0.50	0.12	0.000
22.867	0.11	0.50	0.12	0.000
22.883	0.11	0.50	0.12	0.000
22.900	0.11	0.50	0.11	0.000
22.917	0.11	0.50	0.11	0.000
22.933	0.11	0.50	0.11	0.000
22.950	0.11	0.50	0.11	0.000
22.967	0.11	0.50	0.11	0.000
22.983	0.11	0.50	0.11	0.000
23.000	0.11	0.50	0.11	0.000

23.017	0.11	0.50	0.11	0.000
23.033	0.11	0.50	0.11	0.000
23.050	0.11	0.50	0.11	0.000
23.067	0.11	0.50	0.11	0.000
23.083	0.11	0.50	0.11	0.000
23.100	0.11	0.50	0.11	0.000
23.117	0.11	0.50	0.11	0.000
23.133	0.11	0.50	0.11	0.000
23.150	0.11	0.50	0.11	0.000
23.167	0.11	0.50	0.11	0.000
23.183	0.11	0.50	0.11	0.000
23.200	0.11	0.50	0.11	0.000
23.217	0.11	0.50	0.11	0.000
23.233	0.11	0.50	0.11	0.000
23.250	0.11	0.50	0.11	0.000
23.267	0.11	0.50	0.11	0.000
23.283	0.11	0.50	0.11	0.000
23.300	0.11	0.50	0.11	0.000
23.317	0.11	0.50	0.11	0.000
23.333	0.11	0.50	0.11	0.000
23.350	0.11	0.50	0.11	0.000
23.367	0.11	0.50	0.11	0.000
23.383	0.11	0.50	0.11	0.000
23.400	0.11	0.50	0.11	0.000
23.417	0.11	0.50	0.11	0.000
23.433	0.11	0.50	0.11	0.000
23.450	0.11	0.50	0.11	0.000
23.467	0.11	0.50	0.11	0.000
23.483	0.11	0.50	0.11	0.000
23.500	0.11	0.50	0.11	0.000
23.517	0.11	0.50	0.11	0.000
23.533	0.11	0.50	0.11	0.000
23.550	0.11	0.50	0.11	0.000
23.567	0.11	0.50	0.11	0.000
23.583	0.11	0.50	0.11	0.000
23.600	0.11	0.50	0.11	0.000
23.617	0.11	0.50	0.11	0.000
23.633	0.11	0.50	0.11	0.000
23.650	0.11	0.50	0.11	0.000
23.667	0.11	0.50	0.11	0.000
23.683	0.11	0.50	0.11	0.000
23.700	0.11	0.50	0.11	0.000
23.717	0.11	0.50	0.11	0.000
23.733	0.11	0.50	0.11	0.000
23.750	0.11	0.50	0.11	0.000
23.767	0.11	0.50	0.11	0.000
23.783	0.11	0.50	0.11	0.000
23.800	0.11	0.50	0.11	0.000
23.817	0.11	0.50	0.11	0.000
23.833	0.10	0.50	0.11	0.000

23.850	0.10	0.50	0.11	0.000
23.867	0.10	0.50	0.11	0.000
23.883	0.10	0.50	0.11	0.000
23.900	0.10	0.50	0.10	0.000
23.917	0.10	0.50	0.10	0.000
23.933	0.10	0.50	0.10	0.000
23.950	0.10	0.50	0.10	0.000
23.967	0.10	0.50	0.10	0.000
23.983	0.10	0.50	0.10	0.000
24.000	0.10	0.50	0.10	0.000
24.017	0.10	0.50	0.10	0.000
24.033	0.10	0.50	0.10	0.000
24.050	0.10	0.50	0.10	0.000
24.067	0.10	0.50	0.10	0.000
24.083	0.10	0.50	0.10	0.000
24.100	0.10	0.50	0.10	0.000
24.117	0.09	0.50	0.10	0.000
24.133	0.09	0.50	0.10	0.000
24.150	0.09	0.50	0.10	0.000
24.167	0.08	0.50	0.10	0.000
24.183	0.07	0.50	0.09	0.000
24.200	0.07	0.50	0.09	0.000
24.217	0.06	0.50	0.08	0.000
24.233	0.06	0.50	0.08	0.000
24.250	0.05	0.50	0.07	0.000
24.267	0.05	0.50	0.07	0.000
24.283	0.04	0.50	0.06	0.000
24.300	0.04	0.50	0.06	0.000
24.317	0.04	0.50	0.05	0.000
24.333	0.03	0.50	0.05	0.000
24.350	0.03	0.50	0.04	0.000
24.367	0.03	0.50	0.04	0.000
24.383	0.03	0.50	0.04	0.000
24.400	0.02	0.50	0.03	0.000
24.417	0.02	0.50	0.03	0.000
24.433	0.02	0.50	0.03	0.000
24.450	0.02	0.50	0.03	0.000
24.467	0.02	0.50	0.02	0.000
24.483	0.01	0.50	0.02	0.000
24.500	0.01	0.50	0.02	0.000
24.517	0.01	0.50	0.02	0.000
24.533	0.01	0.50	0.02	0.000
24.550	0.01	0.50	0.01	0.000
24.567	0.01	0.50	0.01	0.000
24.583	0.01	0.50	0.01	0.000
24.600	0.01	0.50	0.01	0.000
24.617	0.01	0.50	0.01	0.000
24.633	0.01	0.50	0.01	0.000
24.650	0.01	0.50	0.01	0.000
24.667	0.01	0.50	0.01	0.000

24.683	0.01	0.50	0.01	0.000
24.700	0.00	0.50	0.01	0.000
24.717	0.00	0.50	0.01	0.000
24.733	0.00	0.50	0.01	0.000
24.750	0.00	0.50	0.00	0.000
24.767	0.00	0.50	0.00	0.000
24.783	0.00	0.50	0.00	0.000
24.800	0.00	0.50	0.00	0.000
24.817	0.00	0.50	0.00	0.000
24.833	0.00	0.50	0.00	0.000
24.850	0.00	0.50	0.00	0.000
24.867	0.00	0.50	0.00	0.000
24.883	0.00	0.50	0.00	0.000
24.900	0.00	0.50	0.00	0.000
24.917	0.00	0.50	0.00	0.000
24.933	0.00	0.50	0.00	0.000
24.950	0.00	0.50	0.00	0.000
24.967	0.00	0.50	0.00	0.000
24.983	0.00	0.50	0.00	0.000
25.000	0.00	0.00	0.00	0.000
25.017	0.00	0.00	0.00	0.000
25.033	0.00	0.00	0.00	0.000
25.050	0.00	0.00	0.00	0.000
25.067	0.00	0.00	0.00	0.000
25.083	0.00	0.00	0.00	0.000
25.100	0.00	0.00	0.00	0.000
25.117	0.00	0.00	0.00	0.000
25.133	0.00	0.00	0.00	0.000
25.150	0.00	0.00	0.00	0.000
25.167	0.00	0.00	0.00	0.000
25.183	0.00	0.00	0.00	0.000
25.200	0.00	0.00	0.00	0.000
25.217	0.00	0.00	0.00	0.000
25.233	0.00	0.00	0.00	0.000
25.250	0.00	0.00	0.00	0.000
25.267	0.00	0.00	0.00	0.000
25.283	0.00	0.00	0.00	0.000
25.300	0.00	0.00	0.00	0.000
25.317	0.00	0.00	0.00	0.000
25.333	0.00	0.00	0.00	0.000
25.350	0.00	0.00	0.00	0.000
25.367	0.00	0.00	0.00	0.000
25.383	0.00	0.00	0.00	0.000
25.400	0.00	0.00	0.00	0.000
25.417	0.00	0.00	0.00	0.000
25.433	0.00	0.00	0.00	0.000
25.450	0.00	0.00	0.00	0.000
25.467	0.00	0.00	0.00	0.000
25.483	0.00	0.00	0.00	0.000
25.500	0.00	0.00	0.00	0.000

25.517	0.00	0.00	0.00	0.000
25.533	0.00	0.00	0.00	0.000
25.550	0.00	0.00	0.00	0.000
25.567	0.00	0.00	0.00	0.000
25.583	0.00	0.00	0.00	0.000
25.600	0.00	0.00	0.00	0.000
25.617	0.00	0.00	0.00	0.000
25.633	0.00	0.00	0.00	0.000
25.650	0.00	0.00	0.00	0.000
25.667	0.00	0.00	0.00	0.000
25.683	0.00	0.00	0.00	0.000
25.700	0.00	0.00	0.00	0.000
25.717	0.00	0.00	0.00	0.000
25.733	0.00	0.00	0.00	0.000
25.750	0.00	0.00	0.00	0.000
25.767	0.00	0.00	0.00	0.000
25.783	0.00	0.00	0.00	0.000
25.800	0.00	0.00	0.00	0.000
25.817	0.00	0.00	0.00	0.000
25.833	0.00	0.00	0.00	0.000
25.850	0.00	0.00	0.00	0.000
25.867	0.00	0.00	0.00	0.000
25.883	0.00	0.00	0.00	0.000
25.900	0.00	0.00	0.00	0.000
25.917	0.00	0.00	0.00	0.000
25.933	0.00	0.00	0.00	0.000
25.950	0.00	0.00	0.00	0.000
25.967	0.00	0.00	0.00	0.000
25.983	0.00	0.00	0.00	0.000
26.000	0.00	0.00	0.00	0.000
26.017	0.00	0.00	0.00	0.000
26.033	0.00	0.00	0.00	0.000
26.050	0.00	0.00	0.00	0.000
26.067	0.00	0.00	0.00	0.000
26.083	0.00	0.00	0.00	0.000
26.100	0.00	0.00	0.00	0.000
26.117	0.00	0.00	0.00	0.000
26.133	0.00	0.00	0.00	0.000
26.150	0.00	0.00	0.00	0.000
26.167	0.00	0.00	0.00	0.000
26.183	0.00	0.00	0.00	0.000
26.200	0.00	0.00	0.00	0.000
26.217	0.00	0.00	0.00	0.000
26.233	0.00	0.00	0.00	0.000
26.250	0.00	0.00	0.00	0.000
26.267	0.00	0.00	0.00	0.000
26.283	0.00	0.00	0.00	0.000
26.300	0.00	0.00	0.00	0.000
26.317	0.00	0.00	0.00	0.000
26.333	0.00	0.00	0.00	0.000

26.350	0.00	0.00	0.00	0.000
26.367	0.00	0.00	0.00	0.000
26.383	0.00	0.00	0.00	0.000
26.400	0.00	0.00	0.00	0.000
26.417	0.00	0.00	0.00	0.000
26.433	0.00	0.00	0.00	0.000
26.450	0.00	0.00	0.00	0.000
26.467	0.00	0.00	0.00	0.000
26.483	0.00	0.00	0.00	0.000
26.500	0.00	0.00	0.00	0.000
26.517	0.00	0.00	0.00	0.000
26.533	0.00	0.00	0.00	0.000
26.550	0.00	0.00	0.00	0.000
26.567	0.00	0.00	0.00	0.000
26.583	0.00	0.00	0.00	0.000
26.600	0.00	0.00	0.00	0.000
26.617	0.00	0.00	0.00	0.000
26.633	0.00	0.00	0.00	0.000
26.650	0.00	0.00	0.00	0.000
26.667	0.00	0.00	0.00	0.000
26.683	0.00	0.00	0.00	0.000
26.700	0.00	0.00	0.00	0.000
26.717	0.00	0.00	0.00	0.000
26.733	0.00	0.00	0.00	0.000
26.750	0.00	0.00	0.00	0.000
26.767	0.00	0.00	0.00	0.000
26.783	0.00	0.00	0.00	0.000
26.800	0.00	0.00	0.00	0.000
26.817	0.00	0.00	0.00	0.000
26.833	0.00	0.00	0.00	0.000
26.850	0.00	0.00	0.00	0.000
26.867	0.00	0.00	0.00	0.000
26.883	0.00	0.00	0.00	0.000
26.900	0.00	0.00	0.00	0.000
26.917	0.00	0.00	0.00	0.000
26.933	0.00	0.00	0.00	0.000
26.950	0.00	0.00	0.00	0.000
26.967	0.00	0.00	0.00	0.000
26.983	0.00	0.00	0.00	0.000
27.000	0.00	0.00	0.00	0.000
27.017	0.00	0.00	0.00	0.000
27.033	0.00	0.00	0.00	0.000
27.050	0.00	0.00	0.00	0.000
27.067	0.00	0.00	0.00	0.000
27.083	0.00	0.00	0.00	0.000
27.100	0.00	0.00	0.00	0.000
27.117	0.00	0.00	0.00	0.000
27.133	0.00	0.00	0.00	0.000
27.150	0.00	0.00	0.00	0.000
27.167	0.00	0.00	0.00	0.000

27.183	0.00	0.00	0.00	0.000
27.200	0.00	0.00	0.00	0.000
27.217	0.00	0.00	0.00	0.000
27.233	0.00	0.00	0.00	0.000
27.250	0.00	0.00	0.00	0.000
27.267	0.00	0.00	0.00	0.000
27.283	0.00	0.00	0.00	0.000
27.300	0.00	0.00	0.00	0.000
27.317	0.00	0.00	0.00	0.000
27.333	0.00	0.00	0.00	0.000
27.350	0.00	0.00	0.00	0.000
27.367	0.00	0.00	0.00	0.000
27.383	0.00	0.00	0.00	0.000
27.400	0.00	0.00	0.00	0.000
27.417	0.00	0.00	0.00	0.000
27.433	0.00	0.00	0.00	0.000
27.450	0.00	0.00	0.00	0.000
27.467	0.00	0.00	0.00	0.000
27.483	0.00	0.00	0.00	0.000
27.500	0.00	0.00	0.00	0.000
27.517	0.00	0.00	0.00	0.000
27.533	0.00	0.00	0.00	0.000
27.550	0.00	0.00	0.00	0.000
27.567	0.00	0.00	0.00	0.000
27.583	0.00	0.00	0.00	0.000
27.600	0.00	0.00	0.00	0.000
27.617	0.00	0.00	0.00	0.000
27.633	0.00	0.00	0.00	0.000
27.650	0.00	0.00	0.00	0.000
27.667	0.00	0.00	0.00	0.000
27.683	0.00	0.00	0.00	0.000
27.700	0.00	0.00	0.00	0.000
27.717	0.00	0.00	0.00	0.000
27.733	0.00	0.00	0.00	0.000
27.750	0.00	0.00	0.00	0.000
27.767	0.00	0.00	0.00	0.000
27.783	0.00	0.00	0.00	0.000
27.800	0.00	0.00	0.00	0.000
27.817	0.00	0.00	0.00	0.000
27.833	0.00	0.00	0.00	0.000
27.850	0.00	0.00	0.00	0.000
27.867	0.00	0.00	0.00	0.000
27.883	0.00	0.00	0.00	0.000
27.900	0.00	0.00	0.00	0.000
27.917	0.00	0.00	0.00	0.000
27.933	0.00	0.00	0.00	0.000
27.950	0.00	0.00	0.00	0.000
27.967	0.00	0.00	0.00	0.000
27.983	0.00	0.00	0.00	0.000
28.000	0.00	0.00	0.00	0.000

28.017	0.00	0.00	0.00	0.000
28.033	0.00	0.00	0.00	0.000
28.050	0.00	0.00	0.00	0.000
28.067	0.00	0.00	0.00	0.000
28.083	0.00	0.00	0.00	0.000
28.100	0.00	0.00	0.00	0.000
28.117	0.00	0.00	0.00	0.000
28.133	0.00	0.00	0.00	0.000
28.150	0.00	0.00	0.00	0.000
28.167	0.00	0.00	0.00	0.000
28.183	0.00	0.00	0.00	0.000
28.200	0.00	0.00	0.00	0.000
28.217	0.00	0.00	0.00	0.000
28.233	0.00	0.00	0.00	0.000
28.250	0.00	0.00	0.00	0.000
28.267	0.00	0.00	0.00	0.000
28.283	0.00	0.00	0.00	0.000
28.300	0.00	0.00	0.00	0.000
28.317	0.00	0.00	0.00	0.000
28.333	0.00	0.00	0.00	0.000
28.350	0.00	0.00	0.00	0.000
28.367	0.00	0.00	0.00	0.000
28.383	0.00	0.00	0.00	0.000
28.400	0.00	0.00	0.00	0.000
28.417	0.00	0.00	0.00	0.000
28.433	0.00	0.00	0.00	0.000
28.450	0.00	0.00	0.00	0.000
28.467	0.00	0.00	0.00	0.000
28.483	0.00	0.00	0.00	0.000
28.500	0.00	0.00	0.00	0.000
28.517	0.00	0.00	0.00	0.000
28.533	0.00	0.00	0.00	0.000
28.550	0.00	0.00	0.00	0.000
28.567	0.00	0.00	0.00	0.000
28.583	0.00	0.00	0.00	0.000
28.600	0.00	0.00	0.00	0.000
28.617	0.00	0.00	0.00	0.000
28.633	0.00	0.00	0.00	0.000
28.650	0.00	0.00	0.00	0.000
28.667	0.00	0.00	0.00	0.000
28.683	0.00	0.00	0.00	0.000
28.700	0.00	0.00	0.00	0.000
28.717	0.00	0.00	0.00	0.000
28.733	0.00	0.00	0.00	0.000
28.750	0.00	0.00	0.00	0.000
28.767	0.00	0.00	0.00	0.000
28.783	0.00	0.00	0.00	0.000
28.800	0.00	0.00	0.00	0.000
28.817	0.00	0.00	0.00	0.000
28.833	0.00	0.00	0.00	0.000

28.850	0.00	0.00	0.00	0.000
28.867	0.00	0.00	0.00	0.000
28.883	0.00	0.00	0.00	0.000
28.900	0.00	0.00	0.00	0.000
28.917	0.00	0.00	0.00	0.000
28.933	0.00	0.00	0.00	0.000
28.950	0.00	0.00	0.00	0.000
28.967	0.00	0.00	0.00	0.000
28.983	0.00	0.00	0.00	0.000
29.000	0.00	0.00	0.00	0.000
29.017	0.00	0.00	0.00	0.000
29.033	0.00	0.00	0.00	0.000
29.050	0.00	0.00	0.00	0.000
29.067	0.00	0.00	0.00	0.000
29.083	0.00	0.00	0.00	0.000
29.100	0.00	0.00	0.00	0.000
29.117	0.00	0.00	0.00	0.000
29.133	0.00	0.00	0.00	0.000
29.150	0.00	0.00	0.00	0.000
29.167	0.00	0.00	0.00	0.000
29.183	0.00	0.00	0.00	0.000
29.200	0.00	0.00	0.00	0.000
29.217	0.00	0.00	0.00	0.000
29.233	0.00	0.00	0.00	0.000
29.250	0.00	0.00	0.00	0.000
29.267	0.00	0.00	0.00	0.000
29.283	0.00	0.00	0.00	0.000
29.300	0.00	0.00	0.00	0.000
29.317	0.00	0.00	0.00	0.000
29.333	0.00	0.00	0.00	0.000
29.350	0.00	0.00	0.00	0.000
29.367	0.00	0.00	0.00	0.000
29.383	0.00	0.00	0.00	0.000
29.400	0.00	0.00	0.00	0.000
29.417	0.00	0.00	0.00	0.000
29.433	0.00	0.00	0.00	0.000
29.450	0.00	0.00	0.00	0.000
29.467	0.00	0.00	0.00	0.000
29.483	0.00	0.00	0.00	0.000
29.500	0.00	0.00	0.00	0.000
29.517	0.00	0.00	0.00	0.000
29.533	0.00	0.00	0.00	0.000
29.550	0.00	0.00	0.00	0.000
29.567	0.00	0.00	0.00	0.000
29.583	0.00	0.00	0.00	0.000
29.600	0.00	0.00	0.00	0.000
29.617	0.00	0.00	0.00	0.000
29.633	0.00	0.00	0.00	0.000
29.650	0.00	0.00	0.00	0.000
29.667	0.00	0.00	0.00	0.000

29.683	0.00	0.00	0.00	0.000
29.700	0.00	0.00	0.00	0.000
29.717	0.00	0.00	0.00	0.000
29.733	0.00	0.00	0.00	0.000
29.750	0.00	0.00	0.00	0.000
29.767	0.00	0.00	0.00	0.000
29.783	0.00	0.00	0.00	0.000
29.800	0.00	0.00	0.00	0.000
29.817	0.00	0.00	0.00	0.000
29.833	0.00	0.00	0.00	0.000
29.850	0.00	0.00	0.00	0.000
29.867	0.00	0.00	0.00	0.000
29.883	0.00	0.00	0.00	0.000
29.900	0.00	0.00	0.00	0.000
29.917	0.00	0.00	0.00	0.000
29.933	0.00	0.00	0.00	0.000
29.950	0.00	0.00	0.00	0.000
29.967	0.00	0.00	0.00	0.000
29.983	0.00	0.00	0.00	0.000
30.000	0.00	0.00	0.00	0.000
30.017	0.00	0.00	0.00	0.000
30.033	0.00	0.00	0.00	0.000
30.050	0.00	0.00	0.00	0.000
30.067	0.00	0.00	0.00	0.000
30.083	0.00	0.00	0.00	0.000
30.100	0.00	0.00	0.00	0.000
30.117	0.00	0.00	0.00	0.000
30.133	0.00	0.00	0.00	0.000
30.150	0.00	0.00	0.00	0.000
30.167	0.00	0.00	0.00	0.000
30.183	0.00	0.00	0.00	0.000
30.200	0.00	0.00	0.00	0.000
30.217	0.00	0.00	0.00	0.000
30.233	0.00	0.00	0.00	0.000
30.250	0.00	0.00	0.00	0.000
30.267	0.00	0.00	0.00	0.000
30.283	0.00	0.00	0.00	0.000
30.300	0.00	0.00	0.00	0.000
30.317	0.00	0.00	0.00	0.000
30.333	0.00	0.00	0.00	0.000
30.350	0.00	0.00	0.00	0.000
30.367	0.00	0.00	0.00	0.000
30.383	0.00	0.00	0.00	0.000
30.400	0.00	0.00	0.00	0.000
30.417	0.00	0.00	0.00	0.000
30.433	0.00	0.00	0.00	0.000
30.450	0.00	0.00	0.00	0.000
30.467	0.00	0.00	0.00	0.000
30.483	0.00	0.00	0.00	0.000
30.500	0.00	0.00	0.00	0.000

30.517	0.00	0.00	0.00	0.000
30.533	0.00	0.00	0.00	0.000
30.550	0.00	0.00	0.00	0.000
30.567	0.00	0.00	0.00	0.000
30.583	0.00	0.00	0.00	0.000
30.600	0.00	0.00	0.00	0.000
30.617	0.00	0.00	0.00	0.000
30.633	0.00	0.00	0.00	0.000
30.650	0.00	0.00	0.00	0.000
30.667	0.00	0.00	0.00	0.000
30.683	0.00	0.00	0.00	0.000
30.700	0.00	0.00	0.00	0.000
30.717	0.00	0.00	0.00	0.000
30.733	0.00	0.00	0.00	0.000
30.750	0.00	0.00	0.00	0.000
30.767	0.00	0.00	0.00	0.000
30.783	0.00	0.00	0.00	0.000
30.800	0.00	0.00	0.00	0.000
30.817	0.00	0.00	0.00	0.000
30.833	0.00	0.00	0.00	0.000
30.850	0.00	0.00	0.00	0.000
30.867	0.00	0.00	0.00	0.000
30.883	0.00	0.00	0.00	0.000
30.900	0.00	0.00	0.00	0.000
30.917	0.00	0.00	0.00	0.000
30.933	0.00	0.00	0.00	0.000
30.950	0.00	0.00	0.00	0.000
30.967	0.00	0.00	0.00	0.000
30.983	0.00	0.00	0.00	0.000
31.000	0.00	0.00	0.00	0.000
31.017	0.00	0.00	0.00	0.000
31.033	0.00	0.00	0.00	0.000
31.050	0.00	0.00	0.00	0.000
31.067	0.00	0.00	0.00	0.000
31.083	0.00	0.00	0.00	0.000
31.100	0.00	0.00	0.00	0.000
31.117	0.00	0.00	0.00	0.000
31.133	0.00	0.00	0.00	0.000
31.150	0.00	0.00	0.00	0.000
31.167	0.00	0.00	0.00	0.000
31.183	0.00	0.00	0.00	0.000
31.200	0.00	0.00	0.00	0.000
31.217	0.00	0.00	0.00	0.000
31.233	0.00	0.00	0.00	0.000
31.250	0.00	0.00	0.00	0.000
31.267	0.00	0.00	0.00	0.000
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31.317	0.00	0.00	0.00	0.000
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31.383	0.00	0.00	0.00	0.000
31.400	0.00	0.00	0.00	0.000
31.417	0.00	0.00	0.00	0.000
31.433	0.00	0.00	0.00	0.000
31.450	0.00	0.00	0.00	0.000
31.467	0.00	0.00	0.00	0.000
31.483	0.00	0.00	0.00	0.000
31.500	0.00	0.00	0.00	0.000
31.517	0.00	0.00	0.00	0.000
31.533	0.00	0.00	0.00	0.000
31.550	0.00	0.00	0.00	0.000
31.567	0.00	0.00	0.00	0.000
31.583	0.00	0.00	0.00	0.000
31.600	0.00	0.00	0.00	0.000
31.617	0.00	0.00	0.00	0.000
31.633	0.00	0.00	0.00	0.000
31.650	0.00	0.00	0.00	0.000
31.667	0.00	0.00	0.00	0.000
31.683	0.00	0.00	0.00	0.000
31.700	0.00	0.00	0.00	0.000
31.717	0.00	0.00	0.00	0.000
31.733	0.00	0.00	0.00	0.000
31.750	0.00	0.00	0.00	0.000
31.767	0.00	0.00	0.00	0.000
31.783	0.00	0.00	0.00	0.000
31.800	0.00	0.00	0.00	0.000
31.817	0.00	0.00	0.00	0.000
31.833	0.00	0.00	0.00	0.000
31.850	0.00	0.00	0.00	0.000
31.867	0.00	0.00	0.00	0.000
31.883	0.00	0.00	0.00	0.000
31.900	0.00	0.00	0.00	0.000
31.917	0.00	0.00	0.00	0.000
31.933	0.00	0.00	0.00	0.000
31.950	0.00	0.00	0.00	0.000
31.967	0.00	0.00	0.00	0.000
31.983	0.00	0.00	0.00	0.000
32.000	0.00	0.00	0.00	0.000
32.017	0.00	0.00	0.00	0.000
32.033	0.00	0.00	0.00	0.000
32.050	0.00	0.00	0.00	0.000
32.067	0.00	0.00	0.00	0.000
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32.233	0.00	0.00	0.00	0.000
32.250	0.00	0.00	0.00	0.000
32.267	0.00	0.00	0.00	0.000
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32.317	0.00	0.00	0.00	0.000
32.333	0.00	0.00	0.00	0.000
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32.367	0.00	0.00	0.00	0.000
32.383	0.00	0.00	0.00	0.000
32.400	0.00	0.00	0.00	0.000
32.417	0.00	0.00	0.00	0.000
32.433	0.00	0.00	0.00	0.000
32.450	0.00	0.00	0.00	0.000
32.467	0.00	0.00	0.00	0.000
32.483	0.00	0.00	0.00	0.000
32.500	0.00	0.00	0.00	0.000
32.517	0.00	0.00	0.00	0.000
32.533	0.00	0.00	0.00	0.000
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32.650	0.00	0.00	0.00	0.000
32.667	0.00	0.00	0.00	0.000
32.683	0.00	0.00	0.00	0.000
32.700	0.00	0.00	0.00	0.000
32.717	0.00	0.00	0.00	0.000
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32.783	0.00	0.00	0.00	0.000
32.800	0.00	0.00	0.00	0.000
32.817	0.00	0.00	0.00	0.000
32.833	0.00	0.00	0.00	0.000
32.850	0.00	0.00	0.00	0.000
32.867	0.00	0.00	0.00	0.000
32.883	0.00	0.00	0.00	0.000
32.900	0.00	0.00	0.00	0.000
32.917	0.00	0.00	0.00	0.000
32.933	0.00	0.00	0.00	0.000
32.950	0.00	0.00	0.00	0.000
32.967	0.00	0.00	0.00	0.000
32.983	0.00	0.00	0.00	0.000
33.000	0.00	0.00	0.00	0.000

33.017	0.00	0.00	0.00	0.000
33.033	0.00	0.00	0.00	0.000
33.050	0.00	0.00	0.00	0.000
33.067	0.00	0.00	0.00	0.000
33.083	0.00	0.00	0.00	0.000
33.100	0.00	0.00	0.00	0.000
33.117	0.00	0.00	0.00	0.000
33.133	0.00	0.00	0.00	0.000
33.150	0.00	0.00	0.00	0.000
33.167	0.00	0.00	0.00	0.000
33.183	0.00	0.00	0.00	0.000
33.200	0.00	0.00	0.00	0.000
33.217	0.00	0.00	0.00	0.000
33.233	0.00	0.00	0.00	0.000
33.250	0.00	0.00	0.00	0.000
33.267	0.00	0.00	0.00	0.000
33.283	0.00	0.00	0.00	0.000
33.300	0.00	0.00	0.00	0.000
33.317	0.00	0.00	0.00	0.000
33.333	0.00	0.00	0.00	0.000
33.350	0.00	0.00	0.00	0.000
33.367	0.00	0.00	0.00	0.000
33.383	0.00	0.00	0.00	0.000
33.400	0.00	0.00	0.00	0.000
33.417	0.00	0.00	0.00	0.000
33.433	0.00	0.00	0.00	0.000
33.450	0.00	0.00	0.00	0.000
33.467	0.00	0.00	0.00	0.000
33.483	0.00	0.00	0.00	0.000
33.500	0.00	0.00	0.00	0.000
33.517	0.00	0.00	0.00	0.000
33.533	0.00	0.00	0.00	0.000
33.550	0.00	0.00	0.00	0.000
33.567	0.00	0.00	0.00	0.000
33.583	0.00	0.00	0.00	0.000
33.600	0.00	0.00	0.00	0.000
33.617	0.00	0.00	0.00	0.000
33.633	0.00	0.00	0.00	0.000
33.650	0.00	0.00	0.00	0.000
33.667	0.00	0.00	0.00	0.000
33.683	0.00	0.00	0.00	0.000
33.700	0.00	0.00	0.00	0.000
33.717	0.00	0.00	0.00	0.000
33.733	0.00	0.00	0.00	0.000
33.750	0.00	0.00	0.00	0.000
33.767	0.00	0.00	0.00	0.000
33.783	0.00	0.00	0.00	0.000
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33.817	0.00	0.00	0.00	0.000
33.833	0.00	0.00	0.00	0.000

33.850	0.00	0.00	0.00	0.000
33.867	0.00	0.00	0.00	0.000
33.883	0.00	0.00	0.00	0.000
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33.917	0.00	0.00	0.00	0.000
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33.983	0.00	0.00	0.00	0.000
34.000	0.00	0.00	0.00	0.000
34.017	0.00	0.00	0.00	0.000
34.033	0.00	0.00	0.00	0.000
34.050	0.00	0.00	0.00	0.000
34.067	0.00	0.00	0.00	0.000
34.083	0.00	0.00	0.00	0.000
34.100	0.00	0.00	0.00	0.000
34.117	0.00	0.00	0.00	0.000
34.133	0.00	0.00	0.00	0.000
34.150	0.00	0.00	0.00	0.000
34.167	0.00	0.00	0.00	0.000
34.183	0.00	0.00	0.00	0.000
34.200	0.00	0.00	0.00	0.000
34.217	0.00	0.00	0.00	0.000
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34.317	0.00	0.00	0.00	0.000
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34.367	0.00	0.00	0.00	0.000
34.383	0.00	0.00	0.00	0.000
34.400	0.00	0.00	0.00	0.000
34.417	0.00	0.00	0.00	0.000
34.433	0.00	0.00	0.00	0.000
34.450	0.00	0.00	0.00	0.000
34.467	0.00	0.00	0.00	0.000
34.483	0.00	0.00	0.00	0.000
34.500	0.00	0.00	0.00	0.000
34.517	0.00	0.00	0.00	0.000
34.533	0.00	0.00	0.00	0.000
34.550	0.00	0.00	0.00	0.000
34.567	0.00	0.00	0.00	0.000
34.583	0.00	0.00	0.00	0.000
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34.800	0.00	0.00	0.00	0.000
34.817	0.00	0.00	0.00	0.000
34.833	0.00	0.00	0.00	0.000
34.850	0.00	0.00	0.00	0.000
34.867	0.00	0.00	0.00	0.000
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34.900	0.00	0.00	0.00	0.000
34.917	0.00	0.00	0.00	0.000
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35.000	0.00	0.00	0.00	0.000
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36.000	0.00	0.00	0.00	0.000
36.017	0.00	0.00	0.00	0.000
36.033	0.00	0.00	0.00	0.000
36.050	0.00	0.00	0.00	0.000
36.067	0.00	0.00	0.00	0.000
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36.250	0.00	0.00	0.00	0.000
36.267	0.00	0.00	0.00	0.000
36.283	0.00	0.00	0.00	0.000
36.300	0.00	0.00	0.00	0.000
36.317	0.00	0.00	0.00	0.000
36.333	0.00	0.00	0.00	0.000

36.350	0.00	0.00	0.00	0.000
36.367	0.00	0.00	0.00	0.000
36.383	0.00	0.00	0.00	0.000
36.400	0.00	0.00	0.00	0.000
36.417	0.00	0.00	0.00	0.000
36.433	0.00	0.00	0.00	0.000
36.450	0.00	0.00	0.00	0.000
36.467	0.00	0.00	0.00	0.000
36.483	0.00	0.00	0.00	0.000
36.500	0.00	0.00	0.00	0.000
36.517	0.00	0.00	0.00	0.000
36.533	0.00	0.00	0.00	0.000
36.550	0.00	0.00	0.00	0.000
36.567	0.00	0.00	0.00	0.000
36.583	0.00	0.00	0.00	0.000
36.600	0.00	0.00	0.00	0.000
36.617	0.00	0.00	0.00	0.000
36.633	0.00	0.00	0.00	0.000
36.650	0.00	0.00	0.00	0.000
36.667	0.00	0.00	0.00	0.000
36.683	0.00	0.00	0.00	0.000
36.700	0.00	0.00	0.00	0.000
36.717	0.00	0.00	0.00	0.000
36.733	0.00	0.00	0.00	0.000
36.750	0.00	0.00	0.00	0.000
36.767	0.00	0.00	0.00	0.000
36.783	0.00	0.00	0.00	0.000
36.800	0.00	0.00	0.00	0.000
36.817	0.00	0.00	0.00	0.000
36.833	0.00	0.00	0.00	0.000
36.850	0.00	0.00	0.00	0.000
36.867	0.00	0.00	0.00	0.000
36.883	0.00	0.00	0.00	0.000
36.900	0.00	0.00	0.00	0.000
36.917	0.00	0.00	0.00	0.000
36.933	0.00	0.00	0.00	0.000
36.950	0.00	0.00	0.00	0.000
36.967	0.00	0.00	0.00	0.000
36.983	0.00	0.00	0.00	0.000
37.000	0.00	0.00	0.00	0.000
37.017	0.00	0.00	0.00	0.000
37.033	0.00	0.00	0.00	0.000
37.050	0.00	0.00	0.00	0.000
37.067	0.00	0.00	0.00	0.000
37.083	0.00	0.00	0.00	0.000
37.100	0.00	0.00	0.00	0.000
37.117	0.00	0.00	0.00	0.000
37.133	0.00	0.00	0.00	0.000
37.150	0.00	0.00	0.00	0.000
37.167	0.00	0.00	0.00	0.000

37.183	0.00	0.00	0.00	0.000
37.200	0.00	0.00	0.00	0.000
37.217	0.00	0.00	0.00	0.000
37.233	0.00	0.00	0.00	0.000
37.250	0.00	0.00	0.00	0.000
37.267	0.00	0.00	0.00	0.000
37.283	0.00	0.00	0.00	0.000
37.300	0.00	0.00	0.00	0.000
37.317	0.00	0.00	0.00	0.000
37.333	0.00	0.00	0.00	0.000
37.350	0.00	0.00	0.00	0.000
37.367	0.00	0.00	0.00	0.000
37.383	0.00	0.00	0.00	0.000
37.400	0.00	0.00	0.00	0.000
37.417	0.00	0.00	0.00	0.000
37.433	0.00	0.00	0.00	0.000
37.450	0.00	0.00	0.00	0.000
37.467	0.00	0.00	0.00	0.000
37.483	0.00	0.00	0.00	0.000
37.500	0.00	0.00	0.00	0.000
37.517	0.00	0.00	0.00	0.000
37.533	0.00	0.00	0.00	0.000
37.550	0.00	0.00	0.00	0.000
37.567	0.00	0.00	0.00	0.000
37.583	0.00	0.00	0.00	0.000
37.600	0.00	0.00	0.00	0.000
37.617	0.00	0.00	0.00	0.000
37.633	0.00	0.00	0.00	0.000
37.650	0.00	0.00	0.00	0.000
37.667	0.00	0.00	0.00	0.000
37.683	0.00	0.00	0.00	0.000
37.700	0.00	0.00	0.00	0.000
37.717	0.00	0.00	0.00	0.000
37.733	0.00	0.00	0.00	0.000
37.750	0.00	0.00	0.00	0.000
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37.783	0.00	0.00	0.00	0.000
37.800	0.00	0.00	0.00	0.000
37.817	0.00	0.00	0.00	0.000
37.833	0.00	0.00	0.00	0.000
37.850	0.00	0.00	0.00	0.000
37.867	0.00	0.00	0.00	0.000
37.883	0.00	0.00	0.00	0.000
37.900	0.00	0.00	0.00	0.000
37.917	0.00	0.00	0.00	0.000
37.933	0.00	0.00	0.00	0.000
37.950	0.00	0.00	0.00	0.000
37.967	0.00	0.00	0.00	0.000
37.983	0.00	0.00	0.00	0.000
38.000	0.00	0.00	0.00	0.000

38.017	0.00	0.00	0.00	0.000
38.033	0.00	0.00	0.00	0.000
38.050	0.00	0.00	0.00	0.000
38.067	0.00	0.00	0.00	0.000
38.083	0.00	0.00	0.00	0.000
38.100	0.00	0.00	0.00	0.000
38.117	0.00	0.00	0.00	0.000
38.133	0.00	0.00	0.00	0.000
38.150	0.00	0.00	0.00	0.000
38.167	0.00	0.00	0.00	0.000
38.183	0.00	0.00	0.00	0.000
38.200	0.00	0.00	0.00	0.000
38.217	0.00	0.00	0.00	0.000
38.233	0.00	0.00	0.00	0.000
38.250	0.00	0.00	0.00	0.000
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38.300	0.00	0.00	0.00	0.000
38.317	0.00	0.00	0.00	0.000
38.333	0.00	0.00	0.00	0.000
38.350	0.00	0.00	0.00	0.000
38.367	0.00	0.00	0.00	0.000
38.383	0.00	0.00	0.00	0.000
38.400	0.00	0.00	0.00	0.000
38.417	0.00	0.00	0.00	0.000
38.433	0.00	0.00	0.00	0.000
38.450	0.00	0.00	0.00	0.000
38.467	0.00	0.00	0.00	0.000
38.483	0.00	0.00	0.00	0.000
38.500	0.00	0.00	0.00	0.000
38.517	0.00	0.00	0.00	0.000
38.533	0.00	0.00	0.00	0.000
38.550	0.00	0.00	0.00	0.000
38.567	0.00	0.00	0.00	0.000
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38.600	0.00	0.00	0.00	0.000
38.617	0.00	0.00	0.00	0.000
38.633	0.00	0.00	0.00	0.000
38.650	0.00	0.00	0.00	0.000
38.667	0.00	0.00	0.00	0.000
38.683	0.00	0.00	0.00	0.000
38.700	0.00	0.00	0.00	0.000
38.717	0.00	0.00	0.00	0.000
38.733	0.00	0.00	0.00	0.000
38.750	0.00	0.00	0.00	0.000
38.767	0.00	0.00	0.00	0.000
38.783	0.00	0.00	0.00	0.000
38.800	0.00	0.00	0.00	0.000
38.817	0.00	0.00	0.00	0.000
38.833	0.00	0.00	0.00	0.000

38.850	0.00	0.00	0.00	0.000
38.867	0.00	0.00	0.00	0.000
38.883	0.00	0.00	0.00	0.000
38.900	0.00	0.00	0.00	0.000
38.917	0.00	0.00	0.00	0.000
38.933	0.00	0.00	0.00	0.000
38.950	0.00	0.00	0.00	0.000
38.967	0.00	0.00	0.00	0.000
38.983	0.00	0.00	0.00	0.000
39.000	0.00	0.00	0.00	0.000
39.017	0.00	0.00	0.00	0.000
39.033	0.00	0.00	0.00	0.000
39.050	0.00	0.00	0.00	0.000
39.067	0.00	0.00	0.00	0.000
39.083	0.00	0.00	0.00	0.000
39.100	0.00	0.00	0.00	0.000
39.117	0.00	0.00	0.00	0.000
39.133	0.00	0.00	0.00	0.000
39.150	0.00	0.00	0.00	0.000
39.167	0.00	0.00	0.00	0.000
39.183	0.00	0.00	0.00	0.000
39.200	0.00	0.00	0.00	0.000
39.217	0.00	0.00	0.00	0.000
39.233	0.00	0.00	0.00	0.000
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39.283	0.00	0.00	0.00	0.000
39.300	0.00	0.00	0.00	0.000
39.317	0.00	0.00	0.00	0.000
39.333	0.00	0.00	0.00	0.000
39.350	0.00	0.00	0.00	0.000
39.367	0.00	0.00	0.00	0.000
39.383	0.00	0.00	0.00	0.000
39.400	0.00	0.00	0.00	0.000
39.417	0.00	0.00	0.00	0.000
39.433	0.00	0.00	0.00	0.000
39.450	0.00	0.00	0.00	0.000
39.467	0.00	0.00	0.00	0.000
39.483	0.00	0.00	0.00	0.000
39.500	0.00	0.00	0.00	0.000
39.517	0.00	0.00	0.00	0.000
39.533	0.00	0.00	0.00	0.000
39.550	0.00	0.00	0.00	0.000
39.567	0.00	0.00	0.00	0.000
39.583	0.00	0.00	0.00	0.000
39.600	0.00	0.00	0.00	0.000
39.617	0.00	0.00	0.00	0.000
39.633	0.00	0.00	0.00	0.000
39.650	0.00	0.00	0.00	0.000
39.667	0.00	0.00	0.00	0.000

39.683	0.00	0.00	0.00	0.000
39.700	0.00	0.00	0.00	0.000
39.717	0.00	0.00	0.00	0.000
39.733	0.00	0.00	0.00	0.000
39.750	0.00	0.00	0.00	0.000
39.767	0.00	0.00	0.00	0.000
39.783	0.00	0.00	0.00	0.000
39.800	0.00	0.00	0.00	0.000
39.817	0.00	0.00	0.00	0.000
39.833	0.00	0.00	0.00	0.000
39.850	0.00	0.00	0.00	0.000
39.867	0.00	0.00	0.00	0.000
39.883	0.00	0.00	0.00	0.000
39.900	0.00	0.00	0.00	0.000
39.917	0.00	0.00	0.00	0.000
39.933	0.00	0.00	0.00	0.000
39.950	0.00	0.00	0.00	0.000
39.967	0.00	0.00	0.00	0.000
39.983	0.00	0.00	0.00	0.000
40.000	0.00	0.00	0.00	0.000
40.017	0.00	0.00	0.00	0.000
40.033	0.00	0.00	0.00	0.000
40.050	0.00	0.00	0.00	0.000
40.067	0.00	0.00	0.00	0.000
40.083	0.00	0.00	0.00	0.000
40.100	0.00	0.00	0.00	0.000
40.117	0.00	0.00	0.00	0.000
40.133	0.00	0.00	0.00	0.000
40.150	0.00	0.00	0.00	0.000
40.167	0.00	0.00	0.00	0.000
40.183	0.00	0.00	0.00	0.000
40.200	0.00	0.00	0.00	0.000
40.217	0.00	0.00	0.00	0.000
40.233	0.00	0.00	0.00	0.000
40.250	0.00	0.00	0.00	0.000
40.267	0.00	0.00	0.00	0.000
40.283	0.00	0.00	0.00	0.000
40.300	0.00	0.00	0.00	0.000
40.317	0.00	0.00	0.00	0.000
40.333	0.00	0.00	0.00	0.000
40.350	0.00	0.00	0.00	0.000
40.367	0.00	0.00	0.00	0.000
40.383	0.00	0.00	0.00	0.000
40.400	0.00	0.00	0.00	0.000
40.417	0.00	0.00	0.00	0.000
40.433	0.00	0.00	0.00	0.000
40.450	0.00	0.00	0.00	0.000
40.467	0.00	0.00	0.00	0.000
40.483	0.00	0.00	0.00	0.000
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40.517	0.00	0.00	0.00	0.000
40.533	0.00	0.00	0.00	0.000
40.550	0.00	0.00	0.00	0.000
40.567	0.00	0.00	0.00	0.000
40.583	0.00	0.00	0.00	0.000
40.600	0.00	0.00	0.00	0.000
40.617	0.00	0.00	0.00	0.000
40.633	0.00	0.00	0.00	0.000
40.650	0.00	0.00	0.00	0.000
40.667	0.00	0.00	0.00	0.000
40.683	0.00	0.00	0.00	0.000
40.700	0.00	0.00	0.00	0.000
40.717	0.00	0.00	0.00	0.000
40.733	0.00	0.00	0.00	0.000
40.750	0.00	0.00	0.00	0.000
40.767	0.00	0.00	0.00	0.000
40.783	0.00	0.00	0.00	0.000
40.800	0.00	0.00	0.00	0.000
40.817	0.00	0.00	0.00	0.000
40.833	0.00	0.00	0.00	0.000
40.850	0.00	0.00	0.00	0.000
40.867	0.00	0.00	0.00	0.000
40.883	0.00	0.00	0.00	0.000
40.900	0.00	0.00	0.00	0.000
40.917	0.00	0.00	0.00	0.000
40.933	0.00	0.00	0.00	0.000
40.950	0.00	0.00	0.00	0.000
40.967	0.00	0.00	0.00	0.000
40.983	0.00	0.00	0.00	0.000
41.000	0.00	0.00	0.00	0.000
41.017	0.00	0.00	0.00	0.000
41.033	0.00	0.00	0.00	0.000
41.050	0.00	0.00	0.00	0.000
41.067	0.00	0.00	0.00	0.000
41.083	0.00	0.00	0.00	0.000
41.100	0.00	0.00	0.00	0.000
41.117	0.00	0.00	0.00	0.000
41.133	0.00	0.00	0.00	0.000
41.150	0.00	0.00	0.00	0.000
41.167	0.00	0.00	0.00	0.000
41.183	0.00	0.00	0.00	0.000
41.200	0.00	0.00	0.00	0.000
41.217	0.00	0.00	0.00	0.000
41.233	0.00	0.00	0.00	0.000
41.250	0.00	0.00	0.00	0.000
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41.283	0.00	0.00	0.00	0.000
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41.417	0.00	0.00	0.00	0.000
41.433	0.00	0.00	0.00	0.000
41.450	0.00	0.00	0.00	0.000
41.467	0.00	0.00	0.00	0.000
41.483	0.00	0.00	0.00	0.000
41.500	0.00	0.00	0.00	0.000
41.517	0.00	0.00	0.00	0.000
41.533	0.00	0.00	0.00	0.000
41.550	0.00	0.00	0.00	0.000
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41.617	0.00	0.00	0.00	0.000
41.633	0.00	0.00	0.00	0.000
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41.667	0.00	0.00	0.00	0.000
41.683	0.00	0.00	0.00	0.000
41.700	0.00	0.00	0.00	0.000
41.717	0.00	0.00	0.00	0.000
41.733	0.00	0.00	0.00	0.000
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41.767	0.00	0.00	0.00	0.000
41.783	0.00	0.00	0.00	0.000
41.800	0.00	0.00	0.00	0.000
41.817	0.00	0.00	0.00	0.000
41.833	0.00	0.00	0.00	0.000
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41.950	0.00	0.00	0.00	0.000
41.967	0.00	0.00	0.00	0.000
41.983	0.00	0.00	0.00	0.000
42.000	0.00	0.00	0.00	0.000
42.017	0.00	0.00	0.00	0.000
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42.683	0.00	0.00	0.00	0.000
42.700	0.00	0.00	0.00	0.000
42.717	0.00	0.00	0.00	0.000
42.733	0.00	0.00	0.00	0.000
42.750	0.00	0.00	0.00	0.000
42.767	0.00	0.00	0.00	0.000
42.783	0.00	0.00	0.00	0.000
42.800	0.00	0.00	0.00	0.000
42.817	0.00	0.00	0.00	0.000
42.833	0.00	0.00	0.00	0.000
42.850	0.00	0.00	0.00	0.000
42.867	0.00	0.00	0.00	0.000
42.883	0.00	0.00	0.00	0.000
42.900	0.00	0.00	0.00	0.000
42.917	0.00	0.00	0.00	0.000
42.933	0.00	0.00	0.00	0.000
42.950	0.00	0.00	0.00	0.000
42.967	0.00	0.00	0.00	0.000
42.983	0.00	0.00	0.00	0.000
43.000	0.00	0.00	0.00	0.000

43.017	0.00	0.00	0.00	0.000
43.033	0.00	0.00	0.00	0.000
43.050	0.00	0.00	0.00	0.000
43.067	0.00	0.00	0.00	0.000
43.083	0.00	0.00	0.00	0.000
43.100	0.00	0.00	0.00	0.000
43.117	0.00	0.00	0.00	0.000
43.133	0.00	0.00	0.00	0.000
43.150	0.00	0.00	0.00	0.000
43.167	0.00	0.00	0.00	0.000
43.183	0.00	0.00	0.00	0.000
43.200	0.00	0.00	0.00	0.000
43.217	0.00	0.00	0.00	0.000
43.233	0.00	0.00	0.00	0.000
43.250	0.00	0.00	0.00	0.000
43.267	0.00	0.00	0.00	0.000
43.283	0.00	0.00	0.00	0.000
43.300	0.00	0.00	0.00	0.000
43.317	0.00	0.00	0.00	0.000
43.333	0.00	0.00	0.00	0.000
43.350	0.00	0.00	0.00	0.000
43.367	0.00	0.00	0.00	0.000
43.383	0.00	0.00	0.00	0.000
43.400	0.00	0.00	0.00	0.000
43.417	0.00	0.00	0.00	0.000
43.433	0.00	0.00	0.00	0.000
43.450	0.00	0.00	0.00	0.000
43.467	0.00	0.00	0.00	0.000
43.483	0.00	0.00	0.00	0.000
43.500	0.00	0.00	0.00	0.000
43.517	0.00	0.00	0.00	0.000
43.533	0.00	0.00	0.00	0.000
43.550	0.00	0.00	0.00	0.000
43.567	0.00	0.00	0.00	0.000
43.583	0.00	0.00	0.00	0.000
43.600	0.00	0.00	0.00	0.000
43.617	0.00	0.00	0.00	0.000
43.633	0.00	0.00	0.00	0.000
43.650	0.00	0.00	0.00	0.000
43.667	0.00	0.00	0.00	0.000
43.683	0.00	0.00	0.00	0.000
43.700	0.00	0.00	0.00	0.000
43.717	0.00	0.00	0.00	0.000
43.733	0.00	0.00	0.00	0.000
43.750	0.00	0.00	0.00	0.000
43.767	0.00	0.00	0.00	0.000
43.783	0.00	0.00	0.00	0.000
43.800	0.00	0.00	0.00	0.000
43.817	0.00	0.00	0.00	0.000
43.833	0.00	0.00	0.00	0.000

43.850	0.00	0.00	0.00	0.000
43.867	0.00	0.00	0.00	0.000
43.883	0.00	0.00	0.00	0.000
43.900	0.00	0.00	0.00	0.000
43.917	0.00	0.00	0.00	0.000
43.933	0.00	0.00	0.00	0.000
43.950	0.00	0.00	0.00	0.000
43.967	0.00	0.00	0.00	0.000
43.983	0.00	0.00	0.00	0.000
44.000	0.00	0.00	0.00	0.000
44.017	0.00	0.00	0.00	0.000
44.033	0.00	0.00	0.00	0.000
44.050	0.00	0.00	0.00	0.000
44.067	0.00	0.00	0.00	0.000
44.083	0.00	0.00	0.00	0.000
44.100	0.00	0.00	0.00	0.000
44.117	0.00	0.00	0.00	0.000
44.133	0.00	0.00	0.00	0.000
44.150	0.00	0.00	0.00	0.000
44.167	0.00	0.00	0.00	0.000
44.183	0.00	0.00	0.00	0.000
44.200	0.00	0.00	0.00	0.000
44.217	0.00	0.00	0.00	0.000
44.233	0.00	0.00	0.00	0.000
44.250	0.00	0.00	0.00	0.000
44.267	0.00	0.00	0.00	0.000
44.283	0.00	0.00	0.00	0.000
44.300	0.00	0.00	0.00	0.000
44.317	0.00	0.00	0.00	0.000
44.333	0.00	0.00	0.00	0.000
44.350	0.00	0.00	0.00	0.000
44.367	0.00	0.00	0.00	0.000
44.383	0.00	0.00	0.00	0.000
44.400	0.00	0.00	0.00	0.000
44.417	0.00	0.00	0.00	0.000
44.433	0.00	0.00	0.00	0.000
44.450	0.00	0.00	0.00	0.000
44.467	0.00	0.00	0.00	0.000
44.483	0.00	0.00	0.00	0.000
44.500	0.00	0.00	0.00	0.000
44.517	0.00	0.00	0.00	0.000
44.533	0.00	0.00	0.00	0.000
44.550	0.00	0.00	0.00	0.000
44.567	0.00	0.00	0.00	0.000
44.583	0.00	0.00	0.00	0.000
44.600	0.00	0.00	0.00	0.000
44.617	0.00	0.00	0.00	0.000
44.633	0.00	0.00	0.00	0.000
44.650	0.00	0.00	0.00	0.000
44.667	0.00	0.00	0.00	0.000

44.683	0.00	0.00	0.00	0.000
44.700	0.00	0.00	0.00	0.000
44.717	0.00	0.00	0.00	0.000
44.733	0.00	0.00	0.00	0.000
44.750	0.00	0.00	0.00	0.000
44.767	0.00	0.00	0.00	0.000
44.783	0.00	0.00	0.00	0.000
44.800	0.00	0.00	0.00	0.000
44.817	0.00	0.00	0.00	0.000
44.833	0.00	0.00	0.00	0.000
44.850	0.00	0.00	0.00	0.000
44.867	0.00	0.00	0.00	0.000
44.883	0.00	0.00	0.00	0.000
44.900	0.00	0.00	0.00	0.000
44.917	0.00	0.00	0.00	0.000
44.933	0.00	0.00	0.00	0.000
44.950	0.00	0.00	0.00	0.000
44.967	0.00	0.00	0.00	0.000
44.983	0.00	0.00	0.00	0.000
45.000	0.00	0.00	0.00	0.000
45.017	0.00	0.00	0.00	0.000
45.033	0.00	0.00	0.00	0.000
45.050	0.00	0.00	0.00	0.000
45.067	0.00	0.00	0.00	0.000
45.083	0.00	0.00	0.00	0.000
45.100	0.00	0.00	0.00	0.000
45.117	0.00	0.00	0.00	0.000
45.133	0.00	0.00	0.00	0.000
45.150	0.00	0.00	0.00	0.000
45.167	0.00	0.00	0.00	0.000
45.183	0.00	0.00	0.00	0.000
45.200	0.00	0.00	0.00	0.000
45.217	0.00	0.00	0.00	0.000
45.233	0.00	0.00	0.00	0.000
45.250	0.00	0.00	0.00	0.000
45.267	0.00	0.00	0.00	0.000
45.283	0.00	0.00	0.00	0.000
45.300	0.00	0.00	0.00	0.000
45.317	0.00	0.00	0.00	0.000
45.333	0.00	0.00	0.00	0.000
45.350	0.00	0.00	0.00	0.000
45.367	0.00	0.00	0.00	0.000
45.383	0.00	0.00	0.00	0.000
45.400	0.00	0.00	0.00	0.000
45.417	0.00	0.00	0.00	0.000
45.433	0.00	0.00	0.00	0.000
45.450	0.00	0.00	0.00	0.000
45.467	0.00	0.00	0.00	0.000
45.483	0.00	0.00	0.00	0.000
45.500	0.00	0.00	0.00	0.000

45.517	0.00	0.00	0.00	0.000
45.533	0.00	0.00	0.00	0.000
45.550	0.00	0.00	0.00	0.000
45.567	0.00	0.00	0.00	0.000
45.583	0.00	0.00	0.00	0.000
45.600	0.00	0.00	0.00	0.000
45.617	0.00	0.00	0.00	0.000
45.633	0.00	0.00	0.00	0.000
45.650	0.00	0.00	0.00	0.000
45.667	0.00	0.00	0.00	0.000
45.683	0.00	0.00	0.00	0.000
45.700	0.00	0.00	0.00	0.000
45.717	0.00	0.00	0.00	0.000
45.733	0.00	0.00	0.00	0.000
45.750	0.00	0.00	0.00	0.000
45.767	0.00	0.00	0.00	0.000
45.783	0.00	0.00	0.00	0.000
45.800	0.00	0.00	0.00	0.000
45.817	0.00	0.00	0.00	0.000
45.833	0.00	0.00	0.00	0.000
45.850	0.00	0.00	0.00	0.000
45.867	0.00	0.00	0.00	0.000
45.883	0.00	0.00	0.00	0.000
45.900	0.00	0.00	0.00	0.000
45.917	0.00	0.00	0.00	0.000
45.933	0.00	0.00	0.00	0.000
45.950	0.00	0.00	0.00	0.000
45.967	0.00	0.00	0.00	0.000
45.983	0.00	0.00	0.00	0.000
46.000	0.00	0.00	0.00	0.000
46.017	0.00	0.00	0.00	0.000
46.033	0.00	0.00	0.00	0.000
46.050	0.00	0.00	0.00	0.000
46.067	0.00	0.00	0.00	0.000
46.083	0.00	0.00	0.00	0.000
46.100	0.00	0.00	0.00	0.000
46.117	0.00	0.00	0.00	0.000
46.133	0.00	0.00	0.00	0.000
46.150	0.00	0.00	0.00	0.000
46.167	0.00	0.00	0.00	0.000
46.183	0.00	0.00	0.00	0.000
46.200	0.00	0.00	0.00	0.000
46.217	0.00	0.00	0.00	0.000
46.233	0.00	0.00	0.00	0.000
46.250	0.00	0.00	0.00	0.000
46.267	0.00	0.00	0.00	0.000
46.283	0.00	0.00	0.00	0.000
46.300	0.00	0.00	0.00	0.000
46.317	0.00	0.00	0.00	0.000
46.333	0.00	0.00	0.00	0.000

46.350	0.00	0.00	0.00	0.000
46.367	0.00	0.00	0.00	0.000
46.383	0.00	0.00	0.00	0.000
46.400	0.00	0.00	0.00	0.000
46.417	0.00	0.00	0.00	0.000
46.433	0.00	0.00	0.00	0.000
46.450	0.00	0.00	0.00	0.000
46.467	0.00	0.00	0.00	0.000
46.483	0.00	0.00	0.00	0.000
46.500	0.00	0.00	0.00	0.000
46.517	0.00	0.00	0.00	0.000
46.533	0.00	0.00	0.00	0.000
46.550	0.00	0.00	0.00	0.000
46.567	0.00	0.00	0.00	0.000
46.583	0.00	0.00	0.00	0.000
46.600	0.00	0.00	0.00	0.000
46.617	0.00	0.00	0.00	0.000
46.633	0.00	0.00	0.00	0.000
46.650	0.00	0.00	0.00	0.000
46.667	0.00	0.00	0.00	0.000
46.683	0.00	0.00	0.00	0.000
46.700	0.00	0.00	0.00	0.000
46.717	0.00	0.00	0.00	0.000
46.733	0.00	0.00	0.00	0.000
46.750	0.00	0.00	0.00	0.000
46.767	0.00	0.00	0.00	0.000
46.783	0.00	0.00	0.00	0.000
46.800	0.00	0.00	0.00	0.000
46.817	0.00	0.00	0.00	0.000
46.833	0.00	0.00	0.00	0.000
46.850	0.00	0.00	0.00	0.000
46.867	0.00	0.00	0.00	0.000
46.883	0.00	0.00	0.00	0.000
46.900	0.00	0.00	0.00	0.000
46.917	0.00	0.00	0.00	0.000
46.933	0.00	0.00	0.00	0.000
46.950	0.00	0.00	0.00	0.000
46.967	0.00	0.00	0.00	0.000
46.983	0.00	0.00	0.00	0.000
47.000	0.00	0.00	0.00	0.000
47.017	0.00	0.00	0.00	0.000
47.033	0.00	0.00	0.00	0.000
47.050	0.00	0.00	0.00	0.000
47.067	0.00	0.00	0.00	0.000
47.083	0.00	0.00	0.00	0.000
47.100	0.00	0.00	0.00	0.000
47.117	0.00	0.00	0.00	0.000
47.133	0.00	0.00	0.00	0.000
47.150	0.00	0.00	0.00	0.000
47.167	0.00	0.00	0.00	0.000

47.183	0.00	0.00	0.00	0.000
47.200	0.00	0.00	0.00	0.000
47.217	0.00	0.00	0.00	0.000
47.233	0.00	0.00	0.00	0.000
47.250	0.00	0.00	0.00	0.000
47.267	0.00	0.00	0.00	0.000
47.283	0.00	0.00	0.00	0.000
47.300	0.00	0.00	0.00	0.000
47.317	0.00	0.00	0.00	0.000
47.333	0.00	0.00	0.00	0.000
47.350	0.00	0.00	0.00	0.000
47.367	0.00	0.00	0.00	0.000
47.383	0.00	0.00	0.00	0.000
47.400	0.00	0.00	0.00	0.000
47.417	0.00	0.00	0.00	0.000
47.433	0.00	0.00	0.00	0.000
47.450	0.00	0.00	0.00	0.000
47.467	0.00	0.00	0.00	0.000
47.483	0.00	0.00	0.00	0.000
47.500	0.00	0.00	0.00	0.000
47.517	0.00	0.00	0.00	0.000
47.533	0.00	0.00	0.00	0.000
47.550	0.00	0.00	0.00	0.000
47.567	0.00	0.00	0.00	0.000
47.583	0.00	0.00	0.00	0.000
47.600	0.00	0.00	0.00	0.000
47.617	0.00	0.00	0.00	0.000
47.633	0.00	0.00	0.00	0.000
47.650	0.00	0.00	0.00	0.000
47.667	0.00	0.00	0.00	0.000
47.683	0.00	0.00	0.00	0.000
47.700	0.00	0.00	0.00	0.000
47.717	0.00	0.00	0.00	0.000
47.733	0.00	0.00	0.00	0.000
47.750	0.00	0.00	0.00	0.000
47.767	0.00	0.00	0.00	0.000
47.783	0.00	0.00	0.00	0.000
47.800	0.00	0.00	0.00	0.000
47.817	0.00	0.00	0.00	0.000
47.833	0.00	0.00	0.00	0.000
47.850	0.00	0.00	0.00	0.000
47.867	0.00	0.00	0.00	0.000
47.883	0.00	0.00	0.00	0.000
47.900	0.00	0.00	0.00	0.000
47.917	0.00	0.00	0.00	0.000
47.933	0.00	0.00	0.00	0.000
47.950	0.00	0.00	0.00	0.000
47.967	0.00	0.00	0.00	0.000
47.983	0.00	0.00	0.00	0.000
48.000	0.00	0.00	0.00	0.000

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END OF FLOODSCx ROUTING ANALYSIS

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**************************************************************************

             F L O O D    R O U T I N G    A N A L Y S I S
             USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
          (c) Copyright 1989-2014 Advanced Engineering Software (aes)
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                           Analysis prepared by:

                              Huitt-Zollars, Inc.
                          2603 Main Street, Suite 400
                               Irvine, CA. 92614
                                  949-988-5815

 ************************* DESCRIPTION OF STUDY *************************
* GREAT SCOTT                                                           *
* 100 YR STORM PROP - 7 66" PIPES                                       *
* CGULLIXSON REV HHTUN                                                  *
 ************************************************************************

  FILE NAME: GSFR100.DAT
  TIME/DATE OF STUDY: 11:10 08/23/2023

   The Small Area Unit Hydrograph Procedures in Section J
   of the Hydrology Manual provides estimates of runoff
   hydrograph and runoff volume for watersheds whose time of
   concentration is less than 25 minutes. The PROGRAM User
   should check the applicability of using the small area unit
   hydrograph procedures, and follow the guidelines in
   Sections J and K.5 in complex watershed modeling.


**************************************************************************
  FLOW PROCESS FROM NODE    400.00 TO NODE    405.00 IS CODE = 1.2
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (SMALL AREA UNIT-HYDROGRAPH ANALYSIS) <<<<<
==========================================================================

  (SMALL AREA UNIT-HYDROGRAPH ADDED TO STREAM #1)

    RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
    TOTAL CATCHMENT AREA(ACRES) =    2.00
    SOIL-LOSS RATE, Fm,(INCH/HR) =  0.184
    LOW LOSS FRACTION = 0.046
    TIME OF CONCENTRATION(MIN.) =  8.80
    SMALL AREA PEAK Q COMPUTED USING PEAK FLOW RATE FORMULA
    ORANGE COUNTY "VALLEY" RAINFALL VALUES ARE USED:
    RETURN FREQUENCY(YEARS) = 100
       5-MINUTE POINT RAINFALL VALUE(INCHES) =  0.52
```

```
      30-MINUTE POINT RAINFALL VALUE(INCHES) =  1.09
       1-HOUR   POINT RAINFALL VALUE(INCHES) =  1.45
       3-HOUR   POINT RAINFALL VALUE(INCHES) =  2.43
       6-HOUR   POINT RAINFALL VALUE(INCHES) =  3.36
      24-HOUR   POINT RAINFALL VALUE(INCHES) =  5.63

--------------------------------------------------------------------------------
    TOTAL CATCHMENT   RUNOFF  VOLUME(ACRE-FEET) =     0.80
    TOTAL CATCHMENT SOIL-LOSS VOLUME(ACRE-FEET) =     0.14

--------------------------------------------------------------------------------
```

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================================================================================

                      2 4 - H O U R    S T O R M
                   R U N O F F    H Y D R O G R A P H

================================================================================
               HYDROGRAPH IN  ONE-MINUTE UNIT INTERVALS(CFS)
        (Notes: Time indicated is at END of Each Unit Intervals.
                Peak 5-minute rainfall intensity is modeled as
                a constant value for entire 5-minute period.)
--------------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.        1.9       3.9       5.8       7.7
--------------------------------------------------------------------------------
   0.017      0.0000      0.01  Q        .         .         .         .
   0.033      0.0000      0.02  Q        .         .         .         .
   0.050      0.0001      0.04  Q        .         .         .         .
   0.067      0.0002      0.05  Q        .         .         .         .
   0.083      0.0003      0.07  Q        .         .         .         .
   0.100      0.0004      0.09  Q        .         .         .         .
   0.117      0.0005      0.10  Q        .         .         .         .
   0.133      0.0007      0.12  Q        .         .         .         .
   0.150      0.0009      0.13  Q        .         .         .         .
   0.167      0.0011      0.15  Q        .         .         .         .
   0.183      0.0013      0.15  Q        .         .         .         .
   0.200      0.0015      0.15  Q        .         .         .         .
   0.217      0.0017      0.15  Q        .         .         .         .
   0.233      0.0019      0.15  Q        .         .         .         .
   0.250      0.0021      0.15  Q        .         .         .         .
   0.267      0.0023      0.15  Q        .         .         .         .
   0.283      0.0025      0.15  Q        .         .         .         .
   0.300      0.0027      0.15  Q        .         .         .         .
   0.317      0.0029      0.15  Q        .         .         .         .
   0.333      0.0032      0.15  Q        .         .         .         .
   0.350      0.0034      0.15  Q        .         .         .         .
   0.367      0.0036      0.15  Q        .         .         .         .
   0.383      0.0038      0.15  Q        .         .         .         .
   0.400      0.0040      0.15  Q        .         .         .         .
   0.417      0.0042      0.15  Q        .         .         .         .
```

0.433	0.0044	0.15	Q	.	.	.	.
0.450	0.0046	0.15	Q	.	.	.	.
0.467	0.0048	0.15	Q	.	.	.	.
0.483	0.0050	0.15	Q	.	.	.	.
0.500	0.0052	0.15	Q	.	.	.	.
0.517	0.0055	0.15	Q	.	.	.	.
0.533	0.0057	0.15	Q	.	.	.	.
0.550	0.0059	0.15	Q	.	.	.	.
0.567	0.0061	0.15	Q	.	.	.	.
0.583	0.0063	0.15	Q	.	.	.	.
0.600	0.0065	0.15	Q	.	.	.	.
0.617	0.0067	0.15	Q	.	.	.	.
0.633	0.0069	0.15	Q	.	.	.	.
0.650	0.0071	0.15	Q	.	.	.	.
0.667	0.0073	0.15	Q	.	.	.	.
0.683	0.0076	0.15	Q	.	.	.	.
0.700	0.0078	0.15	Q	.	.	.	.
0.717	0.0080	0.15	Q	.	.	.	.
0.733	0.0082	0.15	Q	.	.	.	.
0.750	0.0084	0.15	Q	.	.	.	.
0.767	0.0086	0.15	Q	.	.	.	.
0.783	0.0088	0.15	Q	.	.	.	.
0.800	0.0090	0.15	Q	.	.	.	.
0.817	0.0093	0.15	Q	.	.	.	.
0.833	0.0095	0.15	Q	.	.	.	.
0.850	0.0097	0.15	Q	.	.	.	.
0.867	0.0099	0.15	Q	.	.	.	.
0.883	0.0101	0.15	Q	.	.	.	.
0.900	0.0103	0.15	Q	.	.	.	.
0.917	0.0105	0.15	Q	.	.	.	.
0.933	0.0107	0.16	Q	.	.	.	.
0.950	0.0110	0.16	Q	.	.	.	.
0.967	0.0112	0.16	Q	.	.	.	.
0.983	0.0114	0.16	Q	.	.	.	.
1.000	0.0116	0.16	Q	.	.	.	.
1.017	0.0118	0.16	Q	.	.	.	.
1.033	0.0120	0.16	Q	.	.	.	.
1.050	0.0122	0.16	Q	.	.	.	.
1.067	0.0125	0.16	Q	.	.	.	.
1.083	0.0127	0.16	Q	.	.	.	.
1.100	0.0129	0.16	Q	.	.	.	.
1.117	0.0131	0.16	Q	.	.	.	.
1.133	0.0133	0.16	Q	.	.	.	.
1.150	0.0135	0.16	Q	.	.	.	.
1.167	0.0137	0.16	Q	.	.	.	.
1.183	0.0140	0.16	Q	.	.	.	.
1.200	0.0142	0.16	Q	.	.	.	.
1.217	0.0144	0.16	Q	.	.	.	.
1.233	0.0146	0.16	Q	.	.	.	.
1.250	0.0148	0.16	Q	.	.	.	.

1.267	0.0150	0.16	Q	.	.	.	.
1.283	0.0153	0.16	Q	.	.	.	.
1.300	0.0155	0.16	Q	.	.	.	.
1.317	0.0157	0.16	Q	.	.	.	.
1.333	0.0159	0.16	Q	.	.	.	.
1.350	0.0161	0.16	Q	.	.	.	.
1.367	0.0163	0.16	Q	.	.	.	.
1.383	0.0166	0.16	Q	.	.	.	.
1.400	0.0168	0.16	Q	.	.	.	.
1.417	0.0170	0.16	Q	.	.	.	.
1.433	0.0172	0.16	Q	.	.	.	.
1.450	0.0174	0.16	Q	.	.	.	.
1.467	0.0177	0.16	Q	.	.	.	.
1.483	0.0179	0.16	Q	.	.	.	.
1.500	0.0181	0.16	Q	.	.	.	.
1.517	0.0183	0.16	Q	.	.	.	.
1.533	0.0185	0.16	Q	.	.	.	.
1.550	0.0187	0.16	Q	.	.	.	.
1.567	0.0190	0.16	Q	.	.	.	.
1.583	0.0192	0.16	Q	.	.	.	.
1.600	0.0194	0.16	Q	.	.	.	.
1.617	0.0196	0.16	Q	.	.	.	.
1.633	0.0198	0.16	Q	.	.	.	.
1.650	0.0201	0.16	QV	.	.	.	.
1.667	0.0203	0.16	QV	.	.	.	.
1.683	0.0205	0.16	QV	.	.	.	.
1.700	0.0207	0.16	QV	.	.	.	.
1.717	0.0209	0.16	QV	.	.	.	.
1.733	0.0212	0.16	QV	.	.	.	.
1.750	0.0214	0.16	QV	.	.	.	.
1.767	0.0216	0.16	QV	.	.	.	.
1.783	0.0218	0.16	QV	.	.	.	.
1.800	0.0220	0.16	QV	.	.	.	.
1.817	0.0223	0.16	QV	.	.	.	.
1.833	0.0225	0.16	QV	.	.	.	.
1.850	0.0227	0.16	QV	.	.	.	.
1.867	0.0229	0.16	QV	.	.	.	.
1.883	0.0232	0.16	QV	.	.	.	.
1.900	0.0234	0.16	QV	.	.	.	.
1.917	0.0236	0.16	QV	.	.	.	.
1.933	0.0238	0.16	QV	.	.	.	.
1.950	0.0240	0.16	QV	.	.	.	.
1.967	0.0243	0.16	QV	.	.	.	.
1.983	0.0245	0.16	QV	.	.	.	.
2.000	0.0247	0.16	QV	.	.	.	.
2.017	0.0249	0.16	QV	.	.	.	.
2.033	0.0252	0.16	QV	.	.	.	.
2.050	0.0254	0.16	QV	.	.	.	.
2.067	0.0256	0.16	QV	.	.	.	.
2.083	0.0258	0.16	QV	.	.	.	.

2.100	0.0261	0.16	QV	.	.	.	.
2.117	0.0263	0.16	QV	.	.	.	.
2.133	0.0265	0.16	QV	.	.	.	.
2.150	0.0267	0.16	QV	.	.	.	.
2.167	0.0270	0.16	QV	.	.	.	.
2.183	0.0272	0.16	QV	.	.	.	.
2.200	0.0274	0.16	QV	.	.	.	.
2.217	0.0276	0.16	QV	.	.	.	.
2.233	0.0279	0.16	QV	.	.	.	.
2.250	0.0281	0.16	QV	.	.	.	.
2.267	0.0283	0.16	QV	.	.	.	.
2.283	0.0285	0.16	QV	.	.	.	.
2.300	0.0288	0.16	QV	.	.	.	.
2.317	0.0290	0.16	QV	.	.	.	.
2.333	0.0292	0.16	QV	.	.	.	.
2.350	0.0294	0.16	QV	.	.	.	.
2.367	0.0297	0.17	QV	.	.	.	.
2.383	0.0299	0.17	QV	.	.	.	.
2.400	0.0301	0.17	QV	.	.	.	.
2.417	0.0304	0.17	QV	.	.	.	.
2.433	0.0306	0.17	QV	.	.	.	.
2.450	0.0308	0.17	QV	.	.	.	.
2.467	0.0310	0.17	QV	.	.	.	.
2.483	0.0313	0.17	QV	.	.	.	.
2.500	0.0315	0.17	QV	.	.	.	.
2.517	0.0317	0.17	QV	.	.	.	.
2.533	0.0320	0.17	QV	.	.	.	.
2.550	0.0322	0.17	QV	.	.	.	.
2.567	0.0324	0.17	QV	.	.	.	.
2.583	0.0326	0.17	QV	.	.	.	.
2.600	0.0329	0.17	QV	.	.	.	.
2.617	0.0331	0.17	QV	.	.	.	.
2.633	0.0333	0.17	QV	.	.	.	.
2.650	0.0336	0.17	QV	.	.	.	.
2.667	0.0338	0.17	QV	.	.	.	.
2.683	0.0340	0.17	QV	.	.	.	.
2.700	0.0343	0.17	QV	.	.	.	.
2.717	0.0345	0.17	QV	.	.	.	.
2.733	0.0347	0.17	QV	.	.	.	.
2.750	0.0349	0.17	QV	.	.	.	.
2.767	0.0352	0.17	QV	.	.	.	.
2.783	0.0354	0.17	QV	.	.	.	.
2.800	0.0356	0.17	QV	.	.	.	.
2.817	0.0359	0.17	QV	.	.	.	.
2.833	0.0361	0.17	QV	.	.	.	.
2.850	0.0363	0.17	QV	.	.	.	.
2.867	0.0366	0.17	QV	.	.	.	.
2.883	0.0368	0.17	QV	.	.	.	.
2.900	0.0370	0.17	QV	.	.	.	.
2.917	0.0373	0.17	QV	.	.	.	.

2.933	0.0375	0.17	QV	.	.	.	.
2.950	0.0377	0.17	QV	.	.	.	.
2.967	0.0380	0.17	QV	.	.	.	.
2.983	0.0382	0.17	QV	.	.	.	.
3.000	0.0384	0.17	QV	.	.	.	.
3.017	0.0387	0.17	QV	.	.	.	.
3.033	0.0389	0.17	QV	.	.	.	.
3.050	0.0391	0.17	QV	.	.	.	.
3.067	0.0394	0.17	QV	.	.	.	.
3.083	0.0396	0.17	QV	.	.	.	.
3.100	0.0398	0.17	QV	.	.	.	.
3.117	0.0401	0.17	Q V	.	.	.	.
3.133	0.0403	0.17	Q V	.	.	.	.
3.150	0.0405	0.17	Q V	.	.	.	.
3.167	0.0408	0.17	Q V	.	.	.	.
3.183	0.0410	0.17	Q V	.	.	.	.
3.200	0.0413	0.17	Q V	.	.	.	.
3.217	0.0415	0.17	Q V	.	.	.	.
3.233	0.0417	0.17	Q V	.	.	.	.
3.250	0.0420	0.17	Q V	.	.	.	.
3.267	0.0422	0.17	Q V	.	.	.	.
3.283	0.0424	0.17	Q V	.	.	.	.
3.300	0.0427	0.17	Q V	.	.	.	.
3.317	0.0429	0.17	Q V	.	.	.	.
3.333	0.0432	0.17	Q V	.	.	.	.
3.350	0.0434	0.17	Q V	.	.	.	.
3.367	0.0436	0.17	Q V	.	.	.	.
3.383	0.0439	0.17	Q V	.	.	.	.
3.400	0.0441	0.17	Q V	.	.	.	.
3.417	0.0443	0.17	Q V	.	.	.	.
3.433	0.0446	0.17	Q V	.	.	.	.
3.450	0.0448	0.17	Q V	.	.	.	.
3.467	0.0451	0.17	Q V	.	.	.	.
3.483	0.0453	0.17	Q V	.	.	.	.
3.500	0.0455	0.17	Q V	.	.	.	.
3.517	0.0458	0.17	Q V	.	.	.	.
3.533	0.0460	0.17	Q V	.	.	.	.
3.550	0.0463	0.17	Q V	.	.	.	.
3.567	0.0465	0.17	Q V	.	.	.	.
3.583	0.0467	0.17	Q V	.	.	.	.
3.600	0.0470	0.17	Q V	.	.	.	.
3.617	0.0472	0.17	Q V	.	.	.	.
3.633	0.0475	0.18	Q V	.	.	.	.
3.650	0.0477	0.18	Q V	.	.	.	.
3.667	0.0479	0.18	Q V	.	.	.	.
3.683	0.0482	0.18	Q V	.	.	.	.
3.700	0.0484	0.18	Q V	.	.	.	.
3.717	0.0487	0.18	Q V	.	.	.	.
3.733	0.0489	0.18	Q V	.	.	.	.
3.750	0.0492	0.18	Q V	.	.	.	.

3.767	0.0494	0.18	Q	V	.	.	.	.
3.783	0.0496	0.18	Q	V	.	.	.	.
3.800	0.0499	0.18	Q	V	.	.	.	.
3.817	0.0501	0.18	Q	V	.	.	.	.
3.833	0.0504	0.18	Q	V	.	.	.	.
3.850	0.0506	0.18	Q	V	.	.	.	.
3.867	0.0509	0.18	Q	V	.	.	.	.
3.883	0.0511	0.18	Q	V	.	.	.	.
3.900	0.0514	0.18	Q	V	.	.	.	.
3.917	0.0516	0.18	Q	V	.	.	.	.
3.933	0.0518	0.18	Q	V	.	.	.	.
3.950	0.0521	0.18	Q	V	.	.	.	.
3.967	0.0523	0.18	Q	V	.	.	.	.
3.983	0.0526	0.18	Q	V	.	.	.	.
4.000	0.0528	0.18	Q	V	.	.	.	.
4.017	0.0531	0.18	Q	V	.	.	.	.
4.033	0.0533	0.18	Q	V	.	.	.	.
4.050	0.0536	0.18	Q	V	.	.	.	.
4.067	0.0538	0.18	Q	V	.	.	.	.
4.083	0.0541	0.18	Q	V	.	.	.	.
4.100	0.0543	0.18	Q	V	.	.	.	.
4.117	0.0545	0.18	Q	V	.	.	.	.
4.133	0.0548	0.18	Q	V	.	.	.	.
4.150	0.0550	0.18	Q	V	.	.	.	.
4.167	0.0553	0.18	Q	V	.	.	.	.
4.183	0.0555	0.18	Q	V	.	.	.	.
4.200	0.0558	0.18	Q	V	.	.	.	.
4.217	0.0560	0.18	Q	V	.	.	.	.
4.233	0.0563	0.18	Q	V	.	.	.	.
4.250	0.0565	0.18	Q	V	.	.	.	.
4.267	0.0568	0.18	Q	V	.	.	.	.
4.283	0.0570	0.18	Q	V	.	.	.	.
4.300	0.0573	0.18	Q	V	.	.	.	.
4.317	0.0575	0.18	Q	V	.	.	.	.
4.333	0.0578	0.18	Q	V	.	.	.	.
4.350	0.0580	0.18	Q	V	.	.	.	.
4.367	0.0583	0.18	Q	V	.	.	.	.
4.383	0.0585	0.18	Q	V	.	.	.	.
4.400	0.0588	0.18	Q	V	.	.	.	.
4.417	0.0590	0.18	Q	V	.	.	.	.
4.433	0.0593	0.18	Q	V	.	.	.	.
4.450	0.0595	0.18	Q	V	.	.	.	.
4.467	0.0598	0.18	Q	V	.	.	.	.
4.483	0.0600	0.18	Q	V	.	.	.	.
4.500	0.0603	0.18	Q	V	.	.	.	.
4.517	0.0606	0.18	Q	V	.	.	.	.
4.533	0.0608	0.18	Q	V	.	.	.	.
4.550	0.0611	0.18	Q	V	.	.	.	.
4.567	0.0613	0.18	Q	V	.	.	.	.
4.583	0.0616	0.18	Q	V	.	.	.	.

4.600	0.0618	0.18	Q	V	.	.	.	.
4.617	0.0621	0.18	Q	V	.	.	.	.
4.633	0.0623	0.18	Q	V	.	.	.	.
4.650	0.0626	0.18	Q	V	.	.	.	.
4.667	0.0628	0.18	Q	V	.	.	.	.
4.683	0.0631	0.19	Q	V	.	.	.	.
4.700	0.0633	0.19	Q	V	.	.	.	.
4.717	0.0636	0.19	Q	V	.	.	.	.
4.733	0.0639	0.19	Q	V	.	.	.	.
4.750	0.0641	0.19	Q	V	.	.	.	.
4.767	0.0644	0.19	Q	V	.	.	.	.
4.783	0.0646	0.19	Q	V	.	.	.	.
4.800	0.0649	0.19	Q	V	.	.	.	.
4.817	0.0651	0.19	Q	V	.	.	.	.
4.833	0.0654	0.19	Q	V	.	.	.	.
4.850	0.0657	0.19	Q	V	.	.	.	.
4.867	0.0659	0.19	Q	V	.	.	.	.
4.883	0.0662	0.19	Q	V	.	.	.	.
4.900	0.0664	0.19	Q	V	.	.	.	.
4.917	0.0667	0.19	Q	V	.	.	.	.
4.933	0.0669	0.19	Q	V	.	.	.	.
4.950	0.0672	0.19	Q	V	.	.	.	.
4.967	0.0675	0.19	Q	V	.	.	.	.
4.983	0.0677	0.19	Q	V	.	.	.	.
5.000	0.0680	0.19	Q	V	.	.	.	.
5.017	0.0682	0.19	Q	V	.	.	.	.
5.033	0.0685	0.19	Q	V	.	.	.	.
5.050	0.0688	0.19	Q	V	.	.	.	.
5.067	0.0690	0.19	Q	V	.	.	.	.
5.083	0.0693	0.19	Q	V	.	.	.	.
5.100	0.0695	0.19	Q	V	.	.	.	.
5.117	0.0698	0.19	Q	V	.	.	.	.
5.133	0.0701	0.19	Q	V	.	.	.	.
5.150	0.0703	0.19	Q	V	.	.	.	.
5.167	0.0706	0.19	Q	V	.	.	.	.
5.183	0.0708	0.19	Q	V	.	.	.	.
5.200	0.0711	0.19	Q	V	.	.	.	.
5.217	0.0714	0.19	Q	V	.	.	.	.
5.233	0.0716	0.19	Q	V	.	.	.	.
5.250	0.0719	0.19	Q	V	.	.	.	.
5.267	0.0722	0.19	Q	V	.	.	.	.
5.283	0.0724	0.19	Q	V	.	.	.	.
5.300	0.0727	0.19	Q	V	.	.	.	.
5.317	0.0730	0.19	Q	V	.	.	.	.
5.333	0.0732	0.19	Q	V	.	.	.	.
5.350	0.0735	0.19	Q	V	.	.	.	.
5.367	0.0737	0.19	Q	V	.	.	.	.
5.383	0.0740	0.19	Q	V	.	.	.	.
5.400	0.0743	0.19	Q	V	.	.	.	.
5.417	0.0745	0.19	Q	V	.	.	.	.

5.433	0.0748	0.19	Q	V	.	.	.	.
5.450	0.0751	0.19	Q	V	.	.	.	.
5.467	0.0753	0.19	.Q	V	.	.	.	.
5.483	0.0756	0.19	.Q	V	.	.	.	.
5.500	0.0759	0.19	.Q	V	.	.	.	.
5.517	0.0761	0.19	.Q	V	.	.	.	.
5.533	0.0764	0.19	.Q	V	.	.	.	.
5.550	0.0767	0.19	.Q	V	.	.	.	.
5.567	0.0769	0.19	.Q	V	.	.	.	.
5.583	0.0772	0.20	.Q	V	.	.	.	.
5.600	0.0775	0.20	.Q	V	.	.	.	.
5.617	0.0778	0.20	.Q	V	.	.	.	.
5.633	0.0780	0.20	.Q	V	.	.	.	.
5.650	0.0783	0.20	.Q	V	.	.	.	.
5.667	0.0786	0.20	.Q	V	.	.	.	.
5.683	0.0788	0.20	.Q	V	.	.	.	.
5.700	0.0791	0.20	.Q	V	.	.	.	.
5.717	0.0794	0.20	.Q	V	.	.	.	.
5.733	0.0796	0.20	.Q	V	.	.	.	.
5.750	0.0799	0.20	.Q	V	.	.	.	.
5.767	0.0802	0.20	.Q	V	.	.	.	.
5.783	0.0805	0.20	.Q	V	.	.	.	.
5.800	0.0807	0.20	.Q	V	.	.	.	.
5.817	0.0810	0.20	.Q	V	.	.	.	.
5.833	0.0813	0.20	.Q	V	.	.	.	.
5.850	0.0815	0.20	.Q	V	.	.	.	.
5.867	0.0818	0.20	.Q	V	.	.	.	.
5.883	0.0821	0.20	.Q	V	.	.	.	.
5.900	0.0824	0.20	.Q	V	.	.	.	.
5.917	0.0826	0.20	.Q	V	.	.	.	.
5.933	0.0829	0.20	.Q	V	.	.	.	.
5.950	0.0832	0.20	.Q	V	.	.	.	.
5.967	0.0835	0.20	.Q	V	.	.	.	.
5.983	0.0837	0.20	.Q	V	.	.	.	.
6.000	0.0840	0.20	.Q	V	.	.	.	.
6.017	0.0843	0.20	.Q	V	.	.	.	.
6.033	0.0846	0.20	.Q	V	.	.	.	.
6.050	0.0848	0.20	.Q	V	.	.	.	.
6.067	0.0851	0.20	.Q	V	.	.	.	.
6.083	0.0854	0.20	.Q	V	.	.	.	.
6.100	0.0857	0.20	.Q	V	.	.	.	.
6.117	0.0859	0.20	.Q	V	.	.	.	.
6.133	0.0862	0.20	.Q	V	.	.	.	.
6.150	0.0865	0.20	.Q	V	.	.	.	.
6.167	0.0868	0.20	.Q	V	.	.	.	.
6.183	0.0871	0.20	.Q	V	.	.	.	.
6.200	0.0873	0.20	.Q	V	.	.	.	.
6.217	0.0876	0.20	.Q	V	.	.	.	.
6.233	0.0879	0.20	.Q	V	.	.	.	.
6.250	0.0882	0.20	.Q	V	.	.	.	.

6.267	0.0885	0.20	.Q	V	.	.	.	.
6.283	0.0887	0.20	.Q	V	.	.	.	.
6.300	0.0890	0.20	.Q	V	.	.	.	.
6.317	0.0893	0.20	.Q	V	.	.	.	.
6.333	0.0896	0.20	.Q	V	.	.	.	.
6.350	0.0899	0.20	.Q	V	.	.	.	.
6.367	0.0901	0.20	.Q	V	.	.	.	.
6.383	0.0904	0.20	.Q	V	.	.	.	.
6.400	0.0907	0.20	.Q	V	.	.	.	.
6.417	0.0910	0.21	.Q	V	.	.	.	.
6.433	0.0913	0.21	.Q	V	.	.	.	.
6.450	0.0916	0.21	.Q	V	.	.	.	.
6.467	0.0918	0.21	.Q	V	.	.	.	.
6.483	0.0921	0.21	.Q	V	.	.	.	.
6.500	0.0924	0.21	.Q	V	.	.	.	.
6.517	0.0927	0.21	.Q	V	.	.	.	.
6.533	0.0930	0.21	.Q	V	.	.	.	.
6.550	0.0933	0.21	.Q	V	.	.	.	.
6.567	0.0935	0.21	.Q	V	.	.	.	.
6.583	0.0938	0.21	.Q	V	.	.	.	.
6.600	0.0941	0.21	.Q	V	.	.	.	.
6.617	0.0944	0.21	.Q	V	.	.	.	.
6.633	0.0947	0.21	.Q	V	.	.	.	.
6.650	0.0950	0.21	.Q	V	.	.	.	.
6.667	0.0953	0.21	.Q	V	.	.	.	.
6.683	0.0956	0.21	.Q	V	.	.	.	.
6.700	0.0958	0.21	.Q	V	.	.	.	.
6.717	0.0961	0.21	.Q	V	.	.	.	.
6.733	0.0964	0.21	.Q	V	.	.	.	.
6.750	0.0967	0.21	.Q	V	.	.	.	.
6.767	0.0970	0.21	.Q	V	.	.	.	.
6.783	0.0973	0.21	.Q	V	.	.	.	.
6.800	0.0976	0.21	.Q	V	.	.	.	.
6.817	0.0979	0.21	.Q	V	.	.	.	.
6.833	0.0982	0.21	.Q	V	.	.	.	.
6.850	0.0984	0.21	.Q	V	.	.	.	.
6.867	0.0987	0.21	.Q	V	.	.	.	.
6.883	0.0990	0.21	.Q	V	.	.	.	.
6.900	0.0993	0.21	.Q	V	.	.	.	.
6.917	0.0996	0.21	.Q	V	.	.	.	.
6.933	0.0999	0.21	.Q	V	.	.	.	.
6.950	0.1002	0.21	.Q	V	.	.	.	.
6.967	0.1005	0.21	.Q	V	.	.	.	.
6.983	0.1008	0.21	.Q	V	.	.	.	.
7.000	0.1011	0.21	.Q	V	.	.	.	.
7.017	0.1014	0.21	.Q	V	.	.	.	.
7.033	0.1017	0.21	.Q	V	.	.	.	.
7.050	0.1020	0.21	.Q	V	.	.	.	.
7.067	0.1023	0.21	.Q	V	.	.	.	.
7.083	0.1026	0.21	.Q	V	.	.	.	.

7.100	0.1029	0.21	.Q	V	.	.	.	.
7.117	0.1031	0.22	.Q	V	.	.	.	.
7.133	0.1034	0.22	.Q	V	.	.	.	.
7.150	0.1037	0.22	.Q	V	.	.	.	.
7.167	0.1040	0.22	.Q	V	.	.	.	.
7.183	0.1043	0.22	.Q	V	.	.	.	.
7.200	0.1046	0.22	.Q	V	.	.	.	.
7.217	0.1049	0.22	.Q	V	.	.	.	.
7.233	0.1052	0.22	.Q	V	.	.	.	.
7.250	0.1055	0.22	.Q	V	.	.	.	.
7.267	0.1058	0.22	.Q	V	.	.	.	.
7.283	0.1061	0.22	.Q	V	.	.	.	.
7.300	0.1064	0.22	.Q	V	.	.	.	.
7.317	0.1067	0.22	.Q	V	.	.	.	.
7.333	0.1070	0.22	.Q	V	.	.	.	.
7.350	0.1073	0.22	.Q	V	.	.	.	.
7.367	0.1076	0.22	.Q	V	.	.	.	.
7.383	0.1079	0.22	.Q	V	.	.	.	.
7.400	0.1082	0.22	.Q	V	.	.	.	.
7.417	0.1085	0.22	.Q	V	.	.	.	.
7.433	0.1088	0.22	.Q	V	.	.	.	.
7.450	0.1091	0.22	.Q	V	.	.	.	.
7.467	0.1094	0.22	.Q	V	.	.	.	.
7.483	0.1098	0.22	.Q	V	.	.	.	.
7.500	0.1101	0.22	.Q	V	.	.	.	.
7.517	0.1104	0.22	.Q	V	.	.	.	.
7.533	0.1107	0.22	.Q	V	.	.	.	.
7.550	0.1110	0.22	.Q	V	.	.	.	.
7.567	0.1113	0.22	.Q	V	.	.	.	.
7.583	0.1116	0.22	.Q	V	.	.	.	.
7.600	0.1119	0.22	.Q	V	.	.	.	.
7.617	0.1122	0.22	.Q	V	.	.	.	.
7.633	0.1125	0.22	.Q	V	.	.	.	.
7.650	0.1128	0.22	.Q	V	.	.	.	.
7.667	0.1131	0.22	.Q	V	.	.	.	.
7.683	0.1134	0.22	.Q	V	.	.	.	.
7.700	0.1137	0.22	.Q	V	.	.	.	.
7.717	0.1140	0.22	.Q	V	.	.	.	.
7.733	0.1144	0.22	.Q	V	.	.	.	.
7.750	0.1147	0.22	.Q	V	.	.	.	.
7.767	0.1150	0.23	.Q	V	.	.	.	.
7.783	0.1153	0.23	.Q	V	.	.	.	.
7.800	0.1156	0.23	.Q	V	.	.	.	.
7.817	0.1159	0.23	.Q	V	.	.	.	.
7.833	0.1162	0.23	.Q	V	.	.	.	.
7.850	0.1165	0.23	.Q	V	.	.	.	.
7.867	0.1168	0.23	.Q	V	.	.	.	.
7.883	0.1172	0.23	.Q	V	.	.	.	.
7.900	0.1175	0.23	.Q	V	.	.	.	.
7.917	0.1178	0.23	.Q	V	.	.	.	.

7.933	0.1181	0.23	.Q	V	.	.	.	.
7.950	0.1184	0.23	.Q	V	.	.	.	.
7.967	0.1187	0.23	.Q	V	.	.	.	.
7.983	0.1190	0.23	.Q	V	.	.	.	.
8.000	0.1194	0.23	.Q	V	.	.	.	.
8.017	0.1197	0.23	.Q	V	.	.	.	.
8.033	0.1200	0.23	.Q	V	.	.	.	.
8.050	0.1203	0.23	.Q	V	.	.	.	.
8.067	0.1206	0.23	.Q	V	.	.	.	.
8.083	0.1209	0.23	.Q	V	.	.	.	.
8.100	0.1213	0.23	.Q	V	.	.	.	.
8.117	0.1216	0.23	.Q	V	.	.	.	.
8.133	0.1219	0.23	.Q	V	.	.	.	.
8.150	0.1222	0.23	.Q	V	.	.	.	.
8.167	0.1225	0.23	.Q	V	.	.	.	.
8.183	0.1229	0.23	.Q	V	.	.	.	.
8.200	0.1232	0.23	.Q	V	.	.	.	.
8.217	0.1235	0.23	.Q	V	.	.	.	.
8.233	0.1238	0.23	.Q	V	.	.	.	.
8.250	0.1242	0.23	.Q	V	.	.	.	.
8.267	0.1245	0.23	.Q	V	.	.	.	.
8.283	0.1248	0.23	.Q	V	.	.	.	.
8.300	0.1251	0.23	.Q	V	.	.	.	.
8.317	0.1254	0.24	.Q	V	.	.	.	.
8.333	0.1258	0.24	.Q	V	.	.	.	.
8.350	0.1261	0.24	.Q	V	.	.	.	.
8.367	0.1264	0.24	.Q	V	.	.	.	.
8.383	0.1267	0.24	.Q	V	.	.	.	.
8.400	0.1271	0.24	.Q	V	.	.	.	.
8.417	0.1274	0.24	.Q	V	.	.	.	.
8.433	0.1277	0.24	.Q	V	.	.	.	.
8.450	0.1281	0.24	.Q	V	.	.	.	.
8.467	0.1284	0.24	.Q	V	.	.	.	.
8.483	0.1287	0.24	.Q	V	.	.	.	.
8.500	0.1290	0.24	.Q	V	.	.	.	.
8.517	0.1294	0.24	.Q	V	.	.	.	.
8.533	0.1297	0.24	.Q	V	.	.	.	.
8.550	0.1300	0.24	.Q	V	.	.	.	.
8.567	0.1304	0.24	.Q	V	.	.	.	.
8.583	0.1307	0.24	.Q	V	.	.	.	.
8.600	0.1310	0.24	.Q	V	.	.	.	.
8.617	0.1314	0.24	.Q	V	.	.	.	.
8.633	0.1317	0.24	.Q	V	.	.	.	.
8.650	0.1320	0.24	.Q	V	.	.	.	.
8.667	0.1324	0.24	.Q	V	.	.	.	.
8.683	0.1327	0.24	.Q	V	.	.	.	.
8.700	0.1330	0.24	.Q	V	.	.	.	.
8.717	0.1334	0.24	.Q	V	.	.	.	.
8.733	0.1337	0.24	.Q	V	.	.	.	.
8.750	0.1340	0.24	.Q	V	.	.	.	.

8.767	0.1344	0.24	.Q	V	.	.	.	.
8.783	0.1347	0.24	.Q	V	.	.	.	.
8.800	0.1350	0.25	.Q	V	.	.	.	.
8.817	0.1354	0.25	.Q	V	.	.	.	.
8.833	0.1357	0.25	.Q	V	.	.	.	.
8.850	0.1361	0.25	.Q	V	.	.	.	.
8.867	0.1364	0.25	.Q	V	.	.	.	.
8.883	0.1367	0.25	.Q	V	.	.	.	.
8.900	0.1371	0.25	.Q	V	.	.	.	.
8.917	0.1374	0.25	.Q	V	.	.	.	.
8.933	0.1378	0.25	.Q	V	.	.	.	.
8.950	0.1381	0.25	.Q	V	.	.	.	.
8.967	0.1384	0.25	.Q	V	.	.	.	.
8.983	0.1388	0.25	.Q	V	.	.	.	.
9.000	0.1391	0.25	.Q	V	.	.	.	.
9.017	0.1395	0.25	.Q	V	.	.	.	.
9.033	0.1398	0.25	.Q	V	.	.	.	.
9.050	0.1402	0.25	.Q	V	.	.	.	.
9.067	0.1405	0.25	.Q	V	.	.	.	.
9.083	0.1408	0.25	.Q	V	.	.	.	.
9.100	0.1412	0.25	.Q	V	.	.	.	.
9.117	0.1415	0.25	.Q	V	.	.	.	.
9.133	0.1419	0.25	.Q	V	.	.	.	.
9.150	0.1422	0.25	.Q	V	.	.	.	.
9.167	0.1426	0.25	.Q	V	.	.	.	.
9.183	0.1429	0.25	.Q	V	.	.	.	.
9.200	0.1433	0.25	.Q	V	.	.	.	.
9.217	0.1436	0.25	.Q	V	.	.	.	.
9.233	0.1440	0.25	.Q	V	.	.	.	.
9.250	0.1443	0.25	.Q	V	.	.	.	.
9.267	0.1447	0.25	.Q	V	.	.	.	.
9.283	0.1450	0.26	.Q	V	.	.	.	.
9.300	0.1454	0.26	.Q	V	.	.	.	.
9.317	0.1457	0.26	.Q	V	.	.	.	.
9.333	0.1461	0.26	.Q	V	.	.	.	.
9.350	0.1464	0.26	.Q	V	.	.	.	.
9.367	0.1468	0.26	.Q	V	.	.	.	.
9.383	0.1472	0.26	.Q	V	.	.	.	.
9.400	0.1475	0.26	.Q	V	.	.	.	.
9.417	0.1479	0.26	.Q	V	.	.	.	.
9.433	0.1482	0.26	.Q	V	.	.	.	.
9.450	0.1486	0.26	.Q	V	.	.	.	.
9.467	0.1489	0.26	.Q	V	.	.	.	.
9.483	0.1493	0.26	.Q	V	.	.	.	.
9.500	0.1497	0.26	.Q	V	.	.	.	.
9.517	0.1500	0.26	.Q	V	.	.	.	.
9.533	0.1504	0.26	.Q	V	.	.	.	.
9.550	0.1507	0.26	.Q	V	.	.	.	.
9.567	0.1511	0.26	.Q	V	.	.	.	.
9.583	0.1515	0.26	.Q	V	.	.	.	.

9.600	0.1518	0.26	.Q	V	.	.	.	.
9.617	0.1522	0.26	.Q	V	.	.	.	.
9.633	0.1526	0.26	.Q	V	.	.	.	.
9.650	0.1529	0.26	.Q	V	.	.	.	.
9.667	0.1533	0.27	.Q	V	.	.	.	.
9.683	0.1536	0.27	.Q	V	.	.	.	.
9.700	0.1540	0.27	.Q	V	.	.	.	.
9.717	0.1544	0.27	.Q	V	.	.	.	.
9.733	0.1547	0.27	.Q	V	.	.	.	.
9.750	0.1551	0.27	.Q	V	.	.	.	.
9.767	0.1555	0.27	.Q	V	.	.	.	.
9.783	0.1559	0.27	.Q	V	.	.	.	.
9.800	0.1562	0.27	.Q	V	.	.	.	.
9.817	0.1566	0.27	.Q	V	.	.	.	.
9.833	0.1570	0.27	.Q	V	.	.	.	.
9.850	0.1573	0.27	.Q	V	.	.	.	.
9.867	0.1577	0.27	.Q	V	.	.	.	.
9.883	0.1581	0.27	.Q	V	.	.	.	.
9.900	0.1585	0.27	.Q	V	.	.	.	.
9.917	0.1588	0.27	.Q	V	.	.	.	.
9.933	0.1592	0.27	.Q	V	.	.	.	.
9.950	0.1596	0.27	.Q	V	.	.	.	.
9.967	0.1600	0.27	.Q	V	.	.	.	.
9.983	0.1603	0.27	.Q	V	.	.	.	.
10.000	0.1607	0.27	.Q	V	.	.	.	.
10.017	0.1611	0.27	.Q	V	.	.	.	.
10.033	0.1615	0.28	.Q	V	.	.	.	.
10.050	0.1618	0.28	.Q	V	.	.	.	.
10.067	0.1622	0.28	.Q	V	.	.	.	.
10.083	0.1626	0.28	.Q	V	.	.	.	.
10.100	0.1630	0.28	.Q	V	.	.	.	.
10.117	0.1634	0.28	.Q	V	.	.	.	.
10.133	0.1637	0.28	.Q	V	.	.	.	.
10.150	0.1641	0.28	.Q	V	.	.	.	.
10.167	0.1645	0.28	.Q	V	.	.	.	.
10.183	0.1649	0.28	.Q	V	.	.	.	.
10.200	0.1653	0.28	.Q	V	.	.	.	.
10.217	0.1657	0.28	.Q	V	.	.	.	.
10.233	0.1661	0.28	.Q	V	.	.	.	.
10.250	0.1664	0.28	.Q	V	.	.	.	.
10.267	0.1668	0.28	.Q	V	.	.	.	.
10.283	0.1672	0.28	.Q	V	.	.	.	.
10.300	0.1676	0.28	.Q	V	.	.	.	.
10.317	0.1680	0.28	.Q	V	.	.	.	.
10.333	0.1684	0.28	.Q	V	.	.	.	.
10.350	0.1688	0.28	.Q	V	.	.	.	.
10.367	0.1692	0.28	.Q	V	.	.	.	.
10.383	0.1696	0.28	.Q	V	.	.	.	.
10.400	0.1700	0.29	.Q	V	.	.	.	.
10.417	0.1704	0.29	.Q	V	.	.	.	.

10.433	0.1708	0.29	.Q	V	.	.	.
10.450	0.1711	0.29	.Q	V	.	.	.
10.467	0.1715	0.29	.Q	V	.	.	.
10.483	0.1719	0.29	.Q	V	.	.	.
10.500	0.1723	0.29	.Q	V	.	.	.
10.517	0.1727	0.29	.Q	V	.	.	.
10.533	0.1731	0.29	.Q	V	.	.	.
10.550	0.1735	0.29	.Q	V	.	.	.
10.567	0.1739	0.29	.Q	V	.	.	.
10.583	0.1743	0.29	.Q	V	.	.	.
10.600	0.1747	0.29	.Q	V	.	.	.
10.617	0.1751	0.29	.Q	V	.	.	.
10.633	0.1756	0.29	.Q	V	.	.	.
10.650	0.1760	0.29	.Q	V	.	.	.
10.667	0.1764	0.29	.Q	V	.	.	.
10.683	0.1768	0.29	.Q	V	.	.	.
10.700	0.1772	0.30	.Q	V	.	.	.
10.717	0.1776	0.30	.Q	V	.	.	.
10.733	0.1780	0.30	.Q	V	.	.	.
10.750	0.1784	0.30	.Q	V	.	.	.
10.767	0.1788	0.30	.Q	V	.	.	.
10.783	0.1792	0.30	.Q	V	.	.	.
10.800	0.1796	0.30	.Q	V	.	.	.
10.817	0.1800	0.30	.Q	V	.	.	.
10.833	0.1805	0.30	.Q	V.	.	.	.
10.850	0.1809	0.30	.Q	V.	.	.	.
10.867	0.1813	0.30	.Q	V.	.	.	.
10.883	0.1817	0.30	.Q	V.	.	.	.
10.900	0.1821	0.30	.Q	V.	.	.	.
10.917	0.1825	0.30	.Q	V.	.	.	.
10.933	0.1830	0.30	.Q	V.	.	.	.
10.950	0.1834	0.30	.Q	V.	.	.	.
10.967	0.1838	0.30	.Q	V.	.	.	.
10.983	0.1842	0.31	.Q	V.	.	.	.
11.000	0.1846	0.31	.Q	V.	.	.	.
11.017	0.1851	0.31	.Q	V.	.	.	.
11.033	0.1855	0.31	.Q	V.	.	.	.
11.050	0.1859	0.31	.Q	V.	.	.	.
11.067	0.1863	0.31	.Q	V.	.	.	.
11.083	0.1868	0.31	.Q	V.	.	.	.
11.100	0.1872	0.31	.Q	V.	.	.	.
11.117	0.1876	0.31	.Q	V.	.	.	.
11.133	0.1880	0.31	.Q	V.	.	.	.
11.150	0.1885	0.31	.Q	V.	.	.	.
11.167	0.1889	0.31	.Q	V.	.	.	.
11.183	0.1893	0.31	.Q	V.	.	.	.
11.200	0.1898	0.31	.Q	V.	.	.	.
11.217	0.1902	0.32	.Q	V.	.	.	.
11.233	0.1906	0.32	.Q	V.	.	.	.
11.250	0.1911	0.32	.Q	V.	.	.	.

11.267	0.1915	0.32	.Q	V.	.	.	.
11.283	0.1919	0.32	.Q	V.	.	.	.
11.300	0.1924	0.32	.Q	V.	.	.	.
11.317	0.1928	0.32	.Q	V.	.	.	.
11.333	0.1933	0.32	.Q	V.	.	.	.
11.350	0.1937	0.32	.Q	V.	.	.	.
11.367	0.1941	0.32	.Q	V.	.	.	.
11.383	0.1946	0.32	.Q	V.	.	.	.
11.400	0.1950	0.32	.Q	V.	.	.	.
11.417	0.1955	0.32	.Q	V.	.	.	.
11.433	0.1959	0.32	.Q	V.	.	.	.
11.450	0.1964	0.33	.Q	V.	.	.	.
11.467	0.1968	0.33	.Q	V.	.	.	.
11.483	0.1973	0.33	.Q	V.	.	.	.
11.500	0.1977	0.33	.Q	V.	.	.	.
11.517	0.1982	0.33	.Q	V.	.	.	.
11.533	0.1986	0.33	.Q	V.	.	.	.
11.550	0.1991	0.33	.Q	V.	.	.	.
11.567	0.1995	0.33	.Q	V.	.	.	.
11.583	0.2000	0.33	.Q	V.	.	.	.
11.600	0.2004	0.33	.Q	V	.	.	.
11.617	0.2009	0.33	.Q	V	.	.	.
11.633	0.2014	0.33	.Q	V	.	.	.
11.650	0.2018	0.33	.Q	V	.	.	.
11.667	0.2023	0.33	.Q	V	.	.	.
11.683	0.2027	0.34	.Q	V	.	.	.
11.700	0.2032	0.34	.Q	V	.	.	.
11.717	0.2037	0.34	.Q	V	.	.	.
11.733	0.2041	0.34	.Q	V	.	.	.
11.750	0.2046	0.34	.Q	V	.	.	.
11.767	0.2051	0.34	.Q	V	.	.	.
11.783	0.2055	0.34	.Q	V	.	.	.
11.800	0.2060	0.34	.Q	V	.	.	.
11.817	0.2065	0.34	.Q	V	.	.	.
11.833	0.2069	0.34	.Q	V	.	.	.
11.850	0.2074	0.34	.Q	V	.	.	.
11.867	0.2079	0.34	.Q	V	.	.	.
11.883	0.2084	0.34	.Q	V	.	.	.
11.900	0.2088	0.34	.Q	V	.	.	.
11.917	0.2093	0.35	.Q	V	.	.	.
11.933	0.2098	0.35	.Q	V	.	.	.
11.950	0.2103	0.35	.Q	V	.	.	.
11.967	0.2108	0.35	.Q	V	.	.	.
11.983	0.2112	0.35	.Q	V	.	.	.
12.000	0.2117	0.35	.Q	V	.	.	.
12.017	0.2122	0.35	.Q	V	.	.	.
12.033	0.2127	0.35	.Q	V	.	.	.
12.050	0.2132	0.36	.Q	V	.	.	.
12.067	0.2137	0.37	.Q	V	.	.	.
12.083	0.2142	0.38	.Q	V	.	.	.

12.100	0.2147	0.39	.Q	V	.	.	.
12.117	0.2153	0.40	. Q	V	.	.	.
12.133	0.2158	0.41	. Q	V	.	.	.
12.150	0.2164	0.42	. Q	V	.	.	.
12.167	0.2170	0.43	. Q	V	.	.	.
12.183	0.2176	0.44	. Q	V	.	.	.
12.200	0.2182	0.44	. Q	V	.	.	.
12.217	0.2188	0.45	. Q	V	.	.	.
12.233	0.2194	0.45	. Q	V	.	.	.
12.250	0.2201	0.45	. Q	V	.	.	.
12.267	0.2207	0.45	. Q	.V	.	.	.
12.283	0.2213	0.46	. Q	.V	.	.	.
12.300	0.2220	0.46	. Q	.V	.	.	.
12.317	0.2226	0.46	. Q	.V	.	.	.
12.333	0.2232	0.46	. Q	.V	.	.	.
12.350	0.2239	0.46	. Q	.V	.	.	.
12.367	0.2245	0.47	. Q	.V	.	.	.
12.383	0.2252	0.47	. Q	.V	.	.	.
12.400	0.2258	0.47	. Q	.V	.	.	.
12.417	0.2264	0.47	. Q	.V	.	.	.
12.433	0.2271	0.47	. Q	.V	.	.	.
12.450	0.2277	0.47	. Q	.V	.	.	.
12.467	0.2284	0.47	. Q	.V	.	.	.
12.483	0.2290	0.47	. Q	.V	.	.	.
12.500	0.2297	0.47	. Q	.V	.	.	.
12.517	0.2303	0.47	. Q	.V	.	.	.
12.533	0.2310	0.48	. Q	.V	.	.	.
12.550	0.2316	0.48	. Q	.V	.	.	.
12.567	0.2323	0.48	. Q	.V	.	.	.
12.583	0.2330	0.48	. Q	.V	.	.	.
12.600	0.2336	0.48	. Q	.V	.	.	.
12.617	0.2343	0.48	. Q	.V	.	.	.
12.633	0.2350	0.48	. Q	.V	.	.	.
12.650	0.2356	0.49	. Q	.V	.	.	.
12.667	0.2363	0.49	. Q	.V	.	.	.
12.683	0.2370	0.49	. Q	.V	.	.	.
12.700	0.2376	0.49	. Q	.V	.	.	.
12.717	0.2383	0.49	. Q	.V	.	.	.
12.733	0.2390	0.49	. Q	.V	.	.	.
12.750	0.2397	0.49	. Q	.V	.	.	.
12.767	0.2403	0.49	. Q	. V	.	.	.
12.783	0.2410	0.49	. Q	. V	.	.	.
12.800	0.2417	0.49	. Q	. V	.	.	.
12.817	0.2424	0.50	. Q	. V	.	.	.
12.833	0.2431	0.50	. Q	. V	.	.	.
12.850	0.2438	0.50	. Q	. V	.	.	.
12.867	0.2444	0.50	. Q	. V	.	.	.
12.883	0.2451	0.50	. Q	. V	.	.	.
12.900	0.2458	0.51	. Q	. V	.	.	.
12.917	0.2465	0.51	. Q	. V	.	.	.

12.933	0.2472	0.51	. Q	. V	.	.	.
12.950	0.2479	0.51	. Q	. V	.	.	.
12.967	0.2486	0.51	. Q	. V	.	.	.
12.983	0.2493	0.51	. Q	. V	.	.	.
13.000	0.2501	0.51	. Q	. V	.	.	.
13.017	0.2508	0.51	. Q	. V	.	.	.
13.033	0.2515	0.51	. Q	. V	.	.	.
13.050	0.2522	0.52	. Q	. V	.	.	.
13.067	0.2529	0.52	. Q	. V	.	.	.
13.083	0.2536	0.52	. Q	. V	.	.	.
13.100	0.2543	0.52	. Q	. V	.	.	.
13.117	0.2550	0.52	. Q	. V	.	.	.
13.133	0.2558	0.52	. Q	. V	.	.	.
13.150	0.2565	0.53	. Q	. V	.	.	.
13.167	0.2572	0.53	. Q	. V	.	.	.
13.183	0.2579	0.53	. Q	. V	.	.	.
13.200	0.2587	0.53	. Q	. V	.	.	.
13.217	0.2594	0.53	. Q	. V	.	.	.
13.233	0.2601	0.54	. Q	. V	.	.	.
13.250	0.2609	0.54	. Q	. V	.	.	.
13.267	0.2616	0.54	. Q	. V	.	.	.
13.283	0.2624	0.54	. Q	. V	.	.	.
13.300	0.2631	0.54	. Q	. V	.	.	.
13.317	0.2639	0.54	. Q	. V	.	.	.
13.333	0.2646	0.54	. Q	. V	.	.	.
13.350	0.2654	0.54	. Q	. V	.	.	.
13.367	0.2661	0.54	. Q	. V	.	.	.
13.383	0.2669	0.55	. Q	. V	.	.	.
13.400	0.2676	0.55	. Q	. V	.	.	.
13.417	0.2684	0.55	. Q	. V	.	.	.
13.433	0.2691	0.55	. Q	. V	.	.	.
13.450	0.2699	0.56	. Q	. V	.	.	.
13.467	0.2707	0.56	. Q	. V	.	.	.
13.483	0.2715	0.56	. Q	. V	.	.	.
13.500	0.2722	0.56	. Q	. V	.	.	.
13.517	0.2730	0.57	. Q	. V	.	.	.
13.533	0.2738	0.57	. Q	. V	.	.	.
13.550	0.2746	0.57	. Q	. V	.	.	.
13.567	0.2754	0.57	. Q	. V	.	.	.
13.583	0.2762	0.57	. Q	. V	.	.	.
13.600	0.2769	0.57	. Q	. V	.	.	.
13.617	0.2777	0.57	. Q	. V	.	.	.
13.633	0.2785	0.58	. Q	. V	.	.	.
13.650	0.2793	0.58	. Q	. V	.	.	.
13.667	0.2801	0.58	. Q	. V	.	.	.
13.683	0.2809	0.58	. Q	. V	.	.	.
13.700	0.2817	0.58	. Q	. V	.	.	.
13.717	0.2825	0.59	. Q	. V	.	.	.
13.733	0.2834	0.59	. Q	. V	.	.	.
13.750	0.2842	0.59	. Q	. V	.	.	.

13.767	0.2850	0.60	.	Q	.	V	.	.	.
13.783	0.2858	0.60	.	Q	.	V	.	.	.
13.800	0.2866	0.60	.	Q	.	V	.	.	.
13.817	0.2875	0.60	.	Q	.	V	.	.	.
13.833	0.2883	0.61	.	Q	.	V	.	.	.
13.850	0.2892	0.61	.	Q	.	V	.	.	.
13.867	0.2900	0.61	.	Q	.	V	.	.	.
13.883	0.2908	0.61	.	Q	.	V	.	.	.
13.900	0.2917	0.61	.	Q	.	V	.	.	.
13.917	0.2925	0.61	.	Q	.	V	.	.	.
13.933	0.2934	0.62	.	Q	.	V	.	.	.
13.950	0.2942	0.62	.	Q	.	V	.	.	.
13.967	0.2951	0.62	.	Q	.	V	.	.	.
13.983	0.2959	0.62	.	Q	.	V	.	.	.
14.000	0.2968	0.63	.	Q	.	V	.	.	.
14.017	0.2977	0.63	.	Q	.	V	.	.	.
14.033	0.2986	0.64	.	Q	.	V	.	.	.
14.050	0.2994	0.64	.	Q	.	V	.	.	.
14.067	0.3003	0.64	.	Q	.	V	.	.	.
14.083	0.3012	0.65	.	Q	.	V	.	.	.
14.100	0.3021	0.65	.	Q	.	V	.	.	.
14.117	0.3030	0.65	.	Q	.	V	.	.	.
14.133	0.3039	0.66	.	Q	.	V	.	.	.
14.150	0.3048	0.66	.	Q	.	V	.	.	.
14.167	0.3057	0.66	.	Q	.	V	.	.	.
14.183	0.3066	0.66	.	Q	.	V	.	.	.
14.200	0.3075	0.66	.	Q	.	V	.	.	.
14.217	0.3085	0.67	.	Q	.	V	.	.	.
14.233	0.3094	0.67	.	Q	.	V	.	.	.
14.250	0.3103	0.67	.	Q	.	V	.	.	.
14.267	0.3112	0.68	.	Q	.	V	.	.	.
14.283	0.3122	0.68	.	Q	.	V	.	.	.
14.300	0.3131	0.68	.	Q	.	V	.	.	.
14.317	0.3141	0.69	.	Q	.	V	.	.	.
14.333	0.3150	0.69	.	Q	.	V	.	.	.
14.350	0.3160	0.70	.	Q	.	V	.	.	.
14.367	0.3170	0.70	.	Q	.	V	.	.	.
14.383	0.3179	0.71	.	Q	.	V	.	.	.
14.400	0.3189	0.71	.	Q	.	V	.	.	.
14.417	0.3199	0.71	.	Q	.	V	.	.	.
14.433	0.3209	0.72	.	Q	.	V	.	.	.
14.450	0.3219	0.72	.	Q	.	V	.	.	.
14.467	0.3229	0.72	.	Q	.	V	.	.	.
14.483	0.3239	0.72	.	Q	.	V	.	.	.
14.500	0.3249	0.73	.	Q	.	V	.	.	.
14.517	0.3259	0.73	.	Q	.	V	.	.	.
14.533	0.3269	0.73	.	Q	.	V	.	.	.
14.550	0.3279	0.74	.	Q	.	V	.	.	.
14.567	0.3289	0.74	.	Q	.	V	.	.	.
14.583	0.3299	0.75	.	Q	.	V	.	.	.

14.600	0.3310	0.75	.	Q	.	V	.	.	.
14.617	0.3320	0.76	.	Q	.	V	.	.	.
14.633	0.3331	0.77	.	Q	.	V	.	.	.
14.650	0.3341	0.77	.	Q	.	V	.	.	.
14.667	0.3352	0.78	.	Q	.	V	.	.	.
14.683	0.3363	0.78	.	Q	.	V	.	.	.
14.700	0.3374	0.79	.	Q	.	V	.	.	.
14.717	0.3385	0.79	.	Q	.	V	.	.	.
14.733	0.3395	0.79	.	Q	.	V	.	.	.
14.750	0.3406	0.80	.	Q	.	V	.	.	.
14.767	0.3417	0.80	.	Q	.	V	.	.	.
14.783	0.3429	0.80	.	Q	.	V	.	.	.
14.800	0.3440	0.81	.	Q	.	V	.	.	.
14.817	0.3451	0.81	.	Q	.	V	.	.	.
14.833	0.3462	0.81	.	Q	.	V	.	.	.
14.850	0.3473	0.82	.	Q	.	V	.	.	.
14.867	0.3485	0.83	.	Q	.	V	.	.	.
14.883	0.3496	0.84	.	Q	.	V	.	.	.
14.900	0.3508	0.85	.	Q	.	V	.	.	.
14.917	0.3520	0.86	.	Q	.	V	.	.	.
14.933	0.3532	0.86	.	Q	.	V	.	.	.
14.950	0.3544	0.87	.	Q	.	V	.	.	.
14.967	0.3556	0.88	.	Q	.	V	.	.	.
14.983	0.3568	0.89	.	Q	.	V	.	.	.
15.000	0.3580	0.89	.	Q	.	V	.	.	.
15.017	0.3593	0.90	.	Q	.	V	.	.	.
15.033	0.3605	0.90	.	Q	.	V	.	.	.
15.050	0.3618	0.91	.	Q	.	V	.	.	.
15.067	0.3630	0.91	.	Q	.	V	.	.	.
15.083	0.3643	0.92	.	Q	.	V	.	.	.
15.100	0.3656	0.92	.	Q	.	V	.	.	.
15.117	0.3668	0.93	.	Q	.	V	.	.	.
15.133	0.3681	0.94	.	Q	.	V	.	.	.
15.150	0.3694	0.95	.	Q	.	V	.	.	.
15.167	0.3708	0.96	.	Q	.	V	.	.	.
15.183	0.3721	0.97	.	Q	.	V	.	.	.
15.200	0.3735	0.99	.	Q	.	V	.	.	.
15.217	0.3748	1.00	.	Q	.	V	.	.	.
15.233	0.3762	1.01	.	Q	.	V	.	.	.
15.250	0.3776	1.02	.	Q	.	V	.	.	.
15.267	0.3791	1.04	.	Q	.	V	.	.	.
15.283	0.3805	1.05	.	Q	.	V	.	.	.
15.300	0.3819	1.05	.	Q	.	V	.	.	.
15.317	0.3834	1.06	.	Q	.	V	.	.	.
15.333	0.3849	1.07	.	Q	.	V	.	.	.
15.350	0.3864	1.08	.	Q	.	V	.	.	.
15.367	0.3879	1.09	.	Q	.	V	.	.	.
15.383	0.3894	1.09	.	Q	.	V	.	.	.
15.400	0.3909	1.10	.	Q	.	V	.	.	.
15.417	0.3924	1.11	.	Q	.	V	.	.	.

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15.433      0.3940      1.12  .    Q    .        V.         .         .
15.450      0.3955      1.12  .    Q    .        V.         .         .
15.467      0.3971      1.13  .    Q    .        V.         .         .
15.483      0.3986      1.13  .    Q    .        V.         .         .
15.500      0.4002      1.14  .    Q    .        V.         .         .
15.517      0.4018      1.15  .    Q    .         V         .         .
15.533      0.4034      1.15  .    Q    .         V         .         .
15.550      0.4050      1.16  .    Q    .         V         .         .
15.567      0.4066      1.17  .     Q   .         V         .         .
15.583      0.4082      1.18  .     Q   .         V         .         .
15.600      0.4098      1.20  .     Q   .         V         .         .
15.617      0.4115      1.21  .     Q   .         V         .         .
15.633      0.4132      1.23  .     Q   .         V         .         .
15.650      0.4149      1.25  .     Q   .         V         .         .
15.667      0.4167      1.26  .     Q   .         V         .         .
15.683      0.4184      1.28  .     Q   .         V         .         .
15.700      0.4202      1.30  .     Q   .         V         .         .
15.717      0.4220      1.32  .     Q   .         .V        .         .
15.733      0.4239      1.38  .      Q  .         .V        .         .
15.750      0.4259      1.44  .      Q  .         .V        .         .
15.767      0.4280      1.51  .      Q  .         .V        .         .
15.783      0.4302      1.57  .       Q .         .V        .         .
15.800      0.4324      1.63  .       Q .         .V        .         .
15.817      0.4347      1.70  .       Q .         .V        .         .
15.833      0.4372      1.76  .        Q.         .V        .         .
15.850      0.4397      1.82  .        Q.         .V        .         .
15.867      0.4423      1.89  .        Q.         . V       .         .
15.883      0.4450      1.97  .         Q         . V       .         .
15.900      0.4478      2.05  .         Q         . V       .         .
15.917      0.4507      2.12  .         Q         . V       .         .
15.933      0.4538      2.20  .         .Q        . V       .         .
15.950      0.4569      2.28  .         .Q        . V       .         .
15.967      0.4601      2.36  .         . Q       . V       .         .
15.983      0.4635      2.43  .         . Q       .  V      .         .
16.000      0.4670      2.51  .         . Q       .  V      .         .
16.017      0.4709      2.84  .         .   Q     .  V      .         .
16.033      0.4756      3.43  .         .      Q  .  V      .         .
16.050      0.4811      4.02  .         .         Q   V     .         .
16.067      0.4875      4.61  .         .         .  QV     .         .
16.083      0.4946      5.20  .         .         .   V Q   .         .
16.100      0.5026      5.79  .         .         .    V   Q.         .
16.117      0.5114      6.38  .         .         .    V    . Q       .
16.133      0.5210      6.96  .         .         .     V   .     Q   .
16.150      0.5316      7.73  .         .         .     V   .        Q
16.167      0.5416      7.24  .         .         .      V  .      Q  .
16.183      0.5506      6.53  .         .         .      V  .  Q       .
16.200      0.5586      5.83  .         .         .      V  Q          .
16.217      0.5657      5.12  .         .         .     Q V .          .
16.233      0.5718      4.42  .         .         . Q     V .          .
16.250      0.5769      3.71  .         .        Q.       V .          .
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16.267      0.5810      3.01  .          .    Q    .         V.          .
16.283      0.5842      2.30  .          .Q        .         V.          .
16.300      0.5864      1.65  .        Q .         .         V.          .
16.317      0.5885      1.48  .       Q  .         .         V.          .
16.333      0.5904      1.43  .       Q  .         .         V.          .
16.350      0.5923      1.38  .       Q  .         .         V.          .
16.367      0.5942      1.33  .      Q   .         .         V.          .
16.383      0.5959      1.28  .      Q   .         .         V.          .
16.400      0.5976      1.23  .      Q   .         .         V.          .
16.417      0.5992      1.18  .      Q   .         .         V.          .
16.433      0.6008      1.13  .     Q    .         .          V          .
16.450      0.6023      1.08  .     Q    .         .          V          .
16.467      0.6038      1.07  .     Q    .         .          V          .
16.483      0.6052      1.06  .     Q    .         .          V          .
16.500      0.6067      1.05  .     Q    .         .          V          .
16.517      0.6081      1.04  .     Q    .         .          V          .
16.533      0.6095      1.02  .     Q    .         .          V          .
16.550      0.6109      1.01  .     Q    .         .          V          .
16.567      0.6123      1.00  .     Q    .         .          V          .
16.583      0.6136      0.99  .     Q    .         .          V          .
16.600      0.6150      0.98  .     Q    .         .          V          .
16.617      0.6163      0.96  .    Q     .         .          V          .
16.633      0.6176      0.95  .    Q     .         .          V          .
16.650      0.6189      0.93  .    Q     .         .          V          .
16.667      0.6202      0.92  .    Q     .         .          V          .
16.683      0.6214      0.90  .    Q     .         .          .V         .
16.700      0.6226      0.89  .    Q     .         .          .V         .
16.717      0.6238      0.87  .    Q     .         .          .V         .
16.733      0.6250      0.86  .    Q     .         .          .V         .
16.750      0.6262      0.84  .    Q     .         .          .V         .
16.767      0.6273      0.83  .    Q     .         .          .V         .
16.783      0.6284      0.82  .    Q     .         .          .V         .
16.800      0.6296      0.81  .    Q     .         .          .V         .
16.817      0.6307      0.80  .    Q     .         .          .V         .
16.833      0.6318      0.79  .    Q     .         .          .V         .
16.850      0.6328      0.78  .    Q     .         .          .V         .
16.867      0.6339      0.77  .  Q       .         .          .V         .
16.883      0.6349      0.76  .  Q       .         .          .V         .
16.900      0.6360      0.75  .  Q       .         .          .V         .
16.917      0.6370      0.74  .  Q       .         .          .V         .
16.933      0.6380      0.74  .  Q       .         .          .V         .
16.950      0.6390      0.73  .  Q       .         .          .V         .
16.967      0.6400      0.72  .  Q       .         .          .V         .
16.983      0.6410      0.71  .  Q       .         .          . V        .
17.000      0.6420      0.71  .  Q       .         .          . V        .
17.017      0.6429      0.70  .  Q       .         .          . V        .
17.033      0.6439      0.69  .  Q       .         .          . V        .
17.050      0.6448      0.68  .  Q       .         .          . V        .
17.067      0.6458      0.68  .  Q       .         .          . V        .
17.083      0.6467      0.67  .  Q       .         .          . V        .
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17.100	0.6476	0.66	.	Q	.	.	.	V	.
17.117	0.6485	0.66	.	Q	.	.	.	V	.
17.133	0.6494	0.65	.	Q	.	.	.	V	.
17.150	0.6503	0.65	.	Q	.	.	.	V	.
17.167	0.6512	0.64	.	Q	.	.	.	V	.
17.183	0.6520	0.63	.	Q	.	.	.	V	.
17.200	0.6529	0.63	.	Q	.	.	.	V	.
17.217	0.6538	0.62	.	Q	.	.	.	V	.
17.233	0.6546	0.62	.	Q	.	.	.	V	.
17.250	0.6555	0.61	.	Q	.	.	.	V	.
17.267	0.6563	0.61	.	Q	.	.	.	V	.
17.283	0.6571	0.60	.	Q	.	.	.	V	.
17.300	0.6580	0.60	.	Q	.	.	.	V	.
17.317	0.6588	0.59	.	Q	.	.	.	V	.
17.333	0.6596	0.59	.	Q	.	.	.	V	.
17.350	0.6604	0.59	.	Q	.	.	.	V	.
17.367	0.6612	0.58	.	Q	.	.	.	V	.
17.383	0.6620	0.58	.	Q	.	.	.	V	.
17.400	0.6628	0.57	.	Q	.	.	.	V	.
17.417	0.6636	0.57	.	Q	.	.	.	V	.
17.433	0.6643	0.57	.	Q	.	.	.	V	.
17.450	0.6651	0.56	.	Q	.	.	.	V	.
17.467	0.6659	0.56	.	Q	.	.	.	V	.
17.483	0.6667	0.55	.	Q	.	.	.	V	.
17.500	0.6674	0.55	.	Q	.	.	.	V	.
17.517	0.6682	0.55	.	Q	.	.	.	V	.
17.533	0.6689	0.54	.	Q	.	.	.	V	.
17.550	0.6697	0.54	.	Q	.	.	.	V	.
17.567	0.6704	0.54	.	Q	.	.	.	V	.
17.583	0.6711	0.53	.	Q	.	.	.	V	.
17.600	0.6719	0.53	.	Q	.	.	.	V	.
17.617	0.6726	0.53	.	Q	.	.	.	V	.
17.633	0.6733	0.52	.	Q	.	.	.	V	.
17.650	0.6740	0.52	.	Q	.	.	.	V	.
17.667	0.6747	0.52	.	Q	.	.	.	V	.
17.683	0.6754	0.51	.	Q	.	.	.	V	.
17.700	0.6762	0.51	.	Q	.	.	.	V	.
17.717	0.6769	0.51	.	Q	.	.	.	V	.
17.733	0.6776	0.51	.	Q	.	.	.	V	.
17.750	0.6782	0.50	.	Q	.	.	.	V	.
17.767	0.6789	0.50	.	Q	.	.	.	V	.
17.783	0.6796	0.50	.	Q	.	.	.	V	.
17.800	0.6803	0.50	.	Q	.	.	.	V	.
17.817	0.6810	0.49	.	Q	.	.	.	V	.
17.833	0.6817	0.49	.	Q	.	.	.	V	.
17.850	0.6823	0.49	.	Q	.	.	.	V	.
17.867	0.6830	0.49	.	Q	.	.	.	V	.
17.883	0.6837	0.48	.	Q	.	.	.	V	.
17.900	0.6843	0.48	.	Q	.	.	.	V	.
17.917	0.6850	0.48	.	Q	.	.	.	V	.

17.933	0.6856	0.48	. Q	.	.	.	V	.
17.950	0.6863	0.47	. Q	.	.	.	V	.
17.967	0.6869	0.47	. Q	.	.	.	V	.
17.983	0.6876	0.47	. Q	.	.	.	V	.
18.000	0.6882	0.47	. Q	.	.	.	V	.
18.017	0.6889	0.46	. Q	.	.	.	V	.
18.033	0.6895	0.46	. Q	.	.	.	V	.
18.050	0.6901	0.46	. Q	.	.	.	V	.
18.067	0.6908	0.45	. Q	.	.	.	V	.
18.083	0.6914	0.44	. Q	.	.	.	V	.
18.100	0.6920	0.43	. Q	.	.	.	V	.
18.117	0.6925	0.42	. Q	.	.	.	V	.
18.133	0.6931	0.41	. Q	.	.	.	V	.
18.150	0.6936	0.39	. Q	.	.	.	V	.
18.167	0.6942	0.38	.Q	.	.	.	V	.
18.183	0.6947	0.37	.Q	.	.	.	V	.
18.200	0.6952	0.36	.Q	.	.	.	V	.
18.217	0.6956	0.35	.Q	.	.	.	V	.
18.233	0.6961	0.35	.Q	.	.	.	V	.
18.250	0.6966	0.35	.Q	.	.	.	V	.
18.267	0.6971	0.34	.Q	.	.	.	V	.
18.283	0.6975	0.34	.Q	.	.	.	V	.
18.300	0.6980	0.34	.Q	.	.	.	V	.
18.317	0.6985	0.34	.Q	.	.	.	V	.
18.333	0.6989	0.34	.Q	.	.	.	V	.
18.350	0.6994	0.34	.Q	.	.	.	V	.
18.367	0.6999	0.33	.Q	.	.	.	V	.
18.383	0.7003	0.33	.Q	.	.	.	V	.
18.400	0.7008	0.33	.Q	.	.	.	V	.
18.417	0.7012	0.33	.Q	.	.	.	V	.
18.433	0.7017	0.33	.Q	.	.	.	V	.
18.450	0.7021	0.33	.Q	.	.	.	V	.
18.467	0.7026	0.32	.Q	.	.	.	V	.
18.483	0.7030	0.32	.Q	.	.	.	V	.
18.500	0.7035	0.32	.Q	.	.	.	V	.
18.517	0.7039	0.32	.Q	.	.	.	V	.
18.533	0.7043	0.32	.Q	.	.	.	V	.
18.550	0.7048	0.32	.Q	.	.	.	V	.
18.567	0.7052	0.32	.Q	.	.	.	V	.
18.583	0.7056	0.32	.Q	.	.	.	V	.
18.600	0.7061	0.31	.Q	.	.	.	V	.
18.617	0.7065	0.31	.Q	.	.	.	V	.
18.633	0.7069	0.31	.Q	.	.	.	V	.
18.650	0.7074	0.31	.Q	.	.	.	V	.
18.667	0.7078	0.31	.Q	.	.	.	V	.
18.683	0.7082	0.31	.Q	.	.	.	V	.
18.700	0.7086	0.31	.Q	.	.	.	V	.
18.717	0.7091	0.30	.Q	.	.	.	V	.
18.733	0.7095	0.30	.Q	.	.	.	V	.
18.750	0.7099	0.30	.Q	.	.	.	V	.

18.767	0.7103	0.30	.Q	.	.	.	V	.
18.783	0.7107	0.30	.Q	.	.	.	V	.
18.800	0.7111	0.30	.Q	.	.	.	V	.
18.817	0.7115	0.30	.Q	.	.	.	V	.
18.833	0.7119	0.30	.Q	.	.	.	V	.
18.850	0.7124	0.30	.Q	.	.	.	V	.
18.867	0.7128	0.29	.Q	.	.	.	V	.
18.883	0.7132	0.29	.Q	.	.	.	V	.
18.900	0.7136	0.29	.Q	.	.	.	V	.
18.917	0.7140	0.29	.Q	.	.	.	V	.
18.933	0.7144	0.29	.Q	.	.	.	V	.
18.950	0.7148	0.29	.Q	.	.	.	V	.
18.967	0.7152	0.29	.Q	.	.	.	V	.
18.983	0.7156	0.29	.Q	.	.	.	V	.
19.000	0.7159	0.29	.Q	.	.	.	V	.
19.017	0.7163	0.28	.Q	.	.	.	V	.
19.033	0.7167	0.28	.Q	.	.	.	V	.
19.050	0.7171	0.28	.Q	.	.	.	V	.
19.067	0.7175	0.28	.Q	.	.	.	V	.
19.083	0.7179	0.28	.Q	.	.	.	V	.
19.100	0.7183	0.28	.Q	.	.	.	V	.
19.117	0.7187	0.28	.Q	.	.	.	V	.
19.133	0.7190	0.28	.Q	.	.	.	V	.
19.150	0.7194	0.28	.Q	.	.	.	V	.
19.167	0.7198	0.28	.Q	.	.	.	V	.
19.183	0.7202	0.27	.Q	.	.	.	V	.
19.200	0.7206	0.27	.Q	.	.	.	V	.
19.217	0.7209	0.27	.Q	.	.	.	V	.
19.233	0.7213	0.27	.Q	.	.	.	V	.
19.250	0.7217	0.27	.Q	.	.	.	V	.
19.267	0.7221	0.27	.Q	.	.	.	V	.
19.283	0.7224	0.27	.Q	.	.	.	V	.
19.300	0.7228	0.27	.Q	.	.	.	V	.
19.317	0.7232	0.27	.Q	.	.	.	V	.
19.333	0.7235	0.27	.Q	.	.	.	V	.
19.350	0.7239	0.27	.Q	.	.	.	V	.
19.367	0.7243	0.26	.Q	.	.	.	V	.
19.383	0.7246	0.26	.Q	.	.	.	V	.
19.400	0.7250	0.26	.Q	.	.	.	V	.
19.417	0.7253	0.26	.Q	.	.	.	V	.
19.433	0.7257	0.26	.Q	.	.	.	V	.
19.450	0.7261	0.26	.Q	.	.	.	V	.
19.467	0.7264	0.26	.Q	.	.	.	V	.
19.483	0.7268	0.26	.Q	.	.	.	V	.
19.500	0.7271	0.26	.Q	.	.	.	V	.
19.517	0.7275	0.26	.Q	.	.	.	V	.
19.533	0.7278	0.26	.Q	.	.	.	V	.
19.550	0.7282	0.26	.Q	.	.	.	V	.
19.567	0.7285	0.25	.Q	.	.	.	V	.
19.583	0.7289	0.25	.Q	.	.	.	V	.

19.600	0.7292	0.25	.Q	.	.	.	V	.
19.617	0.7296	0.25	.Q	.	.	.	V	.
19.633	0.7299	0.25	.Q	.	.	.	V	.
19.650	0.7303	0.25	.Q	.	.	.	V	.
19.667	0.7306	0.25	.Q	.	.	.	V	.
19.683	0.7310	0.25	.Q	.	.	.	V	.
19.700	0.7313	0.25	.Q	.	.	.	V	.
19.717	0.7317	0.25	.Q	.	.	.	V	.
19.733	0.7320	0.25	.Q	.	.	.	V	.
19.750	0.7323	0.25	.Q	.	.	.	V	.
19.767	0.7327	0.25	.Q	.	.	.	V	.
19.783	0.7330	0.25	.Q	.	.	.	V	.
19.800	0.7334	0.24	.Q	.	.	.	V	.
19.817	0.7337	0.24	.Q	.	.	.	V	.
19.833	0.7340	0.24	.Q	.	.	.	V	.
19.850	0.7344	0.24	.Q	.	.	.	V	.
19.867	0.7347	0.24	.Q	.	.	.	V	.
19.883	0.7350	0.24	.Q	.	.	.	V	.
19.900	0.7354	0.24	.Q	.	.	.	V	.
19.917	0.7357	0.24	.Q	.	.	.	V	.
19.933	0.7360	0.24	.Q	.	.	.	V	.
19.950	0.7363	0.24	.Q	.	.	.	V	.
19.967	0.7367	0.24	.Q	.	.	.	V	.
19.983	0.7370	0.24	.Q	.	.	.	V	.
20.000	0.7373	0.24	.Q	.	.	.	V	.
20.017	0.7377	0.24	.Q	.	.	.	V	.
20.033	0.7380	0.24	.Q	.	.	.	V	.
20.050	0.7383	0.23	.Q	.	.	.	V	.
20.067	0.7386	0.23	.Q	.	.	.	V	.
20.083	0.7389	0.23	.Q	.	.	.	V	.
20.100	0.7393	0.23	.Q	.	.	.	V	.
20.117	0.7396	0.23	.Q	.	.	.	V	.
20.133	0.7399	0.23	.Q	.	.	.	V	.
20.150	0.7402	0.23	.Q	.	.	.	V	.
20.167	0.7405	0.23	.Q	.	.	.	V	.
20.183	0.7409	0.23	.Q	.	.	.	V	.
20.200	0.7412	0.23	.Q	.	.	.	V	.
20.217	0.7415	0.23	.Q	.	.	.	V	.
20.233	0.7418	0.23	.Q	.	.	.	V	.
20.250	0.7421	0.23	.Q	.	.	.	V	.
20.267	0.7424	0.23	.Q	.	.	.	V	.
20.283	0.7427	0.23	.Q	.	.	.	V	.
20.300	0.7430	0.23	.Q	.	.	.	V	.
20.317	0.7434	0.23	.Q	.	.	.	V	.
20.333	0.7437	0.22	.Q	.	.	.	V	.
20.350	0.7440	0.22	.Q	.	.	.	V	.
20.367	0.7443	0.22	.Q	.	.	.	V	.
20.383	0.7446	0.22	.Q	.	.	.	V	.
20.400	0.7449	0.22	.Q	.	.	.	V	.
20.417	0.7452	0.22	.Q	.	.	.	V	.

20.433	0.7455	0.22	.Q	.	.	.	V	.
20.450	0.7458	0.22	.Q	.	.	.	V	.
20.467	0.7461	0.22	.Q	.	.	.	V	.
20.483	0.7464	0.22	.Q	.	.	.	V	.
20.500	0.7467	0.22	.Q	.	.	.	V	.
20.517	0.7470	0.22	.Q	.	.	.	V	.
20.533	0.7473	0.22	.Q	.	.	.	V	.
20.550	0.7476	0.22	.Q	.	.	.	V	.
20.567	0.7479	0.22	.Q	.	.	.	V	.
20.583	0.7482	0.22	.Q	.	.	.	V	.
20.600	0.7485	0.22	.Q	.	.	.	V	.
20.617	0.7488	0.22	.Q	.	.	.	V	.
20.633	0.7491	0.22	.Q	.	.	.	V	.
20.650	0.7494	0.21	.Q	.	.	.	V	.
20.667	0.7497	0.21	.Q	.	.	.	V	.
20.683	0.7500	0.21	.Q	.	.	.	V	.
20.700	0.7503	0.21	.Q	.	.	.	V	.
20.717	0.7506	0.21	.Q	.	.	.	V	.
20.733	0.7509	0.21	.Q	.	.	.	V	.
20.750	0.7512	0.21	.Q	.	.	.	V	.
20.767	0.7515	0.21	.Q	.	.	.	V	.
20.783	0.7517	0.21	.Q	.	.	.	V	.
20.800	0.7520	0.21	.Q	.	.	.	V	.
20.817	0.7523	0.21	.Q	.	.	.	V	.
20.833	0.7526	0.21	.Q	.	.	.	V	.
20.850	0.7529	0.21	.Q	.	.	.	V	.
20.867	0.7532	0.21	.Q	.	.	.	V	.
20.883	0.7535	0.21	.Q	.	.	.	V	.
20.900	0.7538	0.21	.Q	.	.	.	V	.
20.917	0.7540	0.21	.Q	.	.	.	V	.
20.933	0.7543	0.21	.Q	.	.	.	V	.
20.950	0.7546	0.21	.Q	.	.	.	V	.
20.967	0.7549	0.21	.Q	.	.	.	V	.
20.983	0.7552	0.21	.Q	.	.	.	V	.
21.000	0.7555	0.20	.Q	.	.	.	V	.
21.017	0.7557	0.20	.Q	.	.	.	V	.
21.033	0.7560	0.20	.Q	.	.	.	V	.
21.050	0.7563	0.20	.Q	.	.	.	V	.
21.067	0.7566	0.20	.Q	.	.	.	V	.
21.083	0.7569	0.20	.Q	.	.	.	V	.
21.100	0.7571	0.20	.Q	.	.	.	V	.
21.117	0.7574	0.20	.Q	.	.	.	V	.
21.133	0.7577	0.20	.Q	.	.	.	V	.
21.150	0.7580	0.20	.Q	.	.	.	V	.
21.167	0.7583	0.20	.Q	.	.	.	V	.
21.183	0.7585	0.20	.Q	.	.	.	V	.
21.200	0.7588	0.20	.Q	.	.	.	V	.
21.217	0.7591	0.20	.Q	.	.	.	V	.
21.233	0.7594	0.20	.Q	.	.	.	V	.
21.250	0.7596	0.20	.Q	.	.	.	V	.

21.267	0.7599	0.20	.Q	.	.	.	V .
21.283	0.7602	0.20	.Q	.	.	.	V .
21.300	0.7604	0.20	.Q	.	.	.	V .
21.317	0.7607	0.20	.Q	.	.	.	V .
21.333	0.7610	0.20	.Q	.	.	.	V .
21.350	0.7613	0.20	.Q	.	.	.	V .
21.367	0.7615	0.20	.Q	.	.	.	V .
21.383	0.7618	0.20	.Q	.	.	.	V .
21.400	0.7621	0.19	.Q	.	.	.	V .
21.417	0.7623	0.19	.Q	.	.	.	V .
21.433	0.7626	0.19	.Q	.	.	.	V .
21.450	0.7629	0.19	.Q	.	.	.	V .
21.467	0.7631	0.19	.Q	.	.	.	V .
21.483	0.7634	0.19	Q	.	.	.	V .
21.500	0.7637	0.19	Q	.	.	.	V .
21.517	0.7639	0.19	Q	.	.	.	V .
21.533	0.7642	0.19	Q	.	.	.	V .
21.550	0.7645	0.19	Q	.	.	.	V .
21.567	0.7647	0.19	Q	.	.	.	V .
21.583	0.7650	0.19	Q	.	.	.	V .
21.600	0.7652	0.19	Q	.	.	.	V .
21.617	0.7655	0.19	Q	.	.	.	V .
21.633	0.7658	0.19	Q	.	.	.	V .
21.650	0.7660	0.19	Q	.	.	.	V .
21.667	0.7663	0.19	Q	.	.	.	V .
21.683	0.7665	0.19	Q	.	.	.	V .
21.700	0.7668	0.19	Q	.	.	.	V .
21.717	0.7671	0.19	Q	.	.	.	V .
21.733	0.7673	0.19	Q	.	.	.	V .
21.750	0.7676	0.19	Q	.	.	.	V .
21.767	0.7678	0.19	Q	.	.	.	V .
21.783	0.7681	0.19	Q	.	.	.	V .
21.800	0.7684	0.19	Q	.	.	.	V .
21.817	0.7686	0.19	Q	.	.	.	V .
21.833	0.7689	0.19	Q	.	.	.	V .
21.850	0.7691	0.19	Q	.	.	.	V .
21.867	0.7694	0.18	Q	.	.	.	V .
21.883	0.7696	0.18	Q	.	.	.	V .
21.900	0.7699	0.18	Q	.	.	.	V .
21.917	0.7701	0.18	Q	.	.	.	V .
21.933	0.7704	0.18	Q	.	.	.	V .
21.950	0.7706	0.18	Q	.	.	.	V .
21.967	0.7709	0.18	Q	.	.	.	V .
21.983	0.7711	0.18	Q	.	.	.	V .
22.000	0.7714	0.18	Q	.	.	.	V .
22.017	0.7716	0.18	Q	.	.	.	V .
22.033	0.7719	0.18	Q	.	.	.	V .
22.050	0.7721	0.18	Q	.	.	.	V .
22.067	0.7724	0.18	Q	.	.	.	V .
22.083	0.7726	0.18	Q	.	.	.	V .

22.100	0.7729	0.18	Q	.	.	.	V .
22.117	0.7731	0.18	Q	.	.	.	V .
22.133	0.7734	0.18	Q	.	.	.	V .
22.150	0.7736	0.18	Q	.	.	.	V .
22.167	0.7739	0.18	Q	.	.	.	V .
22.183	0.7741	0.18	Q	.	.	.	V .
22.200	0.7744	0.18	Q	.	.	.	V .
22.217	0.7746	0.18	Q	.	.	.	V .
22.233	0.7749	0.18	Q	.	.	.	V .
22.250	0.7751	0.18	Q	.	.	.	V .
22.267	0.7753	0.18	Q	.	.	.	V .
22.283	0.7756	0.18	Q	.	.	.	V .
22.300	0.7758	0.18	Q	.	.	.	V .
22.317	0.7761	0.18	Q	.	.	.	V .
22.333	0.7763	0.18	Q	.	.	.	V .
22.350	0.7766	0.18	Q	.	.	.	V .
22.367	0.7768	0.18	Q	.	.	.	V .
22.383	0.7770	0.18	Q	.	.	.	V .
22.400	0.7773	0.17	Q	.	.	.	V .
22.417	0.7775	0.17	Q	.	.	.	V .
22.433	0.7778	0.17	Q	.	.	.	V .
22.450	0.7780	0.17	Q	.	.	.	V .
22.467	0.7782	0.17	Q	.	.	.	V .
22.483	0.7785	0.17	Q	.	.	.	V .
22.500	0.7787	0.17	Q	.	.	.	V .
22.517	0.7790	0.17	Q	.	.	.	V .
22.533	0.7792	0.17	Q	.	.	.	V .
22.550	0.7794	0.17	Q	.	.	.	V .
22.567	0.7797	0.17	Q	.	.	.	V .
22.583	0.7799	0.17	Q	.	.	.	V .
22.600	0.7801	0.17	Q	.	.	.	V .
22.617	0.7804	0.17	Q	.	.	.	V .
22.633	0.7806	0.17	Q	.	.	.	V.
22.650	0.7809	0.17	Q	.	.	.	V.
22.667	0.7811	0.17	Q	.	.	.	V.
22.683	0.7813	0.17	Q	.	.	.	V.
22.700	0.7816	0.17	Q	.	.	.	V.
22.717	0.7818	0.17	Q	.	.	.	V.
22.733	0.7820	0.17	Q	.	.	.	V.
22.750	0.7823	0.17	Q	.	.	.	V.
22.767	0.7825	0.17	Q	.	.	.	V.
22.783	0.7827	0.17	Q	.	.	.	V.
22.800	0.7829	0.17	Q	.	.	.	V.
22.817	0.7832	0.17	Q	.	.	.	V.
22.833	0.7834	0.17	Q	.	.	.	V.
22.850	0.7836	0.17	Q	.	.	.	V.
22.867	0.7839	0.17	Q	.	.	.	V.
22.883	0.7841	0.17	Q	.	.	.	V.
22.900	0.7843	0.17	Q	.	.	.	V.
22.917	0.7846	0.17	Q	.	.	.	V.

22.933	0.7848	0.17	Q	.	.	.	V.
22.950	0.7850	0.17	Q	.	.	.	V.
22.967	0.7852	0.17	Q	.	.	.	V.
22.983	0.7855	0.17	Q	.	.	.	V.
23.000	0.7857	0.17	Q	.	.	.	V.
23.017	0.7859	0.16	Q	.	.	.	V.
23.033	0.7862	0.16	Q	.	.	.	V.
23.050	0.7864	0.16	Q	.	.	.	V.
23.067	0.7866	0.16	Q	.	.	.	V.
23.083	0.7868	0.16	Q	.	.	.	V.
23.100	0.7871	0.16	Q	.	.	.	V.
23.117	0.7873	0.16	Q	.	.	.	V.
23.133	0.7875	0.16	Q	.	.	.	V.
23.150	0.7877	0.16	Q	.	.	.	V.
23.167	0.7880	0.16	Q	.	.	.	V.
23.183	0.7882	0.16	Q	.	.	.	V.
23.200	0.7884	0.16	Q	.	.	.	V.
23.217	0.7886	0.16	Q	.	.	.	V.
23.233	0.7888	0.16	Q	.	.	.	V.
23.250	0.7891	0.16	Q	.	.	.	V.
23.267	0.7893	0.16	Q	.	.	.	V.
23.283	0.7895	0.16	Q	.	.	.	V.
23.300	0.7897	0.16	Q	.	.	.	V.
23.317	0.7900	0.16	Q	.	.	.	V.
23.333	0.7902	0.16	Q	.	.	.	V.
23.350	0.7904	0.16	Q	.	.	.	V.
23.367	0.7906	0.16	Q	.	.	.	V.
23.383	0.7908	0.16	Q	.	.	.	V.
23.400	0.7911	0.16	Q	.	.	.	V.
23.417	0.7913	0.16	Q	.	.	.	V.
23.433	0.7915	0.16	Q	.	.	.	V.
23.450	0.7917	0.16	Q	.	.	.	V.
23.467	0.7919	0.16	Q	.	.	.	V.
23.483	0.7921	0.16	Q	.	.	.	V.
23.500	0.7924	0.16	Q	.	.	.	V.
23.517	0.7926	0.16	Q	.	.	.	V.
23.533	0.7928	0.16	Q	.	.	.	V.
23.550	0.7930	0.16	Q	.	.	.	V.
23.567	0.7932	0.16	Q	.	.	.	V.
23.583	0.7934	0.16	Q	.	.	.	V.
23.600	0.7937	0.16	Q	.	.	.	V.
23.617	0.7939	0.16	Q	.	.	.	V.
23.633	0.7941	0.16	Q	.	.	.	V.
23.650	0.7943	0.16	Q	.	.	.	V.
23.667	0.7945	0.16	Q	.	.	.	V.
23.683	0.7947	0.16	Q	.	.	.	V.
23.700	0.7950	0.16	Q	.	.	.	V.
23.717	0.7952	0.16	Q	.	.	.	V.
23.733	0.7954	0.15	Q	.	.	.	V.
23.750	0.7956	0.15	Q	.	.	.	V.

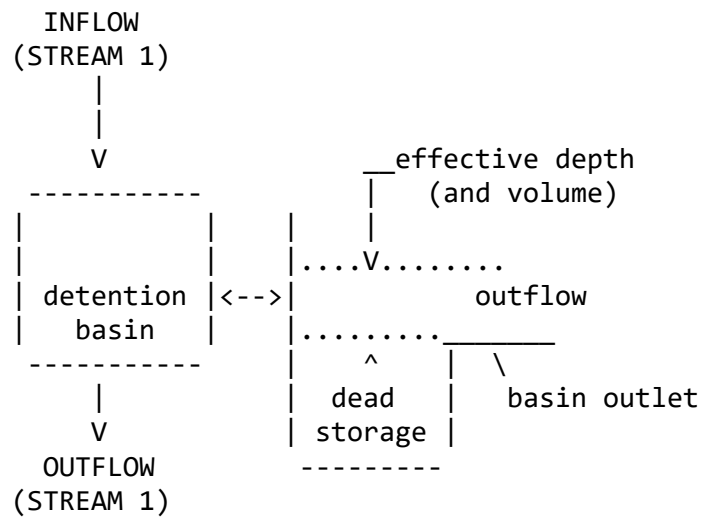
23.767	0.7958	0.15	Q	.	.	.	V.
23.783	0.7960	0.15	Q	.	.	.	V.
23.800	0.7962	0.15	Q	.	.	.	V.
23.817	0.7964	0.15	Q	.	.	.	V.
23.833	0.7967	0.15	Q	.	.	.	V.
23.850	0.7969	0.15	Q	.	.	.	V.
23.867	0.7971	0.15	Q	.	.	.	V.
23.883	0.7973	0.15	Q	.	.	.	V.
23.900	0.7975	0.15	Q	.	.	.	V.
23.917	0.7977	0.15	Q	.	.	.	V.
23.933	0.7979	0.15	Q	.	.	.	V.
23.950	0.7981	0.15	Q	.	.	.	V.
23.967	0.7983	0.15	Q	.	.	.	V.
23.983	0.7985	0.15	Q	.	.	.	V.
24.000	0.7988	0.15	Q	.	.	.	V.
24.017	0.7990	0.15	Q	.	.	.	V.
24.033	0.7992	0.15	Q	.	.	.	V.
24.050	0.7994	0.15	Q	.	.	.	V.
24.067	0.7996	0.15	Q	.	.	.	V.
24.083	0.7998	0.14	Q	.	.	.	V.
24.100	0.8000	0.12	Q	.	.	.	V.
24.117	0.8001	0.11	Q	.	.	.	V.
24.133	0.8002	0.09	Q	.	.	.	V.
24.150	0.8003	0.07	Q	.	.	.	V.
24.167	0.8004	0.06	Q	.	.	.	V.
24.183	0.8005	0.04	Q	.	.	.	V.
24.200	0.8005	0.02	Q	.	.	.	V

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
(Note: 100% of Peak Flow Rate estimate assumed to have
an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
0%	1452.0
10%	660.0
20%	160.0
30%	95.0
40%	70.0
50%	60.0
60%	45.0
70%	35.0
80%	25.0
90%	15.0

****
FLOW PROCESS FROM NODE 405.00 TO NODE 405.00 IS CODE = 3.2

>>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #1<<<<<



ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 1
THROUGH A FLOW-THROUGH DETENTION BASIN
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE(AF) = 0.000
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.30	6.52	0.100
3	1.50	7.61	0.118
4	2.00	9.83	0.175
5	2.50	11.63	0.236
6	3.00	13.19	0.305
7	3.50	14.58	0.366
8	4.00	15.85	0.423
9	4.50	17.03	0.475
10	5.00	18.13	0.517
11	5.50	19.16	0.541

MODIFIED-PULS BASIN ROUTING MODEL RESULTS(1-MINUTE COMPUTATION INTERVALS):
(Note: Computed EFFECTIVE DEPTH and VOLUME are estimated at the clock time;

MEAN OUTFLOW is the average value during the unit interval.)

CLOCK TIME (HRS)	DEAD-STORAGE FILLED(AF)	INFLOW (CFS)	LOSS (CFS)	EFFECTIVE DEPTH(FT)	MEAN OUTFLOW (CFS)	EFFECTIVE VOLUME(AF)
0.017	0.000	0.01	0.00	0.00	0.0	0.000
0.033	0.000	0.02	0.00	0.00	0.0	0.000
0.050	0.000	0.04	0.00	0.00	0.0	0.000
0.067	0.000	0.05	0.00	0.00	0.0	0.000
0.083	0.000	0.07	0.00	0.00	0.0	0.000
0.100	0.000	0.09	0.00	0.00	0.0	0.000
0.117	0.000	0.10	0.00	0.01	0.0	0.000
0.133	0.000	0.12	0.00	0.01	0.0	0.001
0.150	0.000	0.13	0.00	0.01	0.0	0.001
0.167	0.000	0.15	0.00	0.01	0.0	0.001
0.183	0.000	0.15	0.00	0.01	0.1	0.001
0.200	0.000	0.15	0.00	0.01	0.1	0.001
0.217	0.000	0.15	0.00	0.02	0.1	0.001
0.233	0.000	0.15	0.00	0.02	0.1	0.001
0.250	0.000	0.15	0.00	0.02	0.1	0.001
0.267	0.000	0.15	0.00	0.02	0.1	0.001
0.283	0.000	0.15	0.00	0.02	0.1	0.002
0.300	0.000	0.15	0.00	0.02	0.1	0.002
0.317	0.000	0.15	0.00	0.02	0.1	0.002
0.333	0.000	0.15	0.00	0.02	0.1	0.002
0.350	0.000	0.15	0.00	0.02	0.1	0.002
0.367	0.000	0.15	0.00	0.02	0.1	0.002
0.383	0.000	0.15	0.00	0.02	0.1	0.002
0.400	0.000	0.15	0.00	0.02	0.1	0.002
0.417	0.000	0.15	0.00	0.03	0.1	0.002
0.433	0.000	0.15	0.00	0.03	0.1	0.002
0.450	0.000	0.15	0.00	0.03	0.1	0.002
0.467	0.000	0.15	0.00	0.03	0.1	0.002
0.483	0.000	0.15	0.00	0.03	0.1	0.002
0.500	0.000	0.15	0.00	0.03	0.1	0.002
0.517	0.000	0.15	0.00	0.03	0.1	0.002
0.533	0.000	0.15	0.00	0.03	0.1	0.002
0.550	0.000	0.15	0.00	0.03	0.1	0.002
0.567	0.000	0.15	0.00	0.03	0.1	0.002
0.583	0.000	0.15	0.00	0.03	0.1	0.002
0.600	0.000	0.15	0.00	0.03	0.1	0.002
0.617	0.000	0.15	0.00	0.03	0.1	0.002
0.633	0.000	0.15	0.00	0.03	0.1	0.002
0.650	0.000	0.15	0.00	0.03	0.1	0.002
0.667	0.000	0.15	0.00	0.03	0.1	0.002
0.683	0.000	0.15	0.00	0.03	0.1	0.002
0.700	0.000	0.15	0.00	0.03	0.1	0.002
0.717	0.000	0.15	0.00	0.03	0.1	0.002
0.733	0.000	0.15	0.00	0.03	0.1	0.002

0.750	0.000	0.15	0.00	0.03	0.1	0.002
0.767	0.000	0.15	0.00	0.03	0.1	0.002
0.783	0.000	0.15	0.00	0.03	0.1	0.002
0.800	0.000	0.15	0.00	0.03	0.1	0.002
0.817	0.000	0.15	0.00	0.03	0.1	0.002
0.833	0.000	0.15	0.00	0.03	0.2	0.002
0.850	0.000	0.15	0.00	0.03	0.2	0.002
0.867	0.000	0.15	0.00	0.03	0.2	0.002
0.883	0.000	0.15	0.00	0.03	0.2	0.002
0.900	0.000	0.15	0.00	0.03	0.2	0.002
0.917	0.000	0.15	0.00	0.03	0.2	0.002
0.933	0.000	0.16	0.00	0.03	0.2	0.002
0.950	0.000	0.16	0.00	0.03	0.2	0.002
0.967	0.000	0.16	0.00	0.03	0.2	0.002
0.983	0.000	0.16	0.00	0.03	0.2	0.002
1.000	0.000	0.16	0.00	0.03	0.2	0.002
1.017	0.000	0.16	0.00	0.03	0.2	0.002
1.033	0.000	0.16	0.00	0.03	0.2	0.002
1.050	0.000	0.16	0.00	0.03	0.2	0.002
1.067	0.000	0.16	0.00	0.03	0.2	0.002
1.083	0.000	0.16	0.00	0.03	0.2	0.002
1.100	0.000	0.16	0.00	0.03	0.2	0.002
1.117	0.000	0.16	0.00	0.03	0.2	0.002
1.133	0.000	0.16	0.00	0.03	0.2	0.002
1.150	0.000	0.16	0.00	0.03	0.2	0.002
1.167	0.000	0.16	0.00	0.03	0.2	0.002
1.183	0.000	0.16	0.00	0.03	0.2	0.002
1.200	0.000	0.16	0.00	0.03	0.2	0.002
1.217	0.000	0.16	0.00	0.03	0.2	0.002
1.233	0.000	0.16	0.00	0.03	0.2	0.002
1.250	0.000	0.16	0.00	0.03	0.2	0.002
1.267	0.000	0.16	0.00	0.03	0.2	0.002
1.283	0.000	0.16	0.00	0.03	0.2	0.002
1.300	0.000	0.16	0.00	0.03	0.2	0.002
1.317	0.000	0.16	0.00	0.03	0.2	0.002
1.333	0.000	0.16	0.00	0.03	0.2	0.002
1.350	0.000	0.16	0.00	0.03	0.2	0.002
1.367	0.000	0.16	0.00	0.03	0.2	0.002
1.383	0.000	0.16	0.00	0.03	0.2	0.002
1.400	0.000	0.16	0.00	0.03	0.2	0.002
1.417	0.000	0.16	0.00	0.03	0.2	0.002
1.433	0.000	0.16	0.00	0.03	0.2	0.002
1.450	0.000	0.16	0.00	0.03	0.2	0.002
1.467	0.000	0.16	0.00	0.03	0.2	0.002
1.483	0.000	0.16	0.00	0.03	0.2	0.002
1.500	0.000	0.16	0.00	0.03	0.2	0.002
1.517	0.000	0.16	0.00	0.03	0.2	0.002
1.533	0.000	0.16	0.00	0.03	0.2	0.002
1.550	0.000	0.16	0.00	0.03	0.2	0.002
1.567	0.000	0.16	0.00	0.03	0.2	0.002

1.583	0.000	0.16	0.00	0.03	0.2	0.002
1.600	0.000	0.16	0.00	0.03	0.2	0.002
1.617	0.000	0.16	0.00	0.03	0.2	0.002
1.633	0.000	0.16	0.00	0.03	0.2	0.002
1.650	0.000	0.16	0.00	0.03	0.2	0.002
1.667	0.000	0.16	0.00	0.03	0.2	0.002
1.683	0.000	0.16	0.00	0.03	0.2	0.002
1.700	0.000	0.16	0.00	0.03	0.2	0.002
1.717	0.000	0.16	0.00	0.03	0.2	0.002
1.733	0.000	0.16	0.00	0.03	0.2	0.002
1.750	0.000	0.16	0.00	0.03	0.2	0.002
1.767	0.000	0.16	0.00	0.03	0.2	0.002
1.783	0.000	0.16	0.00	0.03	0.2	0.002
1.800	0.000	0.16	0.00	0.03	0.2	0.002
1.817	0.000	0.16	0.00	0.03	0.2	0.002
1.833	0.000	0.16	0.00	0.03	0.2	0.002
1.850	0.000	0.16	0.00	0.03	0.2	0.002
1.867	0.000	0.16	0.00	0.03	0.2	0.002
1.883	0.000	0.16	0.00	0.03	0.2	0.002
1.900	0.000	0.16	0.00	0.03	0.2	0.002
1.917	0.000	0.16	0.00	0.03	0.2	0.002
1.933	0.000	0.16	0.00	0.03	0.2	0.002
1.950	0.000	0.16	0.00	0.03	0.2	0.002
1.967	0.000	0.16	0.00	0.03	0.2	0.002
1.983	0.000	0.16	0.00	0.03	0.2	0.002
2.000	0.000	0.16	0.00	0.03	0.2	0.002
2.017	0.000	0.16	0.00	0.03	0.2	0.002
2.033	0.000	0.16	0.00	0.03	0.2	0.002
2.050	0.000	0.16	0.00	0.03	0.2	0.002
2.067	0.000	0.16	0.00	0.03	0.2	0.002
2.083	0.000	0.16	0.00	0.03	0.2	0.002
2.100	0.000	0.16	0.00	0.03	0.2	0.002
2.117	0.000	0.16	0.00	0.03	0.2	0.002
2.133	0.000	0.16	0.00	0.03	0.2	0.002
2.150	0.000	0.16	0.00	0.03	0.2	0.002
2.167	0.000	0.16	0.00	0.03	0.2	0.002
2.183	0.000	0.16	0.00	0.03	0.2	0.002
2.200	0.000	0.16	0.00	0.03	0.2	0.002
2.217	0.000	0.16	0.00	0.03	0.2	0.002
2.233	0.000	0.16	0.00	0.03	0.2	0.002
2.250	0.000	0.16	0.00	0.03	0.2	0.002
2.267	0.000	0.16	0.00	0.03	0.2	0.002
2.283	0.000	0.16	0.00	0.03	0.2	0.002
2.300	0.000	0.16	0.00	0.03	0.2	0.003
2.317	0.000	0.16	0.00	0.03	0.2	0.003
2.333	0.000	0.16	0.00	0.03	0.2	0.003
2.350	0.000	0.16	0.00	0.03	0.2	0.003
2.367	0.000	0.17	0.00	0.03	0.2	0.003
2.383	0.000	0.17	0.00	0.03	0.2	0.003
2.400	0.000	0.17	0.00	0.03	0.2	0.003

2.417	0.000	0.17	0.00	0.03	0.2	0.003
2.433	0.000	0.17	0.00	0.03	0.2	0.003
2.450	0.000	0.17	0.00	0.03	0.2	0.003
2.467	0.000	0.17	0.00	0.03	0.2	0.003
2.483	0.000	0.17	0.00	0.03	0.2	0.003
2.500	0.000	0.17	0.00	0.03	0.2	0.003
2.517	0.000	0.17	0.00	0.03	0.2	0.003
2.533	0.000	0.17	0.00	0.03	0.2	0.003
2.550	0.000	0.17	0.00	0.03	0.2	0.003
2.567	0.000	0.17	0.00	0.03	0.2	0.003
2.583	0.000	0.17	0.00	0.03	0.2	0.003
2.600	0.000	0.17	0.00	0.03	0.2	0.003
2.617	0.000	0.17	0.00	0.03	0.2	0.003
2.633	0.000	0.17	0.00	0.03	0.2	0.003
2.650	0.000	0.17	0.00	0.03	0.2	0.003
2.667	0.000	0.17	0.00	0.03	0.2	0.003
2.683	0.000	0.17	0.00	0.03	0.2	0.003
2.700	0.000	0.17	0.00	0.03	0.2	0.003
2.717	0.000	0.17	0.00	0.03	0.2	0.003
2.733	0.000	0.17	0.00	0.03	0.2	0.003
2.750	0.000	0.17	0.00	0.03	0.2	0.003
2.767	0.000	0.17	0.00	0.03	0.2	0.003
2.783	0.000	0.17	0.00	0.03	0.2	0.003
2.800	0.000	0.17	0.00	0.03	0.2	0.003
2.817	0.000	0.17	0.00	0.03	0.2	0.003
2.833	0.000	0.17	0.00	0.03	0.2	0.003
2.850	0.000	0.17	0.00	0.03	0.2	0.003
2.867	0.000	0.17	0.00	0.03	0.2	0.003
2.883	0.000	0.17	0.00	0.03	0.2	0.003
2.900	0.000	0.17	0.00	0.03	0.2	0.003
2.917	0.000	0.17	0.00	0.03	0.2	0.003
2.933	0.000	0.17	0.00	0.03	0.2	0.003
2.950	0.000	0.17	0.00	0.03	0.2	0.003
2.967	0.000	0.17	0.00	0.03	0.2	0.003
2.983	0.000	0.17	0.00	0.03	0.2	0.003
3.000	0.000	0.17	0.00	0.03	0.2	0.003
3.017	0.000	0.17	0.00	0.03	0.2	0.003
3.033	0.000	0.17	0.00	0.03	0.2	0.003
3.050	0.000	0.17	0.00	0.03	0.2	0.003
3.067	0.000	0.17	0.00	0.03	0.2	0.003
3.083	0.000	0.17	0.00	0.03	0.2	0.003
3.100	0.000	0.17	0.00	0.03	0.2	0.003
3.117	0.000	0.17	0.00	0.03	0.2	0.003
3.133	0.000	0.17	0.00	0.03	0.2	0.003
3.150	0.000	0.17	0.00	0.03	0.2	0.003
3.167	0.000	0.17	0.00	0.03	0.2	0.003
3.183	0.000	0.17	0.00	0.03	0.2	0.003
3.200	0.000	0.17	0.00	0.03	0.2	0.003
3.217	0.000	0.17	0.00	0.03	0.2	0.003
3.233	0.000	0.17	0.00	0.03	0.2	0.003

3.250	0.000	0.17	0.00	0.03	0.2	0.003
3.267	0.000	0.17	0.00	0.03	0.2	0.003
3.283	0.000	0.17	0.00	0.03	0.2	0.003
3.300	0.000	0.17	0.00	0.03	0.2	0.003
3.317	0.000	0.17	0.00	0.03	0.2	0.003
3.333	0.000	0.17	0.00	0.03	0.2	0.003
3.350	0.000	0.17	0.00	0.03	0.2	0.003
3.367	0.000	0.17	0.00	0.03	0.2	0.003
3.383	0.000	0.17	0.00	0.03	0.2	0.003
3.400	0.000	0.17	0.00	0.03	0.2	0.003
3.417	0.000	0.17	0.00	0.03	0.2	0.003
3.433	0.000	0.17	0.00	0.03	0.2	0.003
3.450	0.000	0.17	0.00	0.03	0.2	0.003
3.467	0.000	0.17	0.00	0.03	0.2	0.003
3.483	0.000	0.17	0.00	0.03	0.2	0.003
3.500	0.000	0.17	0.00	0.03	0.2	0.003
3.517	0.000	0.17	0.00	0.03	0.2	0.003
3.533	0.000	0.17	0.00	0.03	0.2	0.003
3.550	0.000	0.17	0.00	0.03	0.2	0.003
3.567	0.000	0.17	0.00	0.03	0.2	0.003
3.583	0.000	0.17	0.00	0.03	0.2	0.003
3.600	0.000	0.17	0.00	0.03	0.2	0.003
3.617	0.000	0.17	0.00	0.03	0.2	0.003
3.633	0.000	0.18	0.00	0.03	0.2	0.003
3.650	0.000	0.18	0.00	0.03	0.2	0.003
3.667	0.000	0.18	0.00	0.03	0.2	0.003
3.683	0.000	0.18	0.00	0.03	0.2	0.003
3.700	0.000	0.18	0.00	0.03	0.2	0.003
3.717	0.000	0.18	0.00	0.03	0.2	0.003
3.733	0.000	0.18	0.00	0.03	0.2	0.003
3.750	0.000	0.18	0.00	0.03	0.2	0.003
3.767	0.000	0.18	0.00	0.03	0.2	0.003
3.783	0.000	0.18	0.00	0.03	0.2	0.003
3.800	0.000	0.18	0.00	0.03	0.2	0.003
3.817	0.000	0.18	0.00	0.03	0.2	0.003
3.833	0.000	0.18	0.00	0.03	0.2	0.003
3.850	0.000	0.18	0.00	0.03	0.2	0.003
3.867	0.000	0.18	0.00	0.04	0.2	0.003
3.883	0.000	0.18	0.00	0.04	0.2	0.003
3.900	0.000	0.18	0.00	0.04	0.2	0.003
3.917	0.000	0.18	0.00	0.04	0.2	0.003
3.933	0.000	0.18	0.00	0.04	0.2	0.003
3.950	0.000	0.18	0.00	0.04	0.2	0.003
3.967	0.000	0.18	0.00	0.04	0.2	0.003
3.983	0.000	0.18	0.00	0.04	0.2	0.003
4.000	0.000	0.18	0.00	0.04	0.2	0.003
4.017	0.000	0.18	0.00	0.04	0.2	0.003
4.033	0.000	0.18	0.00	0.04	0.2	0.003
4.050	0.000	0.18	0.00	0.04	0.2	0.003
4.067	0.000	0.18	0.00	0.04	0.2	0.003

4.083	0.000	0.18	0.00	0.04	0.2	0.003
4.100	0.000	0.18	0.00	0.04	0.2	0.003
4.117	0.000	0.18	0.00	0.04	0.2	0.003
4.133	0.000	0.18	0.00	0.04	0.2	0.003
4.150	0.000	0.18	0.00	0.04	0.2	0.003
4.167	0.000	0.18	0.00	0.04	0.2	0.003
4.183	0.000	0.18	0.00	0.04	0.2	0.003
4.200	0.000	0.18	0.00	0.04	0.2	0.003
4.217	0.000	0.18	0.00	0.04	0.2	0.003
4.233	0.000	0.18	0.00	0.04	0.2	0.003
4.250	0.000	0.18	0.00	0.04	0.2	0.003
4.267	0.000	0.18	0.00	0.04	0.2	0.003
4.283	0.000	0.18	0.00	0.04	0.2	0.003
4.300	0.000	0.18	0.00	0.04	0.2	0.003
4.317	0.000	0.18	0.00	0.04	0.2	0.003
4.333	0.000	0.18	0.00	0.04	0.2	0.003
4.350	0.000	0.18	0.00	0.04	0.2	0.003
4.367	0.000	0.18	0.00	0.04	0.2	0.003
4.383	0.000	0.18	0.00	0.04	0.2	0.003
4.400	0.000	0.18	0.00	0.04	0.2	0.003
4.417	0.000	0.18	0.00	0.04	0.2	0.003
4.433	0.000	0.18	0.00	0.04	0.2	0.003
4.450	0.000	0.18	0.00	0.04	0.2	0.003
4.467	0.000	0.18	0.00	0.04	0.2	0.003
4.483	0.000	0.18	0.00	0.04	0.2	0.003
4.500	0.000	0.18	0.00	0.04	0.2	0.003
4.517	0.000	0.18	0.00	0.04	0.2	0.003
4.533	0.000	0.18	0.00	0.04	0.2	0.003
4.550	0.000	0.18	0.00	0.04	0.2	0.003
4.567	0.000	0.18	0.00	0.04	0.2	0.003
4.583	0.000	0.18	0.00	0.04	0.2	0.003
4.600	0.000	0.18	0.00	0.04	0.2	0.003
4.617	0.000	0.18	0.00	0.04	0.2	0.003
4.633	0.000	0.18	0.00	0.04	0.2	0.003
4.650	0.000	0.18	0.00	0.04	0.2	0.003
4.667	0.000	0.18	0.00	0.04	0.2	0.003
4.683	0.000	0.19	0.00	0.04	0.2	0.003
4.700	0.000	0.19	0.00	0.04	0.2	0.003
4.717	0.000	0.19	0.00	0.04	0.2	0.003
4.733	0.000	0.19	0.00	0.04	0.2	0.003
4.750	0.000	0.19	0.00	0.04	0.2	0.003
4.767	0.000	0.19	0.00	0.04	0.2	0.003
4.783	0.000	0.19	0.00	0.04	0.2	0.003
4.800	0.000	0.19	0.00	0.04	0.2	0.003
4.817	0.000	0.19	0.00	0.04	0.2	0.003
4.833	0.000	0.19	0.00	0.04	0.2	0.003
4.850	0.000	0.19	0.00	0.04	0.2	0.003
4.867	0.000	0.19	0.00	0.04	0.2	0.003
4.883	0.000	0.19	0.00	0.04	0.2	0.003
4.900	0.000	0.19	0.00	0.04	0.2	0.003

4.917	0.000	0.19	0.00	0.04	0.2	0.003
4.933	0.000	0.19	0.00	0.04	0.2	0.003
4.950	0.000	0.19	0.00	0.04	0.2	0.003
4.967	0.000	0.19	0.00	0.04	0.2	0.003
4.983	0.000	0.19	0.00	0.04	0.2	0.003
5.000	0.000	0.19	0.00	0.04	0.2	0.003
5.017	0.000	0.19	0.00	0.04	0.2	0.003
5.033	0.000	0.19	0.00	0.04	0.2	0.003
5.050	0.000	0.19	0.00	0.04	0.2	0.003
5.067	0.000	0.19	0.00	0.04	0.2	0.003
5.083	0.000	0.19	0.00	0.04	0.2	0.003
5.100	0.000	0.19	0.00	0.04	0.2	0.003
5.117	0.000	0.19	0.00	0.04	0.2	0.003
5.133	0.000	0.19	0.00	0.04	0.2	0.003
5.150	0.000	0.19	0.00	0.04	0.2	0.003
5.167	0.000	0.19	0.00	0.04	0.2	0.003
5.183	0.000	0.19	0.00	0.04	0.2	0.003
5.200	0.000	0.19	0.00	0.04	0.2	0.003
5.217	0.000	0.19	0.00	0.04	0.2	0.003
5.233	0.000	0.19	0.00	0.04	0.2	0.003
5.250	0.000	0.19	0.00	0.04	0.2	0.003
5.267	0.000	0.19	0.00	0.04	0.2	0.003
5.283	0.000	0.19	0.00	0.04	0.2	0.003
5.300	0.000	0.19	0.00	0.04	0.2	0.003
5.317	0.000	0.19	0.00	0.04	0.2	0.003
5.333	0.000	0.19	0.00	0.04	0.2	0.003
5.350	0.000	0.19	0.00	0.04	0.2	0.003
5.367	0.000	0.19	0.00	0.04	0.2	0.003
5.383	0.000	0.19	0.00	0.04	0.2	0.003
5.400	0.000	0.19	0.00	0.04	0.2	0.003
5.417	0.000	0.19	0.00	0.04	0.2	0.003
5.433	0.000	0.19	0.00	0.04	0.2	0.003
5.450	0.000	0.19	0.00	0.04	0.2	0.003
5.467	0.000	0.19	0.00	0.04	0.2	0.003
5.483	0.000	0.19	0.00	0.04	0.2	0.003
5.500	0.000	0.19	0.00	0.04	0.2	0.003
5.517	0.000	0.19	0.00	0.04	0.2	0.003
5.533	0.000	0.19	0.00	0.04	0.2	0.003
5.550	0.000	0.19	0.00	0.04	0.2	0.003
5.567	0.000	0.19	0.00	0.04	0.2	0.003
5.583	0.000	0.20	0.00	0.04	0.2	0.003
5.600	0.000	0.20	0.00	0.04	0.2	0.003
5.617	0.000	0.20	0.00	0.04	0.2	0.003
5.633	0.000	0.20	0.00	0.04	0.2	0.003
5.650	0.000	0.20	0.00	0.04	0.2	0.003
5.667	0.000	0.20	0.00	0.04	0.2	0.003
5.683	0.000	0.20	0.00	0.04	0.2	0.003
5.700	0.000	0.20	0.00	0.04	0.2	0.003
5.717	0.000	0.20	0.00	0.04	0.2	0.003
5.733	0.000	0.20	0.00	0.04	0.2	0.003

5.750	0.000	0.20	0.00	0.04	0.2	0.003
5.767	0.000	0.20	0.00	0.04	0.2	0.003
5.783	0.000	0.20	0.00	0.04	0.2	0.003
5.800	0.000	0.20	0.00	0.04	0.2	0.003
5.817	0.000	0.20	0.00	0.04	0.2	0.003
5.833	0.000	0.20	0.00	0.04	0.2	0.003
5.850	0.000	0.20	0.00	0.04	0.2	0.003
5.867	0.000	0.20	0.00	0.04	0.2	0.003
5.883	0.000	0.20	0.00	0.04	0.2	0.003
5.900	0.000	0.20	0.00	0.04	0.2	0.003
5.917	0.000	0.20	0.00	0.04	0.2	0.003
5.933	0.000	0.20	0.00	0.04	0.2	0.003
5.950	0.000	0.20	0.00	0.04	0.2	0.003
5.967	0.000	0.20	0.00	0.04	0.2	0.003
5.983	0.000	0.20	0.00	0.04	0.2	0.003
6.000	0.000	0.20	0.00	0.04	0.2	0.003
6.017	0.000	0.20	0.00	0.04	0.2	0.003
6.033	0.000	0.20	0.00	0.04	0.2	0.003
6.050	0.000	0.20	0.00	0.04	0.2	0.003
6.067	0.000	0.20	0.00	0.04	0.2	0.003
6.083	0.000	0.20	0.00	0.04	0.2	0.003
6.100	0.000	0.20	0.00	0.04	0.2	0.003
6.117	0.000	0.20	0.00	0.04	0.2	0.003
6.133	0.000	0.20	0.00	0.04	0.2	0.003
6.150	0.000	0.20	0.00	0.04	0.2	0.003
6.167	0.000	0.20	0.00	0.04	0.2	0.003
6.183	0.000	0.20	0.00	0.04	0.2	0.003
6.200	0.000	0.20	0.00	0.04	0.2	0.003
6.217	0.000	0.20	0.00	0.04	0.2	0.003
6.233	0.000	0.20	0.00	0.04	0.2	0.003
6.250	0.000	0.20	0.00	0.04	0.2	0.003
6.267	0.000	0.20	0.00	0.04	0.2	0.003
6.283	0.000	0.20	0.00	0.04	0.2	0.003
6.300	0.000	0.20	0.00	0.04	0.2	0.003
6.317	0.000	0.20	0.00	0.04	0.2	0.003
6.333	0.000	0.20	0.00	0.04	0.2	0.003
6.350	0.000	0.20	0.00	0.04	0.2	0.003
6.367	0.000	0.20	0.00	0.04	0.2	0.003
6.383	0.000	0.20	0.00	0.04	0.2	0.003
6.400	0.000	0.20	0.00	0.04	0.2	0.003
6.417	0.000	0.21	0.00	0.04	0.2	0.003
6.433	0.000	0.21	0.00	0.04	0.2	0.003
6.450	0.000	0.21	0.00	0.04	0.2	0.003
6.467	0.000	0.21	0.00	0.04	0.2	0.003
6.483	0.000	0.21	0.00	0.04	0.2	0.003
6.500	0.000	0.21	0.00	0.04	0.2	0.003
6.517	0.000	0.21	0.00	0.04	0.2	0.003
6.533	0.000	0.21	0.00	0.04	0.2	0.003
6.550	0.000	0.21	0.00	0.04	0.2	0.003
6.567	0.000	0.21	0.00	0.04	0.2	0.003

6.583	0.000	0.21	0.00	0.04	0.2	0.003
6.600	0.000	0.21	0.00	0.04	0.2	0.003
6.617	0.000	0.21	0.00	0.04	0.2	0.003
6.633	0.000	0.21	0.00	0.04	0.2	0.003
6.650	0.000	0.21	0.00	0.04	0.2	0.003
6.667	0.000	0.21	0.00	0.04	0.2	0.003
6.683	0.000	0.21	0.00	0.04	0.2	0.003
6.700	0.000	0.21	0.00	0.04	0.2	0.003
6.717	0.000	0.21	0.00	0.04	0.2	0.003
6.733	0.000	0.21	0.00	0.04	0.2	0.003
6.750	0.000	0.21	0.00	0.04	0.2	0.003
6.767	0.000	0.21	0.00	0.04	0.2	0.003
6.783	0.000	0.21	0.00	0.04	0.2	0.003
6.800	0.000	0.21	0.00	0.04	0.2	0.003
6.817	0.000	0.21	0.00	0.04	0.2	0.003
6.833	0.000	0.21	0.00	0.04	0.2	0.003
6.850	0.000	0.21	0.00	0.04	0.2	0.003
6.867	0.000	0.21	0.00	0.04	0.2	0.003
6.883	0.000	0.21	0.00	0.04	0.2	0.003
6.900	0.000	0.21	0.00	0.04	0.2	0.003
6.917	0.000	0.21	0.00	0.04	0.2	0.003
6.933	0.000	0.21	0.00	0.04	0.2	0.003
6.950	0.000	0.21	0.00	0.04	0.2	0.003
6.967	0.000	0.21	0.00	0.04	0.2	0.003
6.983	0.000	0.21	0.00	0.04	0.2	0.003
7.000	0.000	0.21	0.00	0.04	0.2	0.003
7.017	0.000	0.21	0.00	0.04	0.2	0.003
7.033	0.000	0.21	0.00	0.04	0.2	0.003
7.050	0.000	0.21	0.00	0.04	0.2	0.003
7.067	0.000	0.21	0.00	0.04	0.2	0.003
7.083	0.000	0.21	0.00	0.04	0.2	0.003
7.100	0.000	0.21	0.00	0.04	0.2	0.003
7.117	0.000	0.22	0.00	0.04	0.2	0.003
7.133	0.000	0.22	0.00	0.04	0.2	0.003
7.150	0.000	0.22	0.00	0.04	0.2	0.003
7.167	0.000	0.22	0.00	0.04	0.2	0.003
7.183	0.000	0.22	0.00	0.04	0.2	0.003
7.200	0.000	0.22	0.00	0.04	0.2	0.003
7.217	0.000	0.22	0.00	0.04	0.2	0.003
7.233	0.000	0.22	0.00	0.04	0.2	0.003
7.250	0.000	0.22	0.00	0.04	0.2	0.003
7.267	0.000	0.22	0.00	0.04	0.2	0.003
7.283	0.000	0.22	0.00	0.04	0.2	0.003
7.300	0.000	0.22	0.00	0.04	0.2	0.003
7.317	0.000	0.22	0.00	0.04	0.2	0.003
7.333	0.000	0.22	0.00	0.04	0.2	0.003
7.350	0.000	0.22	0.00	0.04	0.2	0.003
7.367	0.000	0.22	0.00	0.04	0.2	0.003
7.383	0.000	0.22	0.00	0.04	0.2	0.003
7.400	0.000	0.22	0.00	0.04	0.2	0.003

7.417	0.000	0.22	0.00	0.04	0.2	0.003
7.433	0.000	0.22	0.00	0.04	0.2	0.003
7.450	0.000	0.22	0.00	0.04	0.2	0.003
7.467	0.000	0.22	0.00	0.04	0.2	0.003
7.483	0.000	0.22	0.00	0.04	0.2	0.003
7.500	0.000	0.22	0.00	0.04	0.2	0.003
7.517	0.000	0.22	0.00	0.04	0.2	0.003
7.533	0.000	0.22	0.00	0.04	0.2	0.003
7.550	0.000	0.22	0.00	0.04	0.2	0.003
7.567	0.000	0.22	0.00	0.04	0.2	0.003
7.583	0.000	0.22	0.00	0.04	0.2	0.003
7.600	0.000	0.22	0.00	0.04	0.2	0.003
7.617	0.000	0.22	0.00	0.04	0.2	0.003
7.633	0.000	0.22	0.00	0.04	0.2	0.003
7.650	0.000	0.22	0.00	0.04	0.2	0.003
7.667	0.000	0.22	0.00	0.04	0.2	0.003
7.683	0.000	0.22	0.00	0.04	0.2	0.003
7.700	0.000	0.22	0.00	0.04	0.2	0.003
7.717	0.000	0.22	0.00	0.04	0.2	0.003
7.733	0.000	0.22	0.00	0.04	0.2	0.003
7.750	0.000	0.22	0.00	0.04	0.2	0.003
7.767	0.000	0.23	0.00	0.04	0.2	0.003
7.783	0.000	0.23	0.00	0.04	0.2	0.003
7.800	0.000	0.23	0.00	0.04	0.2	0.003
7.817	0.000	0.23	0.00	0.04	0.2	0.003
7.833	0.000	0.23	0.00	0.04	0.2	0.003
7.850	0.000	0.23	0.00	0.04	0.2	0.003
7.867	0.000	0.23	0.00	0.04	0.2	0.003
7.883	0.000	0.23	0.00	0.04	0.2	0.003
7.900	0.000	0.23	0.00	0.04	0.2	0.003
7.917	0.000	0.23	0.00	0.04	0.2	0.003
7.933	0.000	0.23	0.00	0.04	0.2	0.003
7.950	0.000	0.23	0.00	0.04	0.2	0.003
7.967	0.000	0.23	0.00	0.05	0.2	0.003
7.983	0.000	0.23	0.00	0.05	0.2	0.003
8.000	0.000	0.23	0.00	0.05	0.2	0.003
8.017	0.000	0.23	0.00	0.05	0.2	0.003
8.033	0.000	0.23	0.00	0.05	0.2	0.003
8.050	0.000	0.23	0.00	0.05	0.2	0.003
8.067	0.000	0.23	0.00	0.05	0.2	0.003
8.083	0.000	0.23	0.00	0.05	0.2	0.003
8.100	0.000	0.23	0.00	0.05	0.2	0.003
8.117	0.000	0.23	0.00	0.05	0.2	0.004
8.133	0.000	0.23	0.00	0.05	0.2	0.004
8.150	0.000	0.23	0.00	0.05	0.2	0.004
8.167	0.000	0.23	0.00	0.05	0.2	0.004
8.183	0.000	0.23	0.00	0.05	0.2	0.004
8.200	0.000	0.23	0.00	0.05	0.2	0.004
8.217	0.000	0.23	0.00	0.05	0.2	0.004
8.233	0.000	0.23	0.00	0.05	0.2	0.004

8.250	0.000	0.23	0.00	0.05	0.2	0.004
8.267	0.000	0.23	0.00	0.05	0.2	0.004
8.283	0.000	0.23	0.00	0.05	0.2	0.004
8.300	0.000	0.23	0.00	0.05	0.2	0.004
8.317	0.000	0.24	0.00	0.05	0.2	0.004
8.333	0.000	0.24	0.00	0.05	0.2	0.004
8.350	0.000	0.24	0.00	0.05	0.2	0.004
8.367	0.000	0.24	0.00	0.05	0.2	0.004
8.383	0.000	0.24	0.00	0.05	0.2	0.004
8.400	0.000	0.24	0.00	0.05	0.2	0.004
8.417	0.000	0.24	0.00	0.05	0.2	0.004
8.433	0.000	0.24	0.00	0.05	0.2	0.004
8.450	0.000	0.24	0.00	0.05	0.2	0.004
8.467	0.000	0.24	0.00	0.05	0.2	0.004
8.483	0.000	0.24	0.00	0.05	0.2	0.004
8.500	0.000	0.24	0.00	0.05	0.2	0.004
8.517	0.000	0.24	0.00	0.05	0.2	0.004
8.533	0.000	0.24	0.00	0.05	0.2	0.004
8.550	0.000	0.24	0.00	0.05	0.2	0.004
8.567	0.000	0.24	0.00	0.05	0.2	0.004
8.583	0.000	0.24	0.00	0.05	0.2	0.004
8.600	0.000	0.24	0.00	0.05	0.2	0.004
8.617	0.000	0.24	0.00	0.05	0.2	0.004
8.633	0.000	0.24	0.00	0.05	0.2	0.004
8.650	0.000	0.24	0.00	0.05	0.2	0.004
8.667	0.000	0.24	0.00	0.05	0.2	0.004
8.683	0.000	0.24	0.00	0.05	0.2	0.004
8.700	0.000	0.24	0.00	0.05	0.2	0.004
8.717	0.000	0.24	0.00	0.05	0.2	0.004
8.733	0.000	0.24	0.00	0.05	0.2	0.004
8.750	0.000	0.24	0.00	0.05	0.2	0.004
8.767	0.000	0.24	0.00	0.05	0.2	0.004
8.783	0.000	0.24	0.00	0.05	0.2	0.004
8.800	0.000	0.25	0.00	0.05	0.2	0.004
8.817	0.000	0.25	0.00	0.05	0.2	0.004
8.833	0.000	0.25	0.00	0.05	0.2	0.004
8.850	0.000	0.25	0.00	0.05	0.2	0.004
8.867	0.000	0.25	0.00	0.05	0.2	0.004
8.883	0.000	0.25	0.00	0.05	0.2	0.004
8.900	0.000	0.25	0.00	0.05	0.2	0.004
8.917	0.000	0.25	0.00	0.05	0.2	0.004
8.933	0.000	0.25	0.00	0.05	0.2	0.004
8.950	0.000	0.25	0.00	0.05	0.2	0.004
8.967	0.000	0.25	0.00	0.05	0.2	0.004
8.983	0.000	0.25	0.00	0.05	0.2	0.004
9.000	0.000	0.25	0.00	0.05	0.2	0.004
9.017	0.000	0.25	0.00	0.05	0.2	0.004
9.033	0.000	0.25	0.00	0.05	0.2	0.004
9.050	0.000	0.25	0.00	0.05	0.2	0.004
9.067	0.000	0.25	0.00	0.05	0.2	0.004

9.083	0.000	0.25	0.00	0.05	0.2	0.004
9.100	0.000	0.25	0.00	0.05	0.2	0.004
9.117	0.000	0.25	0.00	0.05	0.2	0.004
9.133	0.000	0.25	0.00	0.05	0.2	0.004
9.150	0.000	0.25	0.00	0.05	0.2	0.004
9.167	0.000	0.25	0.00	0.05	0.2	0.004
9.183	0.000	0.25	0.00	0.05	0.2	0.004
9.200	0.000	0.25	0.00	0.05	0.2	0.004
9.217	0.000	0.25	0.00	0.05	0.2	0.004
9.233	0.000	0.25	0.00	0.05	0.3	0.004
9.250	0.000	0.25	0.00	0.05	0.3	0.004
9.267	0.000	0.25	0.00	0.05	0.3	0.004
9.283	0.000	0.26	0.00	0.05	0.3	0.004
9.300	0.000	0.26	0.00	0.05	0.3	0.004
9.317	0.000	0.26	0.00	0.05	0.3	0.004
9.333	0.000	0.26	0.00	0.05	0.3	0.004
9.350	0.000	0.26	0.00	0.05	0.3	0.004
9.367	0.000	0.26	0.00	0.05	0.3	0.004
9.383	0.000	0.26	0.00	0.05	0.3	0.004
9.400	0.000	0.26	0.00	0.05	0.3	0.004
9.417	0.000	0.26	0.00	0.05	0.3	0.004
9.433	0.000	0.26	0.00	0.05	0.3	0.004
9.450	0.000	0.26	0.00	0.05	0.3	0.004
9.467	0.000	0.26	0.00	0.05	0.3	0.004
9.483	0.000	0.26	0.00	0.05	0.3	0.004
9.500	0.000	0.26	0.00	0.05	0.3	0.004
9.517	0.000	0.26	0.00	0.05	0.3	0.004
9.533	0.000	0.26	0.00	0.05	0.3	0.004
9.550	0.000	0.26	0.00	0.05	0.3	0.004
9.567	0.000	0.26	0.00	0.05	0.3	0.004
9.583	0.000	0.26	0.00	0.05	0.3	0.004
9.600	0.000	0.26	0.00	0.05	0.3	0.004
9.617	0.000	0.26	0.00	0.05	0.3	0.004
9.633	0.000	0.26	0.00	0.05	0.3	0.004
9.650	0.000	0.26	0.00	0.05	0.3	0.004
9.667	0.000	0.27	0.00	0.05	0.3	0.004
9.683	0.000	0.27	0.00	0.05	0.3	0.004
9.700	0.000	0.27	0.00	0.05	0.3	0.004
9.717	0.000	0.27	0.00	0.05	0.3	0.004
9.733	0.000	0.27	0.00	0.05	0.3	0.004
9.750	0.000	0.27	0.00	0.05	0.3	0.004
9.767	0.000	0.27	0.00	0.05	0.3	0.004
9.783	0.000	0.27	0.00	0.05	0.3	0.004
9.800	0.000	0.27	0.00	0.05	0.3	0.004
9.817	0.000	0.27	0.00	0.05	0.3	0.004
9.833	0.000	0.27	0.00	0.05	0.3	0.004
9.850	0.000	0.27	0.00	0.05	0.3	0.004
9.867	0.000	0.27	0.00	0.05	0.3	0.004
9.883	0.000	0.27	0.00	0.05	0.3	0.004
9.900	0.000	0.27	0.00	0.05	0.3	0.004

9.917	0.000	0.27	0.00	0.05	0.3	0.004
9.933	0.000	0.27	0.00	0.05	0.3	0.004
9.950	0.000	0.27	0.00	0.05	0.3	0.004
9.967	0.000	0.27	0.00	0.05	0.3	0.004
9.983	0.000	0.27	0.00	0.05	0.3	0.004
10.000	0.000	0.27	0.00	0.05	0.3	0.004
10.017	0.000	0.27	0.00	0.05	0.3	0.004
10.033	0.000	0.28	0.00	0.05	0.3	0.004
10.050	0.000	0.28	0.00	0.05	0.3	0.004
10.067	0.000	0.28	0.00	0.05	0.3	0.004
10.083	0.000	0.28	0.00	0.05	0.3	0.004
10.100	0.000	0.28	0.00	0.05	0.3	0.004
10.117	0.000	0.28	0.00	0.05	0.3	0.004
10.133	0.000	0.28	0.00	0.05	0.3	0.004
10.150	0.000	0.28	0.00	0.05	0.3	0.004
10.167	0.000	0.28	0.00	0.05	0.3	0.004
10.183	0.000	0.28	0.00	0.05	0.3	0.004
10.200	0.000	0.28	0.00	0.05	0.3	0.004
10.217	0.000	0.28	0.00	0.05	0.3	0.004
10.233	0.000	0.28	0.00	0.05	0.3	0.004
10.250	0.000	0.28	0.00	0.06	0.3	0.004
10.267	0.000	0.28	0.00	0.06	0.3	0.004
10.283	0.000	0.28	0.00	0.06	0.3	0.004
10.300	0.000	0.28	0.00	0.06	0.3	0.004
10.317	0.000	0.28	0.00	0.06	0.3	0.004
10.333	0.000	0.28	0.00	0.06	0.3	0.004
10.350	0.000	0.28	0.00	0.06	0.3	0.004
10.367	0.000	0.28	0.00	0.06	0.3	0.004
10.383	0.000	0.28	0.00	0.06	0.3	0.004
10.400	0.000	0.29	0.00	0.06	0.3	0.004
10.417	0.000	0.29	0.00	0.06	0.3	0.004
10.433	0.000	0.29	0.00	0.06	0.3	0.004
10.450	0.000	0.29	0.00	0.06	0.3	0.004
10.467	0.000	0.29	0.00	0.06	0.3	0.004
10.483	0.000	0.29	0.00	0.06	0.3	0.004
10.500	0.000	0.29	0.00	0.06	0.3	0.004
10.517	0.000	0.29	0.00	0.06	0.3	0.004
10.533	0.000	0.29	0.00	0.06	0.3	0.004
10.550	0.000	0.29	0.00	0.06	0.3	0.004
10.567	0.000	0.29	0.00	0.06	0.3	0.004
10.583	0.000	0.29	0.00	0.06	0.3	0.004
10.600	0.000	0.29	0.00	0.06	0.3	0.004
10.617	0.000	0.29	0.00	0.06	0.3	0.004
10.633	0.000	0.29	0.00	0.06	0.3	0.004
10.650	0.000	0.29	0.00	0.06	0.3	0.004
10.667	0.000	0.29	0.00	0.06	0.3	0.004
10.683	0.000	0.29	0.00	0.06	0.3	0.004
10.700	0.000	0.30	0.00	0.06	0.3	0.004
10.717	0.000	0.30	0.00	0.06	0.3	0.004
10.733	0.000	0.30	0.00	0.06	0.3	0.004

10.750	0.000	0.30	0.00	0.06	0.3	0.004
10.767	0.000	0.30	0.00	0.06	0.3	0.004
10.783	0.000	0.30	0.00	0.06	0.3	0.004
10.800	0.000	0.30	0.00	0.06	0.3	0.004
10.817	0.000	0.30	0.00	0.06	0.3	0.005
10.833	0.000	0.30	0.00	0.06	0.3	0.005
10.850	0.000	0.30	0.00	0.06	0.3	0.005
10.867	0.000	0.30	0.00	0.06	0.3	0.005
10.883	0.000	0.30	0.00	0.06	0.3	0.005
10.900	0.000	0.30	0.00	0.06	0.3	0.005
10.917	0.000	0.30	0.00	0.06	0.3	0.005
10.933	0.000	0.30	0.00	0.06	0.3	0.005
10.950	0.000	0.30	0.00	0.06	0.3	0.005
10.967	0.000	0.30	0.00	0.06	0.3	0.005
10.983	0.000	0.31	0.00	0.06	0.3	0.005
11.000	0.000	0.31	0.00	0.06	0.3	0.005
11.017	0.000	0.31	0.00	0.06	0.3	0.005
11.033	0.000	0.31	0.00	0.06	0.3	0.005
11.050	0.000	0.31	0.00	0.06	0.3	0.005
11.067	0.000	0.31	0.00	0.06	0.3	0.005
11.083	0.000	0.31	0.00	0.06	0.3	0.005
11.100	0.000	0.31	0.00	0.06	0.3	0.005
11.117	0.000	0.31	0.00	0.06	0.3	0.005
11.133	0.000	0.31	0.00	0.06	0.3	0.005
11.150	0.000	0.31	0.00	0.06	0.3	0.005
11.167	0.000	0.31	0.00	0.06	0.3	0.005
11.183	0.000	0.31	0.00	0.06	0.3	0.005
11.200	0.000	0.31	0.00	0.06	0.3	0.005
11.217	0.000	0.32	0.00	0.06	0.3	0.005
11.233	0.000	0.32	0.00	0.06	0.3	0.005
11.250	0.000	0.32	0.00	0.06	0.3	0.005
11.267	0.000	0.32	0.00	0.06	0.3	0.005
11.283	0.000	0.32	0.00	0.06	0.3	0.005
11.300	0.000	0.32	0.00	0.06	0.3	0.005
11.317	0.000	0.32	0.00	0.06	0.3	0.005
11.333	0.000	0.32	0.00	0.06	0.3	0.005
11.350	0.000	0.32	0.00	0.06	0.3	0.005
11.367	0.000	0.32	0.00	0.06	0.3	0.005
11.383	0.000	0.32	0.00	0.06	0.3	0.005
11.400	0.000	0.32	0.00	0.06	0.3	0.005
11.417	0.000	0.32	0.00	0.06	0.3	0.005
11.433	0.000	0.32	0.00	0.06	0.3	0.005
11.450	0.000	0.33	0.00	0.06	0.3	0.005
11.467	0.000	0.33	0.00	0.06	0.3	0.005
11.483	0.000	0.33	0.00	0.06	0.3	0.005
11.500	0.000	0.33	0.00	0.06	0.3	0.005
11.517	0.000	0.33	0.00	0.06	0.3	0.005
11.533	0.000	0.33	0.00	0.06	0.3	0.005
11.550	0.000	0.33	0.00	0.06	0.3	0.005
11.567	0.000	0.33	0.00	0.06	0.3	0.005

11.583	0.000	0.33	0.00	0.06	0.3	0.005
11.600	0.000	0.33	0.00	0.06	0.3	0.005
11.617	0.000	0.33	0.00	0.06	0.3	0.005
11.633	0.000	0.33	0.00	0.06	0.3	0.005
11.650	0.000	0.33	0.00	0.06	0.3	0.005
11.667	0.000	0.33	0.00	0.07	0.3	0.005
11.683	0.000	0.34	0.00	0.07	0.3	0.005
11.700	0.000	0.34	0.00	0.07	0.3	0.005
11.717	0.000	0.34	0.00	0.07	0.3	0.005
11.733	0.000	0.34	0.00	0.07	0.3	0.005
11.750	0.000	0.34	0.00	0.07	0.3	0.005
11.767	0.000	0.34	0.00	0.07	0.3	0.005
11.783	0.000	0.34	0.00	0.07	0.3	0.005
11.800	0.000	0.34	0.00	0.07	0.3	0.005
11.817	0.000	0.34	0.00	0.07	0.3	0.005
11.833	0.000	0.34	0.00	0.07	0.3	0.005
11.850	0.000	0.34	0.00	0.07	0.3	0.005
11.867	0.000	0.34	0.00	0.07	0.3	0.005
11.883	0.000	0.34	0.00	0.07	0.3	0.005
11.900	0.000	0.34	0.00	0.07	0.3	0.005
11.917	0.000	0.35	0.00	0.07	0.3	0.005
11.933	0.000	0.35	0.00	0.07	0.3	0.005
11.950	0.000	0.35	0.00	0.07	0.3	0.005
11.967	0.000	0.35	0.00	0.07	0.3	0.005
11.983	0.000	0.35	0.00	0.07	0.3	0.005
12.000	0.000	0.35	0.00	0.07	0.3	0.005
12.017	0.000	0.35	0.00	0.07	0.3	0.005
12.033	0.000	0.35	0.00	0.07	0.3	0.005
12.050	0.000	0.36	0.00	0.07	0.3	0.005
12.067	0.000	0.37	0.00	0.07	0.3	0.005
12.083	0.000	0.38	0.00	0.07	0.3	0.005
12.100	0.000	0.39	0.00	0.07	0.4	0.005
12.117	0.000	0.40	0.00	0.07	0.4	0.005
12.133	0.000	0.41	0.00	0.07	0.4	0.006
12.150	0.000	0.42	0.00	0.07	0.4	0.006
12.167	0.000	0.43	0.00	0.07	0.4	0.006
12.183	0.000	0.44	0.00	0.08	0.4	0.006
12.200	0.000	0.44	0.00	0.08	0.4	0.006
12.217	0.000	0.45	0.00	0.08	0.4	0.006
12.233	0.000	0.45	0.00	0.08	0.4	0.006
12.250	0.000	0.45	0.00	0.08	0.4	0.006
12.267	0.000	0.45	0.00	0.08	0.4	0.006
12.283	0.000	0.46	0.00	0.08	0.4	0.006
12.300	0.000	0.46	0.00	0.08	0.4	0.006
12.317	0.000	0.46	0.00	0.08	0.4	0.006
12.333	0.000	0.46	0.00	0.08	0.4	0.006
12.350	0.000	0.46	0.00	0.08	0.4	0.006
12.367	0.000	0.47	0.00	0.09	0.4	0.007
12.383	0.000	0.47	0.00	0.09	0.4	0.007
12.400	0.000	0.47	0.00	0.09	0.4	0.007

12.417	0.000	0.47	0.00	0.09	0.4	0.007
12.433	0.000	0.47	0.00	0.09	0.4	0.007
12.450	0.000	0.47	0.00	0.09	0.4	0.007
12.467	0.000	0.47	0.00	0.09	0.4	0.007
12.483	0.000	0.47	0.00	0.09	0.4	0.007
12.500	0.000	0.47	0.00	0.09	0.4	0.007
12.517	0.000	0.47	0.00	0.09	0.4	0.007
12.533	0.000	0.48	0.00	0.09	0.5	0.007
12.550	0.000	0.48	0.00	0.09	0.5	0.007
12.567	0.000	0.48	0.00	0.09	0.5	0.007
12.583	0.000	0.48	0.00	0.09	0.5	0.007
12.600	0.000	0.48	0.00	0.09	0.5	0.007
12.617	0.000	0.48	0.00	0.09	0.5	0.007
12.633	0.000	0.48	0.00	0.09	0.5	0.007
12.650	0.000	0.49	0.00	0.09	0.5	0.007
12.667	0.000	0.49	0.00	0.09	0.5	0.007
12.683	0.000	0.49	0.00	0.09	0.5	0.007
12.700	0.000	0.49	0.00	0.09	0.5	0.007
12.717	0.000	0.49	0.00	0.09	0.5	0.007
12.733	0.000	0.49	0.00	0.09	0.5	0.007
12.750	0.000	0.49	0.00	0.09	0.5	0.007
12.767	0.000	0.49	0.00	0.10	0.5	0.007
12.783	0.000	0.49	0.00	0.10	0.5	0.007
12.800	0.000	0.49	0.00	0.10	0.5	0.007
12.817	0.000	0.50	0.00	0.10	0.5	0.007
12.833	0.000	0.50	0.00	0.10	0.5	0.007
12.850	0.000	0.50	0.00	0.10	0.5	0.007
12.867	0.000	0.50	0.00	0.10	0.5	0.007
12.883	0.000	0.50	0.00	0.10	0.5	0.007
12.900	0.000	0.51	0.00	0.10	0.5	0.007
12.917	0.000	0.51	0.00	0.10	0.5	0.008
12.933	0.000	0.51	0.00	0.10	0.5	0.008
12.950	0.000	0.51	0.00	0.10	0.5	0.008
12.967	0.000	0.51	0.00	0.10	0.5	0.008
12.983	0.000	0.51	0.00	0.10	0.5	0.008
13.000	0.000	0.51	0.00	0.10	0.5	0.008
13.017	0.000	0.51	0.00	0.10	0.5	0.008
13.033	0.000	0.51	0.00	0.10	0.5	0.008
13.050	0.000	0.52	0.00	0.10	0.5	0.008
13.067	0.000	0.52	0.00	0.10	0.5	0.008
13.083	0.000	0.52	0.00	0.10	0.5	0.008
13.100	0.000	0.52	0.00	0.10	0.5	0.008
13.117	0.000	0.52	0.00	0.10	0.5	0.008
13.133	0.000	0.52	0.00	0.10	0.5	0.008
13.150	0.000	0.53	0.00	0.10	0.5	0.008
13.167	0.000	0.53	0.00	0.10	0.5	0.008
13.183	0.000	0.53	0.00	0.10	0.5	0.008
13.200	0.000	0.53	0.00	0.10	0.5	0.008
13.217	0.000	0.53	0.00	0.10	0.5	0.008
13.233	0.000	0.54	0.00	0.10	0.5	0.008

13.250	0.000	0.54	0.00	0.10	0.5	0.008
13.267	0.000	0.54	0.00	0.10	0.5	0.008
13.283	0.000	0.54	0.00	0.10	0.5	0.008
13.300	0.000	0.54	0.00	0.10	0.5	0.008
13.317	0.000	0.54	0.00	0.10	0.5	0.008
13.333	0.000	0.54	0.00	0.11	0.5	0.008
13.350	0.000	0.54	0.00	0.11	0.5	0.008
13.367	0.000	0.54	0.00	0.11	0.5	0.008
13.383	0.000	0.55	0.00	0.11	0.5	0.008
13.400	0.000	0.55	0.00	0.11	0.5	0.008
13.417	0.000	0.55	0.00	0.11	0.5	0.008
13.433	0.000	0.55	0.00	0.11	0.5	0.008
13.450	0.000	0.56	0.00	0.11	0.5	0.008
13.467	0.000	0.56	0.00	0.11	0.5	0.008
13.483	0.000	0.56	0.00	0.11	0.5	0.008
13.500	0.000	0.56	0.00	0.11	0.5	0.008
13.517	0.000	0.57	0.00	0.11	0.5	0.008
13.533	0.000	0.57	0.00	0.11	0.5	0.008
13.550	0.000	0.57	0.00	0.11	0.5	0.008
13.567	0.000	0.57	0.00	0.11	0.6	0.008
13.583	0.000	0.57	0.00	0.11	0.6	0.008
13.600	0.000	0.57	0.00	0.11	0.6	0.009
13.617	0.000	0.57	0.00	0.11	0.6	0.009
13.633	0.000	0.58	0.00	0.11	0.6	0.009
13.650	0.000	0.58	0.00	0.11	0.6	0.009
13.667	0.000	0.58	0.00	0.11	0.6	0.009
13.683	0.000	0.58	0.00	0.11	0.6	0.009
13.700	0.000	0.58	0.00	0.11	0.6	0.009
13.717	0.000	0.59	0.00	0.11	0.6	0.009
13.733	0.000	0.59	0.00	0.11	0.6	0.009
13.750	0.000	0.59	0.00	0.11	0.6	0.009
13.767	0.000	0.60	0.00	0.11	0.6	0.009
13.783	0.000	0.60	0.00	0.11	0.6	0.009
13.800	0.000	0.60	0.00	0.12	0.6	0.009
13.817	0.000	0.60	0.00	0.12	0.6	0.009
13.833	0.000	0.61	0.00	0.12	0.6	0.009
13.850	0.000	0.61	0.00	0.12	0.6	0.009
13.867	0.000	0.61	0.00	0.12	0.6	0.009
13.883	0.000	0.61	0.00	0.12	0.6	0.009
13.900	0.000	0.61	0.00	0.12	0.6	0.009
13.917	0.000	0.61	0.00	0.12	0.6	0.009
13.933	0.000	0.62	0.00	0.12	0.6	0.009
13.950	0.000	0.62	0.00	0.12	0.6	0.009
13.967	0.000	0.62	0.00	0.12	0.6	0.009
13.983	0.000	0.62	0.00	0.12	0.6	0.009
14.000	0.000	0.63	0.00	0.12	0.6	0.009
14.017	0.000	0.63	0.00	0.12	0.6	0.009
14.033	0.000	0.64	0.00	0.12	0.6	0.009
14.050	0.000	0.64	0.00	0.12	0.6	0.009
14.067	0.000	0.64	0.00	0.12	0.6	0.009

14.083	0.000	0.65	0.00	0.12	0.6	0.009
14.100	0.000	0.65	0.00	0.12	0.6	0.010
14.117	0.000	0.65	0.00	0.12	0.6	0.010
14.133	0.000	0.66	0.00	0.12	0.6	0.010
14.150	0.000	0.66	0.00	0.13	0.6	0.010
14.167	0.000	0.66	0.00	0.13	0.6	0.010
14.183	0.000	0.66	0.00	0.13	0.6	0.010
14.200	0.000	0.66	0.00	0.13	0.6	0.010
14.217	0.000	0.67	0.00	0.13	0.6	0.010
14.233	0.000	0.67	0.00	0.13	0.6	0.010
14.250	0.000	0.67	0.00	0.13	0.6	0.010
14.267	0.000	0.68	0.00	0.13	0.6	0.010
14.283	0.000	0.68	0.00	0.13	0.6	0.010
14.300	0.000	0.68	0.00	0.13	0.7	0.010
14.317	0.000	0.69	0.00	0.13	0.7	0.010
14.333	0.000	0.69	0.00	0.13	0.7	0.010
14.350	0.000	0.70	0.00	0.13	0.7	0.010
14.367	0.000	0.70	0.00	0.13	0.7	0.010
14.383	0.000	0.71	0.00	0.13	0.7	0.010
14.400	0.000	0.71	0.00	0.13	0.7	0.010
14.417	0.000	0.71	0.00	0.13	0.7	0.010
14.433	0.000	0.72	0.00	0.14	0.7	0.010
14.450	0.000	0.72	0.00	0.14	0.7	0.010
14.467	0.000	0.72	0.00	0.14	0.7	0.011
14.483	0.000	0.72	0.00	0.14	0.7	0.011
14.500	0.000	0.73	0.00	0.14	0.7	0.011
14.517	0.000	0.73	0.00	0.14	0.7	0.011
14.533	0.000	0.73	0.00	0.14	0.7	0.011
14.550	0.000	0.74	0.00	0.14	0.7	0.011
14.567	0.000	0.74	0.00	0.14	0.7	0.011
14.583	0.000	0.75	0.00	0.14	0.7	0.011
14.600	0.000	0.75	0.00	0.14	0.7	0.011
14.617	0.000	0.76	0.00	0.14	0.7	0.011
14.633	0.000	0.77	0.00	0.14	0.7	0.011
14.650	0.000	0.77	0.00	0.14	0.7	0.011
14.667	0.000	0.78	0.00	0.15	0.7	0.011
14.683	0.000	0.78	0.00	0.15	0.7	0.011
14.700	0.000	0.79	0.00	0.15	0.7	0.011
14.717	0.000	0.79	0.00	0.15	0.7	0.011
14.733	0.000	0.79	0.00	0.15	0.7	0.011
14.750	0.000	0.80	0.00	0.15	0.7	0.012
14.767	0.000	0.80	0.00	0.15	0.8	0.012
14.783	0.000	0.80	0.00	0.15	0.8	0.012
14.800	0.000	0.81	0.00	0.15	0.8	0.012
14.817	0.000	0.81	0.00	0.15	0.8	0.012
14.833	0.000	0.81	0.00	0.15	0.8	0.012
14.850	0.000	0.82	0.00	0.15	0.8	0.012
14.867	0.000	0.83	0.00	0.16	0.8	0.012
14.883	0.000	0.84	0.00	0.16	0.8	0.012
14.900	0.000	0.85	0.00	0.16	0.8	0.012

14.917	0.000	0.86	0.00	0.16	0.8	0.012
14.933	0.000	0.86	0.00	0.16	0.8	0.012
14.950	0.000	0.87	0.00	0.16	0.8	0.012
14.967	0.000	0.88	0.00	0.16	0.8	0.012
14.983	0.000	0.89	0.00	0.16	0.8	0.013
15.000	0.000	0.89	0.00	0.16	0.8	0.013
15.017	0.000	0.90	0.00	0.17	0.8	0.013
15.033	0.000	0.90	0.00	0.17	0.8	0.013
15.050	0.000	0.91	0.00	0.17	0.8	0.013
15.067	0.000	0.91	0.00	0.17	0.8	0.013
15.083	0.000	0.92	0.00	0.17	0.9	0.013
15.100	0.000	0.92	0.00	0.17	0.9	0.013
15.117	0.000	0.93	0.00	0.17	0.9	0.013
15.133	0.000	0.94	0.00	0.17	0.9	0.013
15.150	0.000	0.95	0.00	0.18	0.9	0.013
15.167	0.000	0.96	0.00	0.18	0.9	0.014
15.183	0.000	0.97	0.00	0.18	0.9	0.014
15.200	0.000	0.99	0.00	0.18	0.9	0.014
15.217	0.000	1.00	0.00	0.18	0.9	0.014
15.233	0.000	1.01	0.00	0.18	0.9	0.014
15.250	0.000	1.02	0.00	0.18	0.9	0.014
15.267	0.000	1.04	0.00	0.19	0.9	0.014
15.283	0.000	1.05	0.00	0.19	0.9	0.015
15.300	0.000	1.05	0.00	0.19	1.0	0.015
15.317	0.000	1.06	0.00	0.19	1.0	0.015
15.333	0.000	1.07	0.00	0.19	1.0	0.015
15.350	0.000	1.08	0.00	0.20	1.0	0.015
15.367	0.000	1.09	0.00	0.20	1.0	0.015
15.383	0.000	1.09	0.00	0.20	1.0	0.015
15.400	0.000	1.10	0.00	0.20	1.0	0.015
15.417	0.000	1.11	0.00	0.20	1.0	0.016
15.433	0.000	1.12	0.00	0.20	1.0	0.016
15.450	0.000	1.12	0.00	0.21	1.0	0.016
15.467	0.000	1.13	0.00	0.21	1.0	0.016
15.483	0.000	1.13	0.00	0.21	1.0	0.016
15.500	0.000	1.14	0.00	0.21	1.1	0.016
15.517	0.000	1.15	0.00	0.21	1.1	0.016
15.533	0.000	1.15	0.00	0.21	1.1	0.016
15.550	0.000	1.16	0.00	0.22	1.1	0.017
15.567	0.000	1.17	0.00	0.22	1.1	0.017
15.583	0.000	1.18	0.00	0.22	1.1	0.017
15.600	0.000	1.20	0.00	0.22	1.1	0.017
15.617	0.000	1.21	0.00	0.22	1.1	0.017
15.633	0.000	1.23	0.00	0.22	1.1	0.017
15.650	0.000	1.25	0.00	0.23	1.1	0.017
15.667	0.000	1.26	0.00	0.23	1.1	0.018
15.683	0.000	1.28	0.00	0.23	1.2	0.018
15.700	0.000	1.30	0.00	0.23	1.2	0.018
15.717	0.000	1.32	0.00	0.24	1.2	0.018
15.733	0.000	1.38	0.00	0.24	1.2	0.018

15.750	0.000	1.44	0.00	0.24	1.2	0.019
15.767	0.000	1.51	0.00	0.25	1.2	0.019
15.783	0.000	1.57	0.00	0.25	1.3	0.020
15.800	0.000	1.63	0.00	0.26	1.3	0.020
15.817	0.000	1.70	0.00	0.27	1.3	0.021
15.833	0.000	1.76	0.00	0.27	1.4	0.021
15.850	0.000	1.82	0.00	0.28	1.4	0.022
15.867	0.000	1.89	0.00	0.29	1.4	0.022
15.883	0.000	1.97	0.00	0.30	1.5	0.023
15.900	0.000	2.05	0.00	0.31	1.5	0.024
15.917	0.000	2.12	0.00	0.32	1.6	0.024
15.933	0.000	2.20	0.00	0.33	1.6	0.025
15.950	0.000	2.28	0.00	0.34	1.7	0.026
15.967	0.000	2.36	0.00	0.35	1.7	0.027
15.983	0.000	2.43	0.00	0.36	1.8	0.028
16.000	0.000	2.51	0.00	0.37	1.8	0.029
16.017	0.000	2.84	0.00	0.39	1.9	0.030
16.033	0.000	3.43	0.00	0.42	2.0	0.032
16.050	0.000	4.02	0.00	0.45	2.2	0.035
16.067	0.000	4.61	0.00	0.49	2.4	0.038
16.083	0.000	5.20	0.00	0.54	2.6	0.041
16.100	0.000	5.79	0.00	0.59	2.8	0.045
16.117	0.000	6.38	0.00	0.65	3.1	0.050
16.133	0.000	6.96	0.00	0.71	3.4	0.055
16.150	0.000	7.73	0.00	0.78	3.7	0.060
16.167	0.000	7.24	0.00	0.84	4.1	0.065
16.183	0.000	6.53	0.00	0.88	4.3	0.068
16.200	0.000	5.83	0.00	0.90	4.5	0.070
16.217	0.000	5.12	0.00	0.91	4.6	0.070
16.233	0.000	4.42	0.00	0.91	4.6	0.070
16.250	0.000	3.71	0.00	0.90	4.5	0.069
16.267	0.000	3.01	0.00	0.87	4.4	0.067
16.283	0.000	2.30	0.00	0.84	4.3	0.064
16.300	0.000	1.65	0.00	0.79	4.1	0.061
16.317	0.000	1.48	0.00	0.75	3.9	0.058
16.333	0.000	1.43	0.00	0.71	3.7	0.055
16.350	0.000	1.38	0.00	0.67	3.5	0.052
16.367	0.000	1.33	0.00	0.64	3.3	0.049
16.383	0.000	1.28	0.00	0.60	3.1	0.046
16.400	0.000	1.23	0.00	0.57	3.0	0.044
16.417	0.000	1.18	0.00	0.54	2.8	0.042
16.433	0.000	1.13	0.00	0.52	2.7	0.040
16.450	0.000	1.08	0.00	0.49	2.5	0.038
16.467	0.000	1.07	0.00	0.47	2.4	0.036
16.483	0.000	1.06	0.00	0.44	2.3	0.034
16.500	0.000	1.05	0.00	0.42	2.2	0.033
16.517	0.000	1.04	0.00	0.41	2.1	0.031
16.533	0.000	1.02	0.00	0.39	2.0	0.030
16.550	0.000	1.01	0.00	0.37	1.9	0.029
16.567	0.000	1.00	0.00	0.36	1.8	0.028

16.583	0.000	0.99	0.00	0.34	1.8	0.026
16.600	0.000	0.98	0.00	0.33	1.7	0.025
16.617	0.000	0.96	0.00	0.32	1.6	0.025
16.633	0.000	0.95	0.00	0.31	1.6	0.024
16.650	0.000	0.93	0.00	0.30	1.5	0.023
16.667	0.000	0.92	0.00	0.29	1.5	0.022
16.683	0.000	0.90	0.00	0.28	1.4	0.021
16.700	0.000	0.89	0.00	0.27	1.4	0.021
16.717	0.000	0.87	0.00	0.26	1.3	0.020
16.733	0.000	0.86	0.00	0.25	1.3	0.019
16.750	0.000	0.84	0.00	0.25	1.3	0.019
16.767	0.000	0.83	0.00	0.24	1.2	0.018
16.783	0.000	0.82	0.00	0.23	1.2	0.018
16.800	0.000	0.81	0.00	0.23	1.2	0.017
16.817	0.000	0.80	0.00	0.22	1.1	0.017
16.833	0.000	0.79	0.00	0.22	1.1	0.017
16.850	0.000	0.78	0.00	0.21	1.1	0.016
16.867	0.000	0.77	0.00	0.21	1.0	0.016
16.883	0.000	0.76	0.00	0.20	1.0	0.015
16.900	0.000	0.75	0.00	0.20	1.0	0.015
16.917	0.000	0.74	0.00	0.19	1.0	0.015
16.933	0.000	0.74	0.00	0.19	1.0	0.014
16.950	0.000	0.73	0.00	0.18	0.9	0.014
16.967	0.000	0.72	0.00	0.18	0.9	0.014
16.983	0.000	0.71	0.00	0.18	0.9	0.014
17.000	0.000	0.71	0.00	0.17	0.9	0.013
17.017	0.000	0.70	0.00	0.17	0.9	0.013
17.033	0.000	0.69	0.00	0.17	0.9	0.013
17.050	0.000	0.68	0.00	0.17	0.8	0.013
17.067	0.000	0.68	0.00	0.16	0.8	0.013
17.083	0.000	0.67	0.00	0.16	0.8	0.012
17.100	0.000	0.66	0.00	0.16	0.8	0.012
17.117	0.000	0.66	0.00	0.16	0.8	0.012
17.133	0.000	0.65	0.00	0.15	0.8	0.012
17.150	0.000	0.65	0.00	0.15	0.8	0.012
17.167	0.000	0.64	0.00	0.15	0.8	0.011
17.183	0.000	0.63	0.00	0.15	0.7	0.011
17.200	0.000	0.63	0.00	0.15	0.7	0.011
17.217	0.000	0.62	0.00	0.14	0.7	0.011
17.233	0.000	0.62	0.00	0.14	0.7	0.011
17.250	0.000	0.61	0.00	0.14	0.7	0.011
17.267	0.000	0.61	0.00	0.14	0.7	0.011
17.283	0.000	0.60	0.00	0.14	0.7	0.011
17.300	0.000	0.60	0.00	0.14	0.7	0.010
17.317	0.000	0.59	0.00	0.13	0.7	0.010
17.333	0.000	0.59	0.00	0.13	0.7	0.010
17.350	0.000	0.59	0.00	0.13	0.7	0.010
17.367	0.000	0.58	0.00	0.13	0.7	0.010
17.383	0.000	0.58	0.00	0.13	0.6	0.010
17.400	0.000	0.57	0.00	0.13	0.6	0.010

17.417	0.000	0.57	0.00	0.13	0.6	0.010
17.433	0.000	0.57	0.00	0.13	0.6	0.010
17.450	0.000	0.56	0.00	0.12	0.6	0.010
17.467	0.000	0.56	0.00	0.12	0.6	0.009
17.483	0.000	0.55	0.00	0.12	0.6	0.009
17.500	0.000	0.55	0.00	0.12	0.6	0.009
17.517	0.000	0.55	0.00	0.12	0.6	0.009
17.533	0.000	0.54	0.00	0.12	0.6	0.009
17.550	0.000	0.54	0.00	0.12	0.6	0.009
17.567	0.000	0.54	0.00	0.12	0.6	0.009
17.583	0.000	0.53	0.00	0.12	0.6	0.009
17.600	0.000	0.53	0.00	0.12	0.6	0.009
17.617	0.000	0.53	0.00	0.11	0.6	0.009
17.633	0.000	0.52	0.00	0.11	0.6	0.009
17.650	0.000	0.52	0.00	0.11	0.6	0.009
17.667	0.000	0.52	0.00	0.11	0.6	0.009
17.683	0.000	0.51	0.00	0.11	0.6	0.009
17.700	0.000	0.51	0.00	0.11	0.6	0.008
17.717	0.000	0.51	0.00	0.11	0.6	0.008
17.733	0.000	0.51	0.00	0.11	0.5	0.008
17.750	0.000	0.50	0.00	0.11	0.5	0.008
17.767	0.000	0.50	0.00	0.11	0.5	0.008
17.783	0.000	0.50	0.00	0.11	0.5	0.008
17.800	0.000	0.50	0.00	0.11	0.5	0.008
17.817	0.000	0.49	0.00	0.11	0.5	0.008
17.833	0.000	0.49	0.00	0.10	0.5	0.008
17.850	0.000	0.49	0.00	0.10	0.5	0.008
17.867	0.000	0.49	0.00	0.10	0.5	0.008
17.883	0.000	0.48	0.00	0.10	0.5	0.008
17.900	0.000	0.48	0.00	0.10	0.5	0.008
17.917	0.000	0.48	0.00	0.10	0.5	0.008
17.933	0.000	0.48	0.00	0.10	0.5	0.008
17.950	0.000	0.47	0.00	0.10	0.5	0.008
17.967	0.000	0.47	0.00	0.10	0.5	0.008
17.983	0.000	0.47	0.00	0.10	0.5	0.008
18.000	0.000	0.47	0.00	0.10	0.5	0.008
18.017	0.000	0.46	0.00	0.10	0.5	0.008
18.033	0.000	0.46	0.00	0.10	0.5	0.008
18.050	0.000	0.46	0.00	0.10	0.5	0.007
18.067	0.000	0.45	0.00	0.10	0.5	0.007
18.083	0.000	0.44	0.00	0.10	0.5	0.007
18.100	0.000	0.43	0.00	0.09	0.5	0.007
18.117	0.000	0.42	0.00	0.09	0.5	0.007
18.133	0.000	0.41	0.00	0.09	0.5	0.007
18.150	0.000	0.39	0.00	0.09	0.5	0.007
18.167	0.000	0.38	0.00	0.09	0.5	0.007
18.183	0.000	0.37	0.00	0.09	0.4	0.007
18.200	0.000	0.36	0.00	0.09	0.4	0.007
18.217	0.000	0.35	0.00	0.09	0.4	0.007
18.233	0.000	0.35	0.00	0.08	0.4	0.006

18.250	0.000	0.35	0.00	0.08	0.4	0.006
18.267	0.000	0.34	0.00	0.08	0.4	0.006
18.283	0.000	0.34	0.00	0.08	0.4	0.006
18.300	0.000	0.34	0.00	0.08	0.4	0.006
18.317	0.000	0.34	0.00	0.08	0.4	0.006
18.333	0.000	0.34	0.00	0.08	0.4	0.006
18.350	0.000	0.34	0.00	0.08	0.4	0.006
18.367	0.000	0.33	0.00	0.08	0.4	0.006
18.383	0.000	0.33	0.00	0.07	0.4	0.006
18.400	0.000	0.33	0.00	0.07	0.4	0.006
18.417	0.000	0.33	0.00	0.07	0.4	0.006
18.433	0.000	0.33	0.00	0.07	0.4	0.006
18.450	0.000	0.33	0.00	0.07	0.4	0.006
18.467	0.000	0.32	0.00	0.07	0.4	0.005
18.483	0.000	0.32	0.00	0.07	0.4	0.005
18.500	0.000	0.32	0.00	0.07	0.4	0.005
18.517	0.000	0.32	0.00	0.07	0.4	0.005
18.533	0.000	0.32	0.00	0.07	0.3	0.005
18.550	0.000	0.32	0.00	0.07	0.3	0.005
18.567	0.000	0.32	0.00	0.07	0.3	0.005
18.583	0.000	0.32	0.00	0.07	0.3	0.005
18.600	0.000	0.31	0.00	0.07	0.3	0.005
18.617	0.000	0.31	0.00	0.07	0.3	0.005
18.633	0.000	0.31	0.00	0.07	0.3	0.005
18.650	0.000	0.31	0.00	0.07	0.3	0.005
18.667	0.000	0.31	0.00	0.07	0.3	0.005
18.683	0.000	0.31	0.00	0.07	0.3	0.005
18.700	0.000	0.31	0.00	0.06	0.3	0.005
18.717	0.000	0.30	0.00	0.06	0.3	0.005
18.733	0.000	0.30	0.00	0.06	0.3	0.005
18.750	0.000	0.30	0.00	0.06	0.3	0.005
18.767	0.000	0.30	0.00	0.06	0.3	0.005
18.783	0.000	0.30	0.00	0.06	0.3	0.005
18.800	0.000	0.30	0.00	0.06	0.3	0.005
18.817	0.000	0.30	0.00	0.06	0.3	0.005
18.833	0.000	0.30	0.00	0.06	0.3	0.005
18.850	0.000	0.30	0.00	0.06	0.3	0.005
18.867	0.000	0.29	0.00	0.06	0.3	0.005
18.883	0.000	0.29	0.00	0.06	0.3	0.005
18.900	0.000	0.29	0.00	0.06	0.3	0.005
18.917	0.000	0.29	0.00	0.06	0.3	0.005
18.933	0.000	0.29	0.00	0.06	0.3	0.005
18.950	0.000	0.29	0.00	0.06	0.3	0.005
18.967	0.000	0.29	0.00	0.06	0.3	0.005
18.983	0.000	0.29	0.00	0.06	0.3	0.005
19.000	0.000	0.29	0.00	0.06	0.3	0.005
19.017	0.000	0.28	0.00	0.06	0.3	0.005
19.033	0.000	0.28	0.00	0.06	0.3	0.005
19.050	0.000	0.28	0.00	0.06	0.3	0.005
19.067	0.000	0.28	0.00	0.06	0.3	0.005

19.083	0.000	0.28	0.00	0.06	0.3	0.004
19.100	0.000	0.28	0.00	0.06	0.3	0.004
19.117	0.000	0.28	0.00	0.06	0.3	0.004
19.133	0.000	0.28	0.00	0.06	0.3	0.004
19.150	0.000	0.28	0.00	0.06	0.3	0.004
19.167	0.000	0.28	0.00	0.06	0.3	0.004
19.183	0.000	0.27	0.00	0.06	0.3	0.004
19.200	0.000	0.27	0.00	0.06	0.3	0.004
19.217	0.000	0.27	0.00	0.06	0.3	0.004
19.233	0.000	0.27	0.00	0.06	0.3	0.004
19.250	0.000	0.27	0.00	0.06	0.3	0.004
19.267	0.000	0.27	0.00	0.06	0.3	0.004
19.283	0.000	0.27	0.00	0.06	0.3	0.004
19.300	0.000	0.27	0.00	0.06	0.3	0.004
19.317	0.000	0.27	0.00	0.06	0.3	0.004
19.333	0.000	0.27	0.00	0.06	0.3	0.004
19.350	0.000	0.27	0.00	0.06	0.3	0.004
19.367	0.000	0.26	0.00	0.05	0.3	0.004
19.383	0.000	0.26	0.00	0.05	0.3	0.004
19.400	0.000	0.26	0.00	0.05	0.3	0.004
19.417	0.000	0.26	0.00	0.05	0.3	0.004
19.433	0.000	0.26	0.00	0.05	0.3	0.004
19.450	0.000	0.26	0.00	0.05	0.3	0.004
19.467	0.000	0.26	0.00	0.05	0.3	0.004
19.483	0.000	0.26	0.00	0.05	0.3	0.004
19.500	0.000	0.26	0.00	0.05	0.3	0.004
19.517	0.000	0.26	0.00	0.05	0.3	0.004
19.533	0.000	0.26	0.00	0.05	0.3	0.004
19.550	0.000	0.26	0.00	0.05	0.3	0.004
19.567	0.000	0.25	0.00	0.05	0.3	0.004
19.583	0.000	0.25	0.00	0.05	0.3	0.004
19.600	0.000	0.25	0.00	0.05	0.3	0.004
19.617	0.000	0.25	0.00	0.05	0.3	0.004
19.633	0.000	0.25	0.00	0.05	0.3	0.004
19.650	0.000	0.25	0.00	0.05	0.3	0.004
19.667	0.000	0.25	0.00	0.05	0.3	0.004
19.683	0.000	0.25	0.00	0.05	0.3	0.004
19.700	0.000	0.25	0.00	0.05	0.3	0.004
19.717	0.000	0.25	0.00	0.05	0.3	0.004
19.733	0.000	0.25	0.00	0.05	0.3	0.004
19.750	0.000	0.25	0.00	0.05	0.3	0.004
19.767	0.000	0.25	0.00	0.05	0.3	0.004
19.783	0.000	0.25	0.00	0.05	0.3	0.004
19.800	0.000	0.24	0.00	0.05	0.3	0.004
19.817	0.000	0.24	0.00	0.05	0.3	0.004
19.833	0.000	0.24	0.00	0.05	0.3	0.004
19.850	0.000	0.24	0.00	0.05	0.3	0.004
19.867	0.000	0.24	0.00	0.05	0.3	0.004
19.883	0.000	0.24	0.00	0.05	0.2	0.004
19.900	0.000	0.24	0.00	0.05	0.2	0.004

19.917	0.000	0.24	0.00	0.05	0.2	0.004
19.933	0.000	0.24	0.00	0.05	0.2	0.004
19.950	0.000	0.24	0.00	0.05	0.2	0.004
19.967	0.000	0.24	0.00	0.05	0.2	0.004
19.983	0.000	0.24	0.00	0.05	0.2	0.004
20.000	0.000	0.24	0.00	0.05	0.2	0.004
20.017	0.000	0.24	0.00	0.05	0.2	0.004
20.033	0.000	0.24	0.00	0.05	0.2	0.004
20.050	0.000	0.23	0.00	0.05	0.2	0.004
20.067	0.000	0.23	0.00	0.05	0.2	0.004
20.083	0.000	0.23	0.00	0.05	0.2	0.004
20.100	0.000	0.23	0.00	0.05	0.2	0.004
20.117	0.000	0.23	0.00	0.05	0.2	0.004
20.133	0.000	0.23	0.00	0.05	0.2	0.004
20.150	0.000	0.23	0.00	0.05	0.2	0.004
20.167	0.000	0.23	0.00	0.05	0.2	0.004
20.183	0.000	0.23	0.00	0.05	0.2	0.004
20.200	0.000	0.23	0.00	0.05	0.2	0.004
20.217	0.000	0.23	0.00	0.05	0.2	0.004
20.233	0.000	0.23	0.00	0.05	0.2	0.004
20.250	0.000	0.23	0.00	0.05	0.2	0.004
20.267	0.000	0.23	0.00	0.05	0.2	0.004
20.283	0.000	0.23	0.00	0.05	0.2	0.004
20.300	0.000	0.23	0.00	0.05	0.2	0.004
20.317	0.000	0.23	0.00	0.05	0.2	0.004
20.333	0.000	0.22	0.00	0.05	0.2	0.004
20.350	0.000	0.22	0.00	0.05	0.2	0.004
20.367	0.000	0.22	0.00	0.05	0.2	0.004
20.383	0.000	0.22	0.00	0.05	0.2	0.004
20.400	0.000	0.22	0.00	0.05	0.2	0.004
20.417	0.000	0.22	0.00	0.05	0.2	0.003
20.433	0.000	0.22	0.00	0.05	0.2	0.003
20.450	0.000	0.22	0.00	0.05	0.2	0.003
20.467	0.000	0.22	0.00	0.05	0.2	0.003
20.483	0.000	0.22	0.00	0.05	0.2	0.003
20.500	0.000	0.22	0.00	0.04	0.2	0.003
20.517	0.000	0.22	0.00	0.04	0.2	0.003
20.533	0.000	0.22	0.00	0.04	0.2	0.003
20.550	0.000	0.22	0.00	0.04	0.2	0.003
20.567	0.000	0.22	0.00	0.04	0.2	0.003
20.583	0.000	0.22	0.00	0.04	0.2	0.003
20.600	0.000	0.22	0.00	0.04	0.2	0.003
20.617	0.000	0.22	0.00	0.04	0.2	0.003
20.633	0.000	0.22	0.00	0.04	0.2	0.003
20.650	0.000	0.21	0.00	0.04	0.2	0.003
20.667	0.000	0.21	0.00	0.04	0.2	0.003
20.683	0.000	0.21	0.00	0.04	0.2	0.003
20.700	0.000	0.21	0.00	0.04	0.2	0.003
20.717	0.000	0.21	0.00	0.04	0.2	0.003
20.733	0.000	0.21	0.00	0.04	0.2	0.003

20.750	0.000	0.21	0.00	0.04	0.2	0.003
20.767	0.000	0.21	0.00	0.04	0.2	0.003
20.783	0.000	0.21	0.00	0.04	0.2	0.003
20.800	0.000	0.21	0.00	0.04	0.2	0.003
20.817	0.000	0.21	0.00	0.04	0.2	0.003
20.833	0.000	0.21	0.00	0.04	0.2	0.003
20.850	0.000	0.21	0.00	0.04	0.2	0.003
20.867	0.000	0.21	0.00	0.04	0.2	0.003
20.883	0.000	0.21	0.00	0.04	0.2	0.003
20.900	0.000	0.21	0.00	0.04	0.2	0.003
20.917	0.000	0.21	0.00	0.04	0.2	0.003
20.933	0.000	0.21	0.00	0.04	0.2	0.003
20.950	0.000	0.21	0.00	0.04	0.2	0.003
20.967	0.000	0.21	0.00	0.04	0.2	0.003
20.983	0.000	0.21	0.00	0.04	0.2	0.003
21.000	0.000	0.20	0.00	0.04	0.2	0.003
21.017	0.000	0.20	0.00	0.04	0.2	0.003
21.033	0.000	0.20	0.00	0.04	0.2	0.003
21.050	0.000	0.20	0.00	0.04	0.2	0.003
21.067	0.000	0.20	0.00	0.04	0.2	0.003
21.083	0.000	0.20	0.00	0.04	0.2	0.003
21.100	0.000	0.20	0.00	0.04	0.2	0.003
21.117	0.000	0.20	0.00	0.04	0.2	0.003
21.133	0.000	0.20	0.00	0.04	0.2	0.003
21.150	0.000	0.20	0.00	0.04	0.2	0.003
21.167	0.000	0.20	0.00	0.04	0.2	0.003
21.183	0.000	0.20	0.00	0.04	0.2	0.003
21.200	0.000	0.20	0.00	0.04	0.2	0.003
21.217	0.000	0.20	0.00	0.04	0.2	0.003
21.233	0.000	0.20	0.00	0.04	0.2	0.003
21.250	0.000	0.20	0.00	0.04	0.2	0.003
21.267	0.000	0.20	0.00	0.04	0.2	0.003
21.283	0.000	0.20	0.00	0.04	0.2	0.003
21.300	0.000	0.20	0.00	0.04	0.2	0.003
21.317	0.000	0.20	0.00	0.04	0.2	0.003
21.333	0.000	0.20	0.00	0.04	0.2	0.003
21.350	0.000	0.20	0.00	0.04	0.2	0.003
21.367	0.000	0.20	0.00	0.04	0.2	0.003
21.383	0.000	0.20	0.00	0.04	0.2	0.003
21.400	0.000	0.19	0.00	0.04	0.2	0.003
21.417	0.000	0.19	0.00	0.04	0.2	0.003
21.433	0.000	0.19	0.00	0.04	0.2	0.003
21.450	0.000	0.19	0.00	0.04	0.2	0.003
21.467	0.000	0.19	0.00	0.04	0.2	0.003
21.483	0.000	0.19	0.00	0.04	0.2	0.003
21.500	0.000	0.19	0.00	0.04	0.2	0.003
21.517	0.000	0.19	0.00	0.04	0.2	0.003
21.533	0.000	0.19	0.00	0.04	0.2	0.003
21.550	0.000	0.19	0.00	0.04	0.2	0.003
21.567	0.000	0.19	0.00	0.04	0.2	0.003

21.583	0.000	0.19	0.00	0.04	0.2	0.003
21.600	0.000	0.19	0.00	0.04	0.2	0.003
21.617	0.000	0.19	0.00	0.04	0.2	0.003
21.633	0.000	0.19	0.00	0.04	0.2	0.003
21.650	0.000	0.19	0.00	0.04	0.2	0.003
21.667	0.000	0.19	0.00	0.04	0.2	0.003
21.683	0.000	0.19	0.00	0.04	0.2	0.003
21.700	0.000	0.19	0.00	0.04	0.2	0.003
21.717	0.000	0.19	0.00	0.04	0.2	0.003
21.733	0.000	0.19	0.00	0.04	0.2	0.003
21.750	0.000	0.19	0.00	0.04	0.2	0.003
21.767	0.000	0.19	0.00	0.04	0.2	0.003
21.783	0.000	0.19	0.00	0.04	0.2	0.003
21.800	0.000	0.19	0.00	0.04	0.2	0.003
21.817	0.000	0.19	0.00	0.04	0.2	0.003
21.833	0.000	0.19	0.00	0.04	0.2	0.003
21.850	0.000	0.19	0.00	0.04	0.2	0.003
21.867	0.000	0.18	0.00	0.04	0.2	0.003
21.883	0.000	0.18	0.00	0.04	0.2	0.003
21.900	0.000	0.18	0.00	0.04	0.2	0.003
21.917	0.000	0.18	0.00	0.04	0.2	0.003
21.933	0.000	0.18	0.00	0.04	0.2	0.003
21.950	0.000	0.18	0.00	0.04	0.2	0.003
21.967	0.000	0.18	0.00	0.04	0.2	0.003
21.983	0.000	0.18	0.00	0.04	0.2	0.003
22.000	0.000	0.18	0.00	0.04	0.2	0.003
22.017	0.000	0.18	0.00	0.04	0.2	0.003
22.033	0.000	0.18	0.00	0.04	0.2	0.003
22.050	0.000	0.18	0.00	0.04	0.2	0.003
22.067	0.000	0.18	0.00	0.04	0.2	0.003
22.083	0.000	0.18	0.00	0.04	0.2	0.003
22.100	0.000	0.18	0.00	0.04	0.2	0.003
22.117	0.000	0.18	0.00	0.04	0.2	0.003
22.133	0.000	0.18	0.00	0.04	0.2	0.003
22.150	0.000	0.18	0.00	0.04	0.2	0.003
22.167	0.000	0.18	0.00	0.04	0.2	0.003
22.183	0.000	0.18	0.00	0.04	0.2	0.003
22.200	0.000	0.18	0.00	0.04	0.2	0.003
22.216	0.000	0.18	0.00	0.04	0.2	0.003
22.233	0.000	0.18	0.00	0.04	0.2	0.003
22.250	0.000	0.18	0.00	0.04	0.2	0.003
22.266	0.000	0.18	0.00	0.04	0.2	0.003
22.283	0.000	0.18	0.00	0.04	0.2	0.003
22.300	0.000	0.18	0.00	0.04	0.2	0.003
22.316	0.000	0.18	0.00	0.04	0.2	0.003
22.333	0.000	0.18	0.00	0.04	0.2	0.003
22.350	0.000	0.18	0.00	0.04	0.2	0.003
22.366	0.000	0.18	0.00	0.04	0.2	0.003
22.383	0.000	0.18	0.00	0.04	0.2	0.003
22.400	0.000	0.17	0.00	0.04	0.2	0.003

22.416	0.000	0.17	0.00	0.04	0.2	0.003
22.433	0.000	0.17	0.00	0.04	0.2	0.003
22.450	0.000	0.17	0.00	0.04	0.2	0.003
22.466	0.000	0.17	0.00	0.04	0.2	0.003
22.483	0.000	0.17	0.00	0.04	0.2	0.003
22.500	0.000	0.17	0.00	0.04	0.2	0.003
22.516	0.000	0.17	0.00	0.04	0.2	0.003
22.533	0.000	0.17	0.00	0.04	0.2	0.003
22.550	0.000	0.17	0.00	0.03	0.2	0.003
22.566	0.000	0.17	0.00	0.03	0.2	0.003
22.583	0.000	0.17	0.00	0.03	0.2	0.003
22.600	0.000	0.17	0.00	0.03	0.2	0.003
22.616	0.000	0.17	0.00	0.03	0.2	0.003
22.633	0.000	0.17	0.00	0.03	0.2	0.003
22.650	0.000	0.17	0.00	0.03	0.2	0.003
22.666	0.000	0.17	0.00	0.03	0.2	0.003
22.683	0.000	0.17	0.00	0.03	0.2	0.003
22.700	0.000	0.17	0.00	0.03	0.2	0.003
22.716	0.000	0.17	0.00	0.03	0.2	0.003
22.733	0.000	0.17	0.00	0.03	0.2	0.003
22.750	0.000	0.17	0.00	0.03	0.2	0.003
22.766	0.000	0.17	0.00	0.03	0.2	0.003
22.783	0.000	0.17	0.00	0.03	0.2	0.003
22.800	0.000	0.17	0.00	0.03	0.2	0.003
22.816	0.000	0.17	0.00	0.03	0.2	0.003
22.833	0.000	0.17	0.00	0.03	0.2	0.003
22.850	0.000	0.17	0.00	0.03	0.2	0.003
22.866	0.000	0.17	0.00	0.03	0.2	0.003
22.883	0.000	0.17	0.00	0.03	0.2	0.003
22.900	0.000	0.17	0.00	0.03	0.2	0.003
22.916	0.000	0.17	0.00	0.03	0.2	0.003
22.933	0.000	0.17	0.00	0.03	0.2	0.003
22.950	0.000	0.17	0.00	0.03	0.2	0.003
22.966	0.000	0.17	0.00	0.03	0.2	0.003
22.983	0.000	0.17	0.00	0.03	0.2	0.003
23.000	0.000	0.17	0.00	0.03	0.2	0.003
23.016	0.000	0.16	0.00	0.03	0.2	0.003
23.033	0.000	0.16	0.00	0.03	0.2	0.003
23.050	0.000	0.16	0.00	0.03	0.2	0.003
23.066	0.000	0.16	0.00	0.03	0.2	0.003
23.083	0.000	0.16	0.00	0.03	0.2	0.003
23.100	0.000	0.16	0.00	0.03	0.2	0.003
23.116	0.000	0.16	0.00	0.03	0.2	0.003
23.133	0.000	0.16	0.00	0.03	0.2	0.003
23.150	0.000	0.16	0.00	0.03	0.2	0.003
23.166	0.000	0.16	0.00	0.03	0.2	0.003
23.183	0.000	0.16	0.00	0.03	0.2	0.003
23.200	0.000	0.16	0.00	0.03	0.2	0.003
23.216	0.000	0.16	0.00	0.03	0.2	0.003
23.233	0.000	0.16	0.00	0.03	0.2	0.003

23.250	0.000	0.16	0.00	0.03	0.2	0.003
23.266	0.000	0.16	0.00	0.03	0.2	0.003
23.283	0.000	0.16	0.00	0.03	0.2	0.003
23.300	0.000	0.16	0.00	0.03	0.2	0.003
23.316	0.000	0.16	0.00	0.03	0.2	0.003
23.333	0.000	0.16	0.00	0.03	0.2	0.002
23.350	0.000	0.16	0.00	0.03	0.2	0.002
23.366	0.000	0.16	0.00	0.03	0.2	0.002
23.383	0.000	0.16	0.00	0.03	0.2	0.002
23.400	0.000	0.16	0.00	0.03	0.2	0.002
23.416	0.000	0.16	0.00	0.03	0.2	0.002
23.433	0.000	0.16	0.00	0.03	0.2	0.002
23.450	0.000	0.16	0.00	0.03	0.2	0.002
23.466	0.000	0.16	0.00	0.03	0.2	0.002
23.483	0.000	0.16	0.00	0.03	0.2	0.002
23.500	0.000	0.16	0.00	0.03	0.2	0.002
23.516	0.000	0.16	0.00	0.03	0.2	0.002
23.533	0.000	0.16	0.00	0.03	0.2	0.002
23.550	0.000	0.16	0.00	0.03	0.2	0.002
23.566	0.000	0.16	0.00	0.03	0.2	0.002
23.583	0.000	0.16	0.00	0.03	0.2	0.002
23.600	0.000	0.16	0.00	0.03	0.2	0.002
23.616	0.000	0.16	0.00	0.03	0.2	0.002
23.633	0.000	0.16	0.00	0.03	0.2	0.002
23.650	0.000	0.16	0.00	0.03	0.2	0.002
23.666	0.000	0.16	0.00	0.03	0.2	0.002
23.683	0.000	0.16	0.00	0.03	0.2	0.002
23.700	0.000	0.16	0.00	0.03	0.2	0.002
23.716	0.000	0.16	0.00	0.03	0.2	0.002
23.733	0.000	0.15	0.00	0.03	0.2	0.002
23.750	0.000	0.15	0.00	0.03	0.2	0.002
23.766	0.000	0.15	0.00	0.03	0.2	0.002
23.783	0.000	0.15	0.00	0.03	0.2	0.002
23.800	0.000	0.15	0.00	0.03	0.2	0.002
23.816	0.000	0.15	0.00	0.03	0.2	0.002
23.833	0.000	0.15	0.00	0.03	0.2	0.002
23.850	0.000	0.15	0.00	0.03	0.2	0.002
23.866	0.000	0.15	0.00	0.03	0.2	0.002
23.883	0.000	0.15	0.00	0.03	0.2	0.002
23.900	0.000	0.15	0.00	0.03	0.2	0.002
23.916	0.000	0.15	0.00	0.03	0.2	0.002
23.933	0.000	0.15	0.00	0.03	0.2	0.002
23.950	0.000	0.15	0.00	0.03	0.2	0.002
23.966	0.000	0.15	0.00	0.03	0.2	0.002
23.983	0.000	0.15	0.00	0.03	0.2	0.002
24.000	0.000	0.15	0.00	0.03	0.2	0.002
24.016	0.000	0.15	0.00	0.03	0.2	0.002
24.033	0.000	0.15	0.00	0.03	0.2	0.002
24.050	0.000	0.15	0.00	0.03	0.2	0.002
24.066	0.000	0.15	0.00	0.03	0.2	0.002

24.083	0.000	0.14	0.00	0.03	0.2	0.002
24.100	0.000	0.12	0.00	0.03	0.2	0.002
24.116	0.000	0.11	0.00	0.03	0.1	0.002
24.133	0.000	0.09	0.00	0.03	0.1	0.002
24.150	0.000	0.07	0.00	0.03	0.1	0.002
24.166	0.000	0.06	0.00	0.03	0.1	0.002
24.183	0.000	0.04	0.00	0.02	0.1	0.002
24.200	0.000	0.02	0.00	0.02	0.1	0.002
24.216	0.000	0.00	0.00	0.02	0.1	0.002
24.233	0.000	0.00	0.00	0.02	0.1	0.001
24.250	0.000	0.00	0.00	0.02	0.1	0.001
24.266	0.000	0.00	0.00	0.02	0.1	0.001
24.283	0.000	0.00	0.00	0.01	0.1	0.001
24.300	0.000	0.00	0.00	0.01	0.1	0.001
24.316	0.000	0.00	0.00	0.01	0.1	0.001
24.333	0.000	0.00	0.00	0.01	0.1	0.001
24.350	0.000	0.00	0.00	0.01	0.1	0.001
24.366	0.000	0.00	0.00	0.01	0.0	0.001
24.383	0.000	0.00	0.00	0.01	0.0	0.001
24.400	0.000	0.00	0.00	0.01	0.0	0.001
24.416	0.000	0.00	0.00	0.01	0.0	0.001
24.433	0.000	0.00	0.00	0.01	0.0	0.000
24.450	0.000	0.00	0.00	0.01	0.0	0.000
24.466	0.000	0.00	0.00	0.01	0.0	0.000
24.483	0.000	0.00	0.00	0.00	0.0	0.000
24.500	0.000	0.00	0.00	0.00	0.0	0.000
24.516	0.000	0.00	0.00	0.00	0.0	0.000
24.533	0.000	0.00	0.00	0.00	0.0	0.000
24.550	0.000	0.00	0.00	0.00	0.0	0.000
24.566	0.000	0.00	0.00	0.00	0.0	0.000
24.583	0.000	0.00	0.00	0.00	0.0	0.000
24.600	0.000	0.00	0.00	0.00	0.0	0.000
24.616	0.000	0.00	0.00	0.00	0.0	0.000
24.633	0.000	0.00	0.00	0.00	0.0	0.000
24.650	0.000	0.00	0.00	0.00	0.0	0.000
24.666	0.000	0.00	0.00	0.00	0.0	0.000
24.683	0.000	0.00	0.00	0.00	0.0	0.000
24.700	0.000	0.00	0.00	0.00	0.0	0.000
24.716	0.000	0.00	0.00	0.00	0.0	0.000
24.733	0.000	0.00	0.00	0.00	0.0	0.000
24.750	0.000	0.00	0.00	0.00	0.0	0.000
24.766	0.000	0.00	0.00	0.00	0.0	0.000
24.783	0.000	0.00	0.00	0.00	0.0	0.000
24.800	0.000	0.00	0.00	0.00	0.0	0.000
24.816	0.000	0.00	0.00	0.00	0.0	0.000
24.833	0.000	0.00	0.00	0.00	0.0	0.000
24.850	0.000	0.00	0.00	0.00	0.0	0.000
24.866	0.000	0.00	0.00	0.00	0.0	0.000
24.883	0.000	0.00	0.00	0.00	0.0	0.000
24.900	0.000	0.00	0.00	0.00	0.0	0.000

24.916	0.000	0.00	0.00	0.00	0.0	0.000
24.933	0.000	0.00	0.00	0.00	0.0	0.000
24.950	0.000	0.00	0.00	0.00	0.0	0.000
24.966	0.000	0.00	0.00	0.00	0.0	0.000
24.983	0.000	0.00	0.00	0.00	0.0	0.000
25.000	0.000	0.00	0.00	0.00	0.0	0.000
25.016	0.000	0.00	0.00	0.00	0.0	0.000
25.033	0.000	0.00	0.00	0.00	0.0	0.000
25.050	0.000	0.00	0.00	0.00	0.0	0.000
25.066	0.000	0.00	0.00	0.00	0.0	0.000
25.083	0.000	0.00	0.00	0.00	0.0	0.000
25.100	0.000	0.00	0.00	0.00	0.0	0.000
25.116	0.000	0.00	0.00	0.00	0.0	0.000
25.133	0.000	0.00	0.00	0.00	0.0	0.000
25.150	0.000	0.00	0.00	0.00	0.0	0.000
25.166	0.000	0.00	0.00	0.00	0.0	0.000
25.183	0.000	0.00	0.00	0.00	0.0	0.000
25.200	0.000	0.00	0.00	0.00	0.0	0.000
25.216	0.000	0.00	0.00	0.00	0.0	0.000
25.233	0.000	0.00	0.00	0.00	0.0	0.000
25.250	0.000	0.00	0.00	0.00	0.0	0.000
25.266	0.000	0.00	0.00	0.00	0.0	0.000
25.283	0.000	0.00	0.00	0.00	0.0	0.000
25.300	0.000	0.00	0.00	0.00	0.0	0.000
25.316	0.000	0.00	0.00	0.00	0.0	0.000
25.333	0.000	0.00	0.00	0.00	0.0	0.000
25.350	0.000	0.00	0.00	0.00	0.0	0.000
25.366	0.000	0.00	0.00	0.00	0.0	0.000
25.383	0.000	0.00	0.00	0.00	0.0	0.000
25.400	0.000	0.00	0.00	0.00	0.0	0.000
25.416	0.000	0.00	0.00	0.00	0.0	0.000
25.433	0.000	0.00	0.00	0.00	0.0	0.000
25.450	0.000	0.00	0.00	0.00	0.0	0.000
25.466	0.000	0.00	0.00	0.00	0.0	0.000
25.483	0.000	0.00	0.00	0.00	0.0	0.000
25.500	0.000	0.00	0.00	0.00	0.0	0.000
25.516	0.000	0.00	0.00	0.00	0.0	0.000
25.533	0.000	0.00	0.00	0.00	0.0	0.000
25.550	0.000	0.00	0.00	0.00	0.0	0.000
25.566	0.000	0.00	0.00	0.00	0.0	0.000
25.583	0.000	0.00	0.00	0.00	0.0	0.000
25.600	0.000	0.00	0.00	0.00	0.0	0.000
25.616	0.000	0.00	0.00	0.00	0.0	0.000
25.633	0.000	0.00	0.00	0.00	0.0	0.000
25.650	0.000	0.00	0.00	0.00	0.0	0.000
25.666	0.000	0.00	0.00	0.00	0.0	0.000
25.683	0.000	0.00	0.00	0.00	0.0	0.000
25.700	0.000	0.00	0.00	0.00	0.0	0.000
25.716	0.000	0.00	0.00	0.00	0.0	0.000
25.733	0.000	0.00	0.00	0.00	0.0	0.000

25.750	0.000	0.00	0.00	0.00	0.0	0.000
25.766	0.000	0.00	0.00	0.00	0.0	0.000
25.783	0.000	0.00	0.00	0.00	0.0	0.000
25.800	0.000	0.00	0.00	0.00	0.0	0.000
25.816	0.000	0.00	0.00	0.00	0.0	0.000
25.833	0.000	0.00	0.00	0.00	0.0	0.000
25.850	0.000	0.00	0.00	0.00	0.0	0.000
25.866	0.000	0.00	0.00	0.00	0.0	0.000
25.883	0.000	0.00	0.00	0.00	0.0	0.000
25.900	0.000	0.00	0.00	0.00	0.0	0.000
25.916	0.000	0.00	0.00	0.00	0.0	0.000
25.933	0.000	0.00	0.00	0.00	0.0	0.000
25.950	0.000	0.00	0.00	0.00	0.0	0.000
25.966	0.000	0.00	0.00	0.00	0.0	0.000
25.983	0.000	0.00	0.00	0.00	0.0	0.000
26.000	0.000	0.00	0.00	0.00	0.0	0.000
26.016	0.000	0.00	0.00	0.00	0.0	0.000
26.033	0.000	0.00	0.00	0.00	0.0	0.000
26.050	0.000	0.00	0.00	0.00	0.0	0.000
26.066	0.000	0.00	0.00	0.00	0.0	0.000
26.083	0.000	0.00	0.00	0.00	0.0	0.000
26.100	0.000	0.00	0.00	0.00	0.0	0.000
26.116	0.000	0.00	0.00	0.00	0.0	0.000
26.133	0.000	0.00	0.00	0.00	0.0	0.000
26.150	0.000	0.00	0.00	0.00	0.0	0.000
26.166	0.000	0.00	0.00	0.00	0.0	0.000
26.183	0.000	0.00	0.00	0.00	0.0	0.000
26.200	0.000	0.00	0.00	0.00	0.0	0.000
26.216	0.000	0.00	0.00	0.00	0.0	0.000
26.233	0.000	0.00	0.00	0.00	0.0	0.000
26.250	0.000	0.00	0.00	0.00	0.0	0.000
26.266	0.000	0.00	0.00	0.00	0.0	0.000
26.283	0.000	0.00	0.00	0.00	0.0	0.000
26.300	0.000	0.00	0.00	0.00	0.0	0.000
26.316	0.000	0.00	0.00	0.00	0.0	0.000
26.333	0.000	0.00	0.00	0.00	0.0	0.000
26.350	0.000	0.00	0.00	0.00	0.0	0.000
26.366	0.000	0.00	0.00	0.00	0.0	0.000
26.383	0.000	0.00	0.00	0.00	0.0	0.000
26.400	0.000	0.00	0.00	0.00	0.0	0.000
26.416	0.000	0.00	0.00	0.00	0.0	0.000
26.433	0.000	0.00	0.00	0.00	0.0	0.000
26.450	0.000	0.00	0.00	0.00	0.0	0.000
26.466	0.000	0.00	0.00	0.00	0.0	0.000
26.483	0.000	0.00	0.00	0.00	0.0	0.000
26.500	0.000	0.00	0.00	0.00	0.0	0.000
26.516	0.000	0.00	0.00	0.00	0.0	0.000
26.533	0.000	0.00	0.00	0.00	0.0	0.000
26.550	0.000	0.00	0.00	0.00	0.0	0.000
26.566	0.000	0.00	0.00	0.00	0.0	0.000

26.583	0.000	0.00	0.00	0.00	0.0	0.000
26.600	0.000	0.00	0.00	0.00	0.0	0.000
26.616	0.000	0.00	0.00	0.00	0.0	0.000
26.633	0.000	0.00	0.00	0.00	0.0	0.000
26.650	0.000	0.00	0.00	0.00	0.0	0.000
26.666	0.000	0.00	0.00	0.00	0.0	0.000
26.683	0.000	0.00	0.00	0.00	0.0	0.000
26.700	0.000	0.00	0.00	0.00	0.0	0.000
26.716	0.000	0.00	0.00	0.00	0.0	0.000
26.733	0.000	0.00	0.00	0.00	0.0	0.000
26.750	0.000	0.00	0.00	0.00	0.0	0.000
26.766	0.000	0.00	0.00	0.00	0.0	0.000
26.783	0.000	0.00	0.00	0.00	0.0	0.000
26.800	0.000	0.00	0.00	0.00	0.0	0.000
26.816	0.000	0.00	0.00	0.00	0.0	0.000
26.833	0.000	0.00	0.00	0.00	0.0	0.000
26.850	0.000	0.00	0.00	0.00	0.0	0.000
26.866	0.000	0.00	0.00	0.00	0.0	0.000
26.883	0.000	0.00	0.00	0.00	0.0	0.000
26.900	0.000	0.00	0.00	0.00	0.0	0.000
26.916	0.000	0.00	0.00	0.00	0.0	0.000
26.933	0.000	0.00	0.00	0.00	0.0	0.000
26.950	0.000	0.00	0.00	0.00	0.0	0.000
26.966	0.000	0.00	0.00	0.00	0.0	0.000
26.983	0.000	0.00	0.00	0.00	0.0	0.000
27.000	0.000	0.00	0.00	0.00	0.0	0.000
27.016	0.000	0.00	0.00	0.00	0.0	0.000
27.033	0.000	0.00	0.00	0.00	0.0	0.000
27.050	0.000	0.00	0.00	0.00	0.0	0.000
27.066	0.000	0.00	0.00	0.00	0.0	0.000
27.083	0.000	0.00	0.00	0.00	0.0	0.000
27.100	0.000	0.00	0.00	0.00	0.0	0.000
27.116	0.000	0.00	0.00	0.00	0.0	0.000
27.133	0.000	0.00	0.00	0.00	0.0	0.000
27.150	0.000	0.00	0.00	0.00	0.0	0.000
27.166	0.000	0.00	0.00	0.00	0.0	0.000
27.183	0.000	0.00	0.00	0.00	0.0	0.000
27.200	0.000	0.00	0.00	0.00	0.0	0.000
27.216	0.000	0.00	0.00	0.00	0.0	0.000
27.233	0.000	0.00	0.00	0.00	0.0	0.000
27.250	0.000	0.00	0.00	0.00	0.0	0.000
27.266	0.000	0.00	0.00	0.00	0.0	0.000
27.283	0.000	0.00	0.00	0.00	0.0	0.000
27.300	0.000	0.00	0.00	0.00	0.0	0.000
27.316	0.000	0.00	0.00	0.00	0.0	0.000
27.333	0.000	0.00	0.00	0.00	0.0	0.000
27.350	0.000	0.00	0.00	0.00	0.0	0.000
27.366	0.000	0.00	0.00	0.00	0.0	0.000
27.383	0.000	0.00	0.00	0.00	0.0	0.000
27.400	0.000	0.00	0.00	0.00	0.0	0.000

27.416	0.000	0.00	0.00	0.00	0.0	0.000
27.433	0.000	0.00	0.00	0.00	0.0	0.000
27.450	0.000	0.00	0.00	0.00	0.0	0.000
27.466	0.000	0.00	0.00	0.00	0.0	0.000
27.483	0.000	0.00	0.00	0.00	0.0	0.000
27.500	0.000	0.00	0.00	0.00	0.0	0.000
27.516	0.000	0.00	0.00	0.00	0.0	0.000
27.533	0.000	0.00	0.00	0.00	0.0	0.000
27.550	0.000	0.00	0.00	0.00	0.0	0.000
27.566	0.000	0.00	0.00	0.00	0.0	0.000
27.583	0.000	0.00	0.00	0.00	0.0	0.000
27.600	0.000	0.00	0.00	0.00	0.0	0.000
27.616	0.000	0.00	0.00	0.00	0.0	0.000
27.633	0.000	0.00	0.00	0.00	0.0	0.000
27.650	0.000	0.00	0.00	0.00	0.0	0.000
27.666	0.000	0.00	0.00	0.00	0.0	0.000
27.683	0.000	0.00	0.00	0.00	0.0	0.000
27.700	0.000	0.00	0.00	0.00	0.0	0.000
27.716	0.000	0.00	0.00	0.00	0.0	0.000
27.733	0.000	0.00	0.00	0.00	0.0	0.000
27.750	0.000	0.00	0.00	0.00	0.0	0.000
27.766	0.000	0.00	0.00	0.00	0.0	0.000
27.783	0.000	0.00	0.00	0.00	0.0	0.000
27.800	0.000	0.00	0.00	0.00	0.0	0.000
27.816	0.000	0.00	0.00	0.00	0.0	0.000
27.833	0.000	0.00	0.00	0.00	0.0	0.000
27.850	0.000	0.00	0.00	0.00	0.0	0.000
27.866	0.000	0.00	0.00	0.00	0.0	0.000
27.883	0.000	0.00	0.00	0.00	0.0	0.000
27.900	0.000	0.00	0.00	0.00	0.0	0.000
27.916	0.000	0.00	0.00	0.00	0.0	0.000
27.933	0.000	0.00	0.00	0.00	0.0	0.000
27.950	0.000	0.00	0.00	0.00	0.0	0.000
27.966	0.000	0.00	0.00	0.00	0.0	0.000
27.983	0.000	0.00	0.00	0.00	0.0	0.000
28.000	0.000	0.00	0.00	0.00	0.0	0.000
28.016	0.000	0.00	0.00	0.00	0.0	0.000
28.033	0.000	0.00	0.00	0.00	0.0	0.000
28.050	0.000	0.00	0.00	0.00	0.0	0.000
28.066	0.000	0.00	0.00	0.00	0.0	0.000
28.083	0.000	0.00	0.00	0.00	0.0	0.000
28.100	0.000	0.00	0.00	0.00	0.0	0.000
28.116	0.000	0.00	0.00	0.00	0.0	0.000
28.133	0.000	0.00	0.00	0.00	0.0	0.000
28.150	0.000	0.00	0.00	0.00	0.0	0.000
28.166	0.000	0.00	0.00	0.00	0.0	0.000
28.183	0.000	0.00	0.00	0.00	0.0	0.000
28.200	0.000	0.00	0.00	0.00	0.0	0.000
28.216	0.000	0.00	0.00	0.00	0.0	0.000
28.233	0.000	0.00	0.00	0.00	0.0	0.000

28.250	0.000	0.00	0.00	0.00	0.0	0.000
28.266	0.000	0.00	0.00	0.00	0.0	0.000
28.283	0.000	0.00	0.00	0.00	0.0	0.000
28.300	0.000	0.00	0.00	0.00	0.0	0.000
28.316	0.000	0.00	0.00	0.00	0.0	0.000
28.333	0.000	0.00	0.00	0.00	0.0	0.000
28.350	0.000	0.00	0.00	0.00	0.0	0.000
28.366	0.000	0.00	0.00	0.00	0.0	0.000
28.383	0.000	0.00	0.00	0.00	0.0	0.000
28.400	0.000	0.00	0.00	0.00	0.0	0.000
28.416	0.000	0.00	0.00	0.00	0.0	0.000
28.433	0.000	0.00	0.00	0.00	0.0	0.000
28.450	0.000	0.00	0.00	0.00	0.0	0.000
28.466	0.000	0.00	0.00	0.00	0.0	0.000
28.483	0.000	0.00	0.00	0.00	0.0	0.000
28.500	0.000	0.00	0.00	0.00	0.0	0.000
28.516	0.000	0.00	0.00	0.00	0.0	0.000
28.533	0.000	0.00	0.00	0.00	0.0	0.000
28.550	0.000	0.00	0.00	0.00	0.0	0.000
28.566	0.000	0.00	0.00	0.00	0.0	0.000
28.583	0.000	0.00	0.00	0.00	0.0	0.000
28.600	0.000	0.00	0.00	0.00	0.0	0.000
28.616	0.000	0.00	0.00	0.00	0.0	0.000
28.633	0.000	0.00	0.00	0.00	0.0	0.000
28.650	0.000	0.00	0.00	0.00	0.0	0.000
28.666	0.000	0.00	0.00	0.00	0.0	0.000
28.683	0.000	0.00	0.00	0.00	0.0	0.000
28.700	0.000	0.00	0.00	0.00	0.0	0.000
28.716	0.000	0.00	0.00	0.00	0.0	0.000
28.733	0.000	0.00	0.00	0.00	0.0	0.000
28.750	0.000	0.00	0.00	0.00	0.0	0.000
28.766	0.000	0.00	0.00	0.00	0.0	0.000
28.783	0.000	0.00	0.00	0.00	0.0	0.000
28.800	0.000	0.00	0.00	0.00	0.0	0.000
28.816	0.000	0.00	0.00	0.00	0.0	0.000
28.833	0.000	0.00	0.00	0.00	0.0	0.000
28.850	0.000	0.00	0.00	0.00	0.0	0.000
28.866	0.000	0.00	0.00	0.00	0.0	0.000
28.883	0.000	0.00	0.00	0.00	0.0	0.000
28.900	0.000	0.00	0.00	0.00	0.0	0.000
28.916	0.000	0.00	0.00	0.00	0.0	0.000
28.933	0.000	0.00	0.00	0.00	0.0	0.000
28.950	0.000	0.00	0.00	0.00	0.0	0.000
28.966	0.000	0.00	0.00	0.00	0.0	0.000
28.983	0.000	0.00	0.00	0.00	0.0	0.000
29.000	0.000	0.00	0.00	0.00	0.0	0.000
29.016	0.000	0.00	0.00	0.00	0.0	0.000
29.033	0.000	0.00	0.00	0.00	0.0	0.000
29.050	0.000	0.00	0.00	0.00	0.0	0.000
29.066	0.000	0.00	0.00	0.00	0.0	0.000

29.083	0.000	0.00	0.00	0.00	0.0	0.000
29.100	0.000	0.00	0.00	0.00	0.0	0.000
29.116	0.000	0.00	0.00	0.00	0.0	0.000
29.133	0.000	0.00	0.00	0.00	0.0	0.000
29.150	0.000	0.00	0.00	0.00	0.0	0.000
29.166	0.000	0.00	0.00	0.00	0.0	0.000
29.183	0.000	0.00	0.00	0.00	0.0	0.000
29.200	0.000	0.00	0.00	0.00	0.0	0.000
29.216	0.000	0.00	0.00	0.00	0.0	0.000
29.233	0.000	0.00	0.00	0.00	0.0	0.000
29.250	0.000	0.00	0.00	0.00	0.0	0.000
29.266	0.000	0.00	0.00	0.00	0.0	0.000
29.283	0.000	0.00	0.00	0.00	0.0	0.000
29.300	0.000	0.00	0.00	0.00	0.0	0.000
29.316	0.000	0.00	0.00	0.00	0.0	0.000
29.333	0.000	0.00	0.00	0.00	0.0	0.000
29.350	0.000	0.00	0.00	0.00	0.0	0.000
29.366	0.000	0.00	0.00	0.00	0.0	0.000
29.383	0.000	0.00	0.00	0.00	0.0	0.000
29.400	0.000	0.00	0.00	0.00	0.0	0.000
29.416	0.000	0.00	0.00	0.00	0.0	0.000
29.433	0.000	0.00	0.00	0.00	0.0	0.000
29.450	0.000	0.00	0.00	0.00	0.0	0.000
29.466	0.000	0.00	0.00	0.00	0.0	0.000
29.483	0.000	0.00	0.00	0.00	0.0	0.000
29.500	0.000	0.00	0.00	0.00	0.0	0.000
29.516	0.000	0.00	0.00	0.00	0.0	0.000
29.533	0.000	0.00	0.00	0.00	0.0	0.000
29.550	0.000	0.00	0.00	0.00	0.0	0.000
29.566	0.000	0.00	0.00	0.00	0.0	0.000
29.583	0.000	0.00	0.00	0.00	0.0	0.000
29.600	0.000	0.00	0.00	0.00	0.0	0.000
29.616	0.000	0.00	0.00	0.00	0.0	0.000
29.633	0.000	0.00	0.00	0.00	0.0	0.000
29.650	0.000	0.00	0.00	0.00	0.0	0.000
29.666	0.000	0.00	0.00	0.00	0.0	0.000
29.683	0.000	0.00	0.00	0.00	0.0	0.000
29.700	0.000	0.00	0.00	0.00	0.0	0.000
29.716	0.000	0.00	0.00	0.00	0.0	0.000
29.733	0.000	0.00	0.00	0.00	0.0	0.000
29.750	0.000	0.00	0.00	0.00	0.0	0.000
29.766	0.000	0.00	0.00	0.00	0.0	0.000
29.783	0.000	0.00	0.00	0.00	0.0	0.000
29.800	0.000	0.00	0.00	0.00	0.0	0.000
29.816	0.000	0.00	0.00	0.00	0.0	0.000
29.833	0.000	0.00	0.00	0.00	0.0	0.000
29.850	0.000	0.00	0.00	0.00	0.0	0.000
29.866	0.000	0.00	0.00	0.00	0.0	0.000
29.883	0.000	0.00	0.00	0.00	0.0	0.000
29.900	0.000	0.00	0.00	0.00	0.0	0.000

29.916	0.000	0.00	0.00	0.00	0.0	0.000
29.933	0.000	0.00	0.00	0.00	0.0	0.000
29.950	0.000	0.00	0.00	0.00	0.0	0.000
29.966	0.000	0.00	0.00	0.00	0.0	0.000
29.983	0.000	0.00	0.00	0.00	0.0	0.000
30.000	0.000	0.00	0.00	0.00	0.0	0.000
30.016	0.000	0.00	0.00	0.00	0.0	0.000
30.033	0.000	0.00	0.00	0.00	0.0	0.000
30.050	0.000	0.00	0.00	0.00	0.0	0.000
30.066	0.000	0.00	0.00	0.00	0.0	0.000
30.083	0.000	0.00	0.00	0.00	0.0	0.000
30.100	0.000	0.00	0.00	0.00	0.0	0.000
30.116	0.000	0.00	0.00	0.00	0.0	0.000
30.133	0.000	0.00	0.00	0.00	0.0	0.000
30.150	0.000	0.00	0.00	0.00	0.0	0.000
30.166	0.000	0.00	0.00	0.00	0.0	0.000
30.183	0.000	0.00	0.00	0.00	0.0	0.000
30.200	0.000	0.00	0.00	0.00	0.0	0.000
30.216	0.000	0.00	0.00	0.00	0.0	0.000
30.233	0.000	0.00	0.00	0.00	0.0	0.000
30.250	0.000	0.00	0.00	0.00	0.0	0.000
30.266	0.000	0.00	0.00	0.00	0.0	0.000
30.283	0.000	0.00	0.00	0.00	0.0	0.000
30.300	0.000	0.00	0.00	0.00	0.0	0.000
30.316	0.000	0.00	0.00	0.00	0.0	0.000
30.333	0.000	0.00	0.00	0.00	0.0	0.000
30.350	0.000	0.00	0.00	0.00	0.0	0.000
30.366	0.000	0.00	0.00	0.00	0.0	0.000
30.383	0.000	0.00	0.00	0.00	0.0	0.000
30.400	0.000	0.00	0.00	0.00	0.0	0.000
30.416	0.000	0.00	0.00	0.00	0.0	0.000
30.433	0.000	0.00	0.00	0.00	0.0	0.000
30.450	0.000	0.00	0.00	0.00	0.0	0.000
30.466	0.000	0.00	0.00	0.00	0.0	0.000
30.483	0.000	0.00	0.00	0.00	0.0	0.000
30.500	0.000	0.00	0.00	0.00	0.0	0.000
30.516	0.000	0.00	0.00	0.00	0.0	0.000
30.533	0.000	0.00	0.00	0.00	0.0	0.000
30.550	0.000	0.00	0.00	0.00	0.0	0.000
30.566	0.000	0.00	0.00	0.00	0.0	0.000
30.583	0.000	0.00	0.00	0.00	0.0	0.000
30.600	0.000	0.00	0.00	0.00	0.0	0.000
30.616	0.000	0.00	0.00	0.00	0.0	0.000
30.633	0.000	0.00	0.00	0.00	0.0	0.000
30.650	0.000	0.00	0.00	0.00	0.0	0.000
30.666	0.000	0.00	0.00	0.00	0.0	0.000
30.683	0.000	0.00	0.00	0.00	0.0	0.000
30.700	0.000	0.00	0.00	0.00	0.0	0.000
30.716	0.000	0.00	0.00	0.00	0.0	0.000
30.733	0.000	0.00	0.00	0.00	0.0	0.000

30.750	0.000	0.00	0.00	0.00	0.0	0.000
30.766	0.000	0.00	0.00	0.00	0.0	0.000
30.783	0.000	0.00	0.00	0.00	0.0	0.000
30.800	0.000	0.00	0.00	0.00	0.0	0.000
30.816	0.000	0.00	0.00	0.00	0.0	0.000
30.833	0.000	0.00	0.00	0.00	0.0	0.000
30.850	0.000	0.00	0.00	0.00	0.0	0.000
30.866	0.000	0.00	0.00	0.00	0.0	0.000
30.883	0.000	0.00	0.00	0.00	0.0	0.000
30.900	0.000	0.00	0.00	0.00	0.0	0.000
30.916	0.000	0.00	0.00	0.00	0.0	0.000
30.933	0.000	0.00	0.00	0.00	0.0	0.000
30.950	0.000	0.00	0.00	0.00	0.0	0.000
30.966	0.000	0.00	0.00	0.00	0.0	0.000
30.983	0.000	0.00	0.00	0.00	0.0	0.000
31.000	0.000	0.00	0.00	0.00	0.0	0.000
31.016	0.000	0.00	0.00	0.00	0.0	0.000
31.033	0.000	0.00	0.00	0.00	0.0	0.000
31.050	0.000	0.00	0.00	0.00	0.0	0.000
31.066	0.000	0.00	0.00	0.00	0.0	0.000
31.083	0.000	0.00	0.00	0.00	0.0	0.000
31.100	0.000	0.00	0.00	0.00	0.0	0.000
31.116	0.000	0.00	0.00	0.00	0.0	0.000
31.133	0.000	0.00	0.00	0.00	0.0	0.000
31.150	0.000	0.00	0.00	0.00	0.0	0.000
31.166	0.000	0.00	0.00	0.00	0.0	0.000
31.183	0.000	0.00	0.00	0.00	0.0	0.000
31.200	0.000	0.00	0.00	0.00	0.0	0.000
31.216	0.000	0.00	0.00	0.00	0.0	0.000
31.233	0.000	0.00	0.00	0.00	0.0	0.000
31.250	0.000	0.00	0.00	0.00	0.0	0.000
31.266	0.000	0.00	0.00	0.00	0.0	0.000
31.283	0.000	0.00	0.00	0.00	0.0	0.000
31.300	0.000	0.00	0.00	0.00	0.0	0.000
31.316	0.000	0.00	0.00	0.00	0.0	0.000
31.333	0.000	0.00	0.00	0.00	0.0	0.000
31.350	0.000	0.00	0.00	0.00	0.0	0.000
31.366	0.000	0.00	0.00	0.00	0.0	0.000
31.383	0.000	0.00	0.00	0.00	0.0	0.000
31.400	0.000	0.00	0.00	0.00	0.0	0.000
31.416	0.000	0.00	0.00	0.00	0.0	0.000
31.433	0.000	0.00	0.00	0.00	0.0	0.000
31.450	0.000	0.00	0.00	0.00	0.0	0.000
31.466	0.000	0.00	0.00	0.00	0.0	0.000
31.483	0.000	0.00	0.00	0.00	0.0	0.000
31.500	0.000	0.00	0.00	0.00	0.0	0.000
31.516	0.000	0.00	0.00	0.00	0.0	0.000
31.533	0.000	0.00	0.00	0.00	0.0	0.000
31.550	0.000	0.00	0.00	0.00	0.0	0.000
31.566	0.000	0.00	0.00	0.00	0.0	0.000

31.583	0.000	0.00	0.00	0.00	0.0	0.000
31.600	0.000	0.00	0.00	0.00	0.0	0.000
31.616	0.000	0.00	0.00	0.00	0.0	0.000
31.633	0.000	0.00	0.00	0.00	0.0	0.000
31.650	0.000	0.00	0.00	0.00	0.0	0.000
31.666	0.000	0.00	0.00	0.00	0.0	0.000
31.683	0.000	0.00	0.00	0.00	0.0	0.000
31.700	0.000	0.00	0.00	0.00	0.0	0.000
31.716	0.000	0.00	0.00	0.00	0.0	0.000
31.733	0.000	0.00	0.00	0.00	0.0	0.000
31.750	0.000	0.00	0.00	0.00	0.0	0.000
31.766	0.000	0.00	0.00	0.00	0.0	0.000
31.783	0.000	0.00	0.00	0.00	0.0	0.000
31.800	0.000	0.00	0.00	0.00	0.0	0.000
31.816	0.000	0.00	0.00	0.00	0.0	0.000
31.833	0.000	0.00	0.00	0.00	0.0	0.000
31.850	0.000	0.00	0.00	0.00	0.0	0.000
31.866	0.000	0.00	0.00	0.00	0.0	0.000
31.883	0.000	0.00	0.00	0.00	0.0	0.000
31.900	0.000	0.00	0.00	0.00	0.0	0.000
31.916	0.000	0.00	0.00	0.00	0.0	0.000
31.933	0.000	0.00	0.00	0.00	0.0	0.000
31.950	0.000	0.00	0.00	0.00	0.0	0.000
31.966	0.000	0.00	0.00	0.00	0.0	0.000
31.983	0.000	0.00	0.00	0.00	0.0	0.000
32.000	0.000	0.00	0.00	0.00	0.0	0.000
32.016	0.000	0.00	0.00	0.00	0.0	0.000
32.033	0.000	0.00	0.00	0.00	0.0	0.000
32.050	0.000	0.00	0.00	0.00	0.0	0.000
32.066	0.000	0.00	0.00	0.00	0.0	0.000
32.083	0.000	0.00	0.00	0.00	0.0	0.000
32.100	0.000	0.00	0.00	0.00	0.0	0.000
32.116	0.000	0.00	0.00	0.00	0.0	0.000
32.133	0.000	0.00	0.00	0.00	0.0	0.000
32.150	0.000	0.00	0.00	0.00	0.0	0.000
32.166	0.000	0.00	0.00	0.00	0.0	0.000
32.183	0.000	0.00	0.00	0.00	0.0	0.000
32.200	0.000	0.00	0.00	0.00	0.0	0.000
32.216	0.000	0.00	0.00	0.00	0.0	0.000
32.233	0.000	0.00	0.00	0.00	0.0	0.000
32.250	0.000	0.00	0.00	0.00	0.0	0.000
32.266	0.000	0.00	0.00	0.00	0.0	0.000
32.283	0.000	0.00	0.00	0.00	0.0	0.000
32.300	0.000	0.00	0.00	0.00	0.0	0.000
32.316	0.000	0.00	0.00	0.00	0.0	0.000
32.333	0.000	0.00	0.00	0.00	0.0	0.000
32.350	0.000	0.00	0.00	0.00	0.0	0.000
32.366	0.000	0.00	0.00	0.00	0.0	0.000
32.383	0.000	0.00	0.00	0.00	0.0	0.000
32.400	0.000	0.00	0.00	0.00	0.0	0.000

32.416	0.000	0.00	0.00	0.00	0.0	0.000
32.433	0.000	0.00	0.00	0.00	0.0	0.000
32.450	0.000	0.00	0.00	0.00	0.0	0.000
32.466	0.000	0.00	0.00	0.00	0.0	0.000
32.483	0.000	0.00	0.00	0.00	0.0	0.000
32.500	0.000	0.00	0.00	0.00	0.0	0.000
32.516	0.000	0.00	0.00	0.00	0.0	0.000
32.533	0.000	0.00	0.00	0.00	0.0	0.000
32.550	0.000	0.00	0.00	0.00	0.0	0.000
32.566	0.000	0.00	0.00	0.00	0.0	0.000
32.583	0.000	0.00	0.00	0.00	0.0	0.000
32.600	0.000	0.00	0.00	0.00	0.0	0.000
32.616	0.000	0.00	0.00	0.00	0.0	0.000
32.633	0.000	0.00	0.00	0.00	0.0	0.000
32.650	0.000	0.00	0.00	0.00	0.0	0.000
32.666	0.000	0.00	0.00	0.00	0.0	0.000
32.683	0.000	0.00	0.00	0.00	0.0	0.000
32.700	0.000	0.00	0.00	0.00	0.0	0.000
32.716	0.000	0.00	0.00	0.00	0.0	0.000
32.733	0.000	0.00	0.00	0.00	0.0	0.000
32.750	0.000	0.00	0.00	0.00	0.0	0.000
32.766	0.000	0.00	0.00	0.00	0.0	0.000
32.783	0.000	0.00	0.00	0.00	0.0	0.000
32.800	0.000	0.00	0.00	0.00	0.0	0.000
32.816	0.000	0.00	0.00	0.00	0.0	0.000
32.833	0.000	0.00	0.00	0.00	0.0	0.000
32.850	0.000	0.00	0.00	0.00	0.0	0.000
32.866	0.000	0.00	0.00	0.00	0.0	0.000
32.883	0.000	0.00	0.00	0.00	0.0	0.000
32.900	0.000	0.00	0.00	0.00	0.0	0.000
32.916	0.000	0.00	0.00	0.00	0.0	0.000
32.933	0.000	0.00	0.00	0.00	0.0	0.000
32.950	0.000	0.00	0.00	0.00	0.0	0.000
32.966	0.000	0.00	0.00	0.00	0.0	0.000
32.983	0.000	0.00	0.00	0.00	0.0	0.000
33.000	0.000	0.00	0.00	0.00	0.0	0.000
33.016	0.000	0.00	0.00	0.00	0.0	0.000
33.033	0.000	0.00	0.00	0.00	0.0	0.000
33.050	0.000	0.00	0.00	0.00	0.0	0.000
33.066	0.000	0.00	0.00	0.00	0.0	0.000
33.083	0.000	0.00	0.00	0.00	0.0	0.000
33.100	0.000	0.00	0.00	0.00	0.0	0.000
33.116	0.000	0.00	0.00	0.00	0.0	0.000
33.133	0.000	0.00	0.00	0.00	0.0	0.000
33.150	0.000	0.00	0.00	0.00	0.0	0.000
33.166	0.000	0.00	0.00	0.00	0.0	0.000
33.183	0.000	0.00	0.00	0.00	0.0	0.000
33.200	0.000	0.00	0.00	0.00	0.0	0.000
33.216	0.000	0.00	0.00	0.00	0.0	0.000
33.233	0.000	0.00	0.00	0.00	0.0	0.000

33.250	0.000	0.00	0.00	0.00	0.0	0.000
33.266	0.000	0.00	0.00	0.00	0.0	0.000
33.283	0.000	0.00	0.00	0.00	0.0	0.000
33.300	0.000	0.00	0.00	0.00	0.0	0.000
33.316	0.000	0.00	0.00	0.00	0.0	0.000
33.333	0.000	0.00	0.00	0.00	0.0	0.000
33.350	0.000	0.00	0.00	0.00	0.0	0.000
33.366	0.000	0.00	0.00	0.00	0.0	0.000
33.383	0.000	0.00	0.00	0.00	0.0	0.000
33.400	0.000	0.00	0.00	0.00	0.0	0.000
33.416	0.000	0.00	0.00	0.00	0.0	0.000
33.433	0.000	0.00	0.00	0.00	0.0	0.000
33.450	0.000	0.00	0.00	0.00	0.0	0.000
33.466	0.000	0.00	0.00	0.00	0.0	0.000
33.483	0.000	0.00	0.00	0.00	0.0	0.000
33.500	0.000	0.00	0.00	0.00	0.0	0.000
33.516	0.000	0.00	0.00	0.00	0.0	0.000
33.533	0.000	0.00	0.00	0.00	0.0	0.000
33.550	0.000	0.00	0.00	0.00	0.0	0.000
33.566	0.000	0.00	0.00	0.00	0.0	0.000
33.583	0.000	0.00	0.00	0.00	0.0	0.000
33.600	0.000	0.00	0.00	0.00	0.0	0.000
33.616	0.000	0.00	0.00	0.00	0.0	0.000
33.633	0.000	0.00	0.00	0.00	0.0	0.000
33.650	0.000	0.00	0.00	0.00	0.0	0.000
33.666	0.000	0.00	0.00	0.00	0.0	0.000
33.683	0.000	0.00	0.00	0.00	0.0	0.000
33.700	0.000	0.00	0.00	0.00	0.0	0.000
33.716	0.000	0.00	0.00	0.00	0.0	0.000
33.733	0.000	0.00	0.00	0.00	0.0	0.000
33.750	0.000	0.00	0.00	0.00	0.0	0.000
33.766	0.000	0.00	0.00	0.00	0.0	0.000
33.783	0.000	0.00	0.00	0.00	0.0	0.000
33.800	0.000	0.00	0.00	0.00	0.0	0.000
33.816	0.000	0.00	0.00	0.00	0.0	0.000
33.833	0.000	0.00	0.00	0.00	0.0	0.000
33.850	0.000	0.00	0.00	0.00	0.0	0.000
33.866	0.000	0.00	0.00	0.00	0.0	0.000
33.883	0.000	0.00	0.00	0.00	0.0	0.000
33.900	0.000	0.00	0.00	0.00	0.0	0.000
33.916	0.000	0.00	0.00	0.00	0.0	0.000
33.933	0.000	0.00	0.00	0.00	0.0	0.000
33.950	0.000	0.00	0.00	0.00	0.0	0.000
33.966	0.000	0.00	0.00	0.00	0.0	0.000
33.983	0.000	0.00	0.00	0.00	0.0	0.000
34.000	0.000	0.00	0.00	0.00	0.0	0.000
34.016	0.000	0.00	0.00	0.00	0.0	0.000
34.033	0.000	0.00	0.00	0.00	0.0	0.000
34.050	0.000	0.00	0.00	0.00	0.0	0.000
34.066	0.000	0.00	0.00	0.00	0.0	0.000

34.083	0.000	0.00	0.00	0.00	0.0	0.000
34.100	0.000	0.00	0.00	0.00	0.0	0.000
34.116	0.000	0.00	0.00	0.00	0.0	0.000
34.133	0.000	0.00	0.00	0.00	0.0	0.000
34.150	0.000	0.00	0.00	0.00	0.0	0.000
34.166	0.000	0.00	0.00	0.00	0.0	0.000
34.183	0.000	0.00	0.00	0.00	0.0	0.000
34.200	0.000	0.00	0.00	0.00	0.0	0.000
34.216	0.000	0.00	0.00	0.00	0.0	0.000
34.233	0.000	0.00	0.00	0.00	0.0	0.000
34.250	0.000	0.00	0.00	0.00	0.0	0.000
34.266	0.000	0.00	0.00	0.00	0.0	0.000
34.283	0.000	0.00	0.00	0.00	0.0	0.000
34.300	0.000	0.00	0.00	0.00	0.0	0.000
34.316	0.000	0.00	0.00	0.00	0.0	0.000
34.333	0.000	0.00	0.00	0.00	0.0	0.000
34.350	0.000	0.00	0.00	0.00	0.0	0.000
34.366	0.000	0.00	0.00	0.00	0.0	0.000
34.383	0.000	0.00	0.00	0.00	0.0	0.000
34.400	0.000	0.00	0.00	0.00	0.0	0.000
34.416	0.000	0.00	0.00	0.00	0.0	0.000
34.433	0.000	0.00	0.00	0.00	0.0	0.000
34.450	0.000	0.00	0.00	0.00	0.0	0.000
34.466	0.000	0.00	0.00	0.00	0.0	0.000
34.483	0.000	0.00	0.00	0.00	0.0	0.000
34.500	0.000	0.00	0.00	0.00	0.0	0.000
34.516	0.000	0.00	0.00	0.00	0.0	0.000
34.533	0.000	0.00	0.00	0.00	0.0	0.000
34.550	0.000	0.00	0.00	0.00	0.0	0.000
34.566	0.000	0.00	0.00	0.00	0.0	0.000
34.583	0.000	0.00	0.00	0.00	0.0	0.000
34.600	0.000	0.00	0.00	0.00	0.0	0.000
34.616	0.000	0.00	0.00	0.00	0.0	0.000
34.633	0.000	0.00	0.00	0.00	0.0	0.000
34.650	0.000	0.00	0.00	0.00	0.0	0.000
34.666	0.000	0.00	0.00	0.00	0.0	0.000
34.683	0.000	0.00	0.00	0.00	0.0	0.000
34.700	0.000	0.00	0.00	0.00	0.0	0.000
34.716	0.000	0.00	0.00	0.00	0.0	0.000
34.733	0.000	0.00	0.00	0.00	0.0	0.000
34.750	0.000	0.00	0.00	0.00	0.0	0.000
34.766	0.000	0.00	0.00	0.00	0.0	0.000
34.783	0.000	0.00	0.00	0.00	0.0	0.000
34.800	0.000	0.00	0.00	0.00	0.0	0.000
34.816	0.000	0.00	0.00	0.00	0.0	0.000
34.833	0.000	0.00	0.00	0.00	0.0	0.000
34.850	0.000	0.00	0.00	0.00	0.0	0.000
34.866	0.000	0.00	0.00	0.00	0.0	0.000
34.883	0.000	0.00	0.00	0.00	0.0	0.000
34.900	0.000	0.00	0.00	0.00	0.0	0.000

34.916	0.000	0.00	0.00	0.00	0.0	0.000
34.933	0.000	0.00	0.00	0.00	0.0	0.000
34.950	0.000	0.00	0.00	0.00	0.0	0.000
34.966	0.000	0.00	0.00	0.00	0.0	0.000
34.983	0.000	0.00	0.00	0.00	0.0	0.000
35.000	0.000	0.00	0.00	0.00	0.0	0.000
35.016	0.000	0.00	0.00	0.00	0.0	0.000
35.033	0.000	0.00	0.00	0.00	0.0	0.000
35.050	0.000	0.00	0.00	0.00	0.0	0.000
35.066	0.000	0.00	0.00	0.00	0.0	0.000
35.083	0.000	0.00	0.00	0.00	0.0	0.000
35.100	0.000	0.00	0.00	0.00	0.0	0.000
35.116	0.000	0.00	0.00	0.00	0.0	0.000
35.133	0.000	0.00	0.00	0.00	0.0	0.000
35.150	0.000	0.00	0.00	0.00	0.0	0.000
35.166	0.000	0.00	0.00	0.00	0.0	0.000
35.183	0.000	0.00	0.00	0.00	0.0	0.000
35.200	0.000	0.00	0.00	0.00	0.0	0.000
35.216	0.000	0.00	0.00	0.00	0.0	0.000
35.233	0.000	0.00	0.00	0.00	0.0	0.000
35.250	0.000	0.00	0.00	0.00	0.0	0.000
35.266	0.000	0.00	0.00	0.00	0.0	0.000
35.283	0.000	0.00	0.00	0.00	0.0	0.000
35.300	0.000	0.00	0.00	0.00	0.0	0.000
35.316	0.000	0.00	0.00	0.00	0.0	0.000
35.333	0.000	0.00	0.00	0.00	0.0	0.000
35.350	0.000	0.00	0.00	0.00	0.0	0.000
35.366	0.000	0.00	0.00	0.00	0.0	0.000
35.383	0.000	0.00	0.00	0.00	0.0	0.000
35.400	0.000	0.00	0.00	0.00	0.0	0.000
35.416	0.000	0.00	0.00	0.00	0.0	0.000
35.433	0.000	0.00	0.00	0.00	0.0	0.000
35.450	0.000	0.00	0.00	0.00	0.0	0.000
35.466	0.000	0.00	0.00	0.00	0.0	0.000
35.483	0.000	0.00	0.00	0.00	0.0	0.000
35.500	0.000	0.00	0.00	0.00	0.0	0.000
35.516	0.000	0.00	0.00	0.00	0.0	0.000
35.533	0.000	0.00	0.00	0.00	0.0	0.000
35.550	0.000	0.00	0.00	0.00	0.0	0.000
35.566	0.000	0.00	0.00	0.00	0.0	0.000
35.583	0.000	0.00	0.00	0.00	0.0	0.000
35.600	0.000	0.00	0.00	0.00	0.0	0.000
35.616	0.000	0.00	0.00	0.00	0.0	0.000
35.633	0.000	0.00	0.00	0.00	0.0	0.000
35.650	0.000	0.00	0.00	0.00	0.0	0.000
35.666	0.000	0.00	0.00	0.00	0.0	0.000
35.683	0.000	0.00	0.00	0.00	0.0	0.000
35.700	0.000	0.00	0.00	0.00	0.0	0.000
35.716	0.000	0.00	0.00	0.00	0.0	0.000
35.733	0.000	0.00	0.00	0.00	0.0	0.000

35.750	0.000	0.00	0.00	0.00	0.0	0.000
35.766	0.000	0.00	0.00	0.00	0.0	0.000
35.783	0.000	0.00	0.00	0.00	0.0	0.000
35.800	0.000	0.00	0.00	0.00	0.0	0.000
35.816	0.000	0.00	0.00	0.00	0.0	0.000
35.833	0.000	0.00	0.00	0.00	0.0	0.000
35.850	0.000	0.00	0.00	0.00	0.0	0.000
35.866	0.000	0.00	0.00	0.00	0.0	0.000
35.883	0.000	0.00	0.00	0.00	0.0	0.000
35.900	0.000	0.00	0.00	0.00	0.0	0.000
35.916	0.000	0.00	0.00	0.00	0.0	0.000
35.933	0.000	0.00	0.00	0.00	0.0	0.000
35.950	0.000	0.00	0.00	0.00	0.0	0.000
35.966	0.000	0.00	0.00	0.00	0.0	0.000
35.983	0.000	0.00	0.00	0.00	0.0	0.000
36.000	0.000	0.00	0.00	0.00	0.0	0.000
36.016	0.000	0.00	0.00	0.00	0.0	0.000
36.033	0.000	0.00	0.00	0.00	0.0	0.000
36.050	0.000	0.00	0.00	0.00	0.0	0.000
36.066	0.000	0.00	0.00	0.00	0.0	0.000
36.083	0.000	0.00	0.00	0.00	0.0	0.000
36.100	0.000	0.00	0.00	0.00	0.0	0.000
36.116	0.000	0.00	0.00	0.00	0.0	0.000
36.133	0.000	0.00	0.00	0.00	0.0	0.000
36.150	0.000	0.00	0.00	0.00	0.0	0.000
36.166	0.000	0.00	0.00	0.00	0.0	0.000
36.183	0.000	0.00	0.00	0.00	0.0	0.000
36.200	0.000	0.00	0.00	0.00	0.0	0.000
36.216	0.000	0.00	0.00	0.00	0.0	0.000
36.233	0.000	0.00	0.00	0.00	0.0	0.000
36.250	0.000	0.00	0.00	0.00	0.0	0.000
36.266	0.000	0.00	0.00	0.00	0.0	0.000
36.283	0.000	0.00	0.00	0.00	0.0	0.000
36.300	0.000	0.00	0.00	0.00	0.0	0.000
36.316	0.000	0.00	0.00	0.00	0.0	0.000
36.333	0.000	0.00	0.00	0.00	0.0	0.000
36.350	0.000	0.00	0.00	0.00	0.0	0.000
36.366	0.000	0.00	0.00	0.00	0.0	0.000
36.383	0.000	0.00	0.00	0.00	0.0	0.000
36.400	0.000	0.00	0.00	0.00	0.0	0.000
36.416	0.000	0.00	0.00	0.00	0.0	0.000
36.433	0.000	0.00	0.00	0.00	0.0	0.000
36.450	0.000	0.00	0.00	0.00	0.0	0.000
36.466	0.000	0.00	0.00	0.00	0.0	0.000
36.483	0.000	0.00	0.00	0.00	0.0	0.000
36.500	0.000	0.00	0.00	0.00	0.0	0.000
36.516	0.000	0.00	0.00	0.00	0.0	0.000
36.533	0.000	0.00	0.00	0.00	0.0	0.000
36.550	0.000	0.00	0.00	0.00	0.0	0.000
36.566	0.000	0.00	0.00	0.00	0.0	0.000

36.583	0.000	0.00	0.00	0.00	0.0	0.000
36.600	0.000	0.00	0.00	0.00	0.0	0.000
36.616	0.000	0.00	0.00	0.00	0.0	0.000
36.633	0.000	0.00	0.00	0.00	0.0	0.000
36.650	0.000	0.00	0.00	0.00	0.0	0.000
36.666	0.000	0.00	0.00	0.00	0.0	0.000
36.683	0.000	0.00	0.00	0.00	0.0	0.000
36.700	0.000	0.00	0.00	0.00	0.0	0.000
36.716	0.000	0.00	0.00	0.00	0.0	0.000
36.733	0.000	0.00	0.00	0.00	0.0	0.000
36.750	0.000	0.00	0.00	0.00	0.0	0.000
36.766	0.000	0.00	0.00	0.00	0.0	0.000
36.783	0.000	0.00	0.00	0.00	0.0	0.000
36.800	0.000	0.00	0.00	0.00	0.0	0.000
36.816	0.000	0.00	0.00	0.00	0.0	0.000
36.833	0.000	0.00	0.00	0.00	0.0	0.000
36.850	0.000	0.00	0.00	0.00	0.0	0.000
36.866	0.000	0.00	0.00	0.00	0.0	0.000
36.883	0.000	0.00	0.00	0.00	0.0	0.000
36.900	0.000	0.00	0.00	0.00	0.0	0.000
36.916	0.000	0.00	0.00	0.00	0.0	0.000
36.933	0.000	0.00	0.00	0.00	0.0	0.000
36.950	0.000	0.00	0.00	0.00	0.0	0.000
36.966	0.000	0.00	0.00	0.00	0.0	0.000
36.983	0.000	0.00	0.00	0.00	0.0	0.000
37.000	0.000	0.00	0.00	0.00	0.0	0.000
37.016	0.000	0.00	0.00	0.00	0.0	0.000
37.033	0.000	0.00	0.00	0.00	0.0	0.000
37.050	0.000	0.00	0.00	0.00	0.0	0.000
37.066	0.000	0.00	0.00	0.00	0.0	0.000
37.083	0.000	0.00	0.00	0.00	0.0	0.000
37.100	0.000	0.00	0.00	0.00	0.0	0.000
37.116	0.000	0.00	0.00	0.00	0.0	0.000
37.133	0.000	0.00	0.00	0.00	0.0	0.000
37.150	0.000	0.00	0.00	0.00	0.0	0.000
37.166	0.000	0.00	0.00	0.00	0.0	0.000
37.183	0.000	0.00	0.00	0.00	0.0	0.000
37.200	0.000	0.00	0.00	0.00	0.0	0.000
37.216	0.000	0.00	0.00	0.00	0.0	0.000
37.233	0.000	0.00	0.00	0.00	0.0	0.000
37.250	0.000	0.00	0.00	0.00	0.0	0.000
37.266	0.000	0.00	0.00	0.00	0.0	0.000
37.283	0.000	0.00	0.00	0.00	0.0	0.000
37.300	0.000	0.00	0.00	0.00	0.0	0.000
37.316	0.000	0.00	0.00	0.00	0.0	0.000
37.333	0.000	0.00	0.00	0.00	0.0	0.000
37.350	0.000	0.00	0.00	0.00	0.0	0.000
37.366	0.000	0.00	0.00	0.00	0.0	0.000
37.383	0.000	0.00	0.00	0.00	0.0	0.000
37.400	0.000	0.00	0.00	0.00	0.0	0.000

37.416	0.000	0.00	0.00	0.00	0.0	0.000
37.433	0.000	0.00	0.00	0.00	0.0	0.000
37.450	0.000	0.00	0.00	0.00	0.0	0.000
37.466	0.000	0.00	0.00	0.00	0.0	0.000
37.483	0.000	0.00	0.00	0.00	0.0	0.000
37.500	0.000	0.00	0.00	0.00	0.0	0.000
37.516	0.000	0.00	0.00	0.00	0.0	0.000
37.533	0.000	0.00	0.00	0.00	0.0	0.000
37.550	0.000	0.00	0.00	0.00	0.0	0.000
37.566	0.000	0.00	0.00	0.00	0.0	0.000
37.583	0.000	0.00	0.00	0.00	0.0	0.000
37.600	0.000	0.00	0.00	0.00	0.0	0.000
37.616	0.000	0.00	0.00	0.00	0.0	0.000
37.633	0.000	0.00	0.00	0.00	0.0	0.000
37.650	0.000	0.00	0.00	0.00	0.0	0.000
37.666	0.000	0.00	0.00	0.00	0.0	0.000
37.683	0.000	0.00	0.00	0.00	0.0	0.000
37.700	0.000	0.00	0.00	0.00	0.0	0.000
37.716	0.000	0.00	0.00	0.00	0.0	0.000
37.733	0.000	0.00	0.00	0.00	0.0	0.000
37.750	0.000	0.00	0.00	0.00	0.0	0.000
37.766	0.000	0.00	0.00	0.00	0.0	0.000
37.783	0.000	0.00	0.00	0.00	0.0	0.000
37.800	0.000	0.00	0.00	0.00	0.0	0.000
37.816	0.000	0.00	0.00	0.00	0.0	0.000
37.833	0.000	0.00	0.00	0.00	0.0	0.000
37.850	0.000	0.00	0.00	0.00	0.0	0.000
37.866	0.000	0.00	0.00	0.00	0.0	0.000
37.883	0.000	0.00	0.00	0.00	0.0	0.000
37.900	0.000	0.00	0.00	0.00	0.0	0.000
37.916	0.000	0.00	0.00	0.00	0.0	0.000
37.933	0.000	0.00	0.00	0.00	0.0	0.000
37.950	0.000	0.00	0.00	0.00	0.0	0.000
37.966	0.000	0.00	0.00	0.00	0.0	0.000
37.983	0.000	0.00	0.00	0.00	0.0	0.000
38.000	0.000	0.00	0.00	0.00	0.0	0.000
38.016	0.000	0.00	0.00	0.00	0.0	0.000
38.033	0.000	0.00	0.00	0.00	0.0	0.000
38.050	0.000	0.00	0.00	0.00	0.0	0.000
38.066	0.000	0.00	0.00	0.00	0.0	0.000
38.083	0.000	0.00	0.00	0.00	0.0	0.000
38.100	0.000	0.00	0.00	0.00	0.0	0.000
38.116	0.000	0.00	0.00	0.00	0.0	0.000
38.133	0.000	0.00	0.00	0.00	0.0	0.000
38.150	0.000	0.00	0.00	0.00	0.0	0.000
38.166	0.000	0.00	0.00	0.00	0.0	0.000
38.183	0.000	0.00	0.00	0.00	0.0	0.000
38.200	0.000	0.00	0.00	0.00	0.0	0.000
38.216	0.000	0.00	0.00	0.00	0.0	0.000
38.233	0.000	0.00	0.00	0.00	0.0	0.000

38.250	0.000	0.00	0.00	0.00	0.0	0.000
38.266	0.000	0.00	0.00	0.00	0.0	0.000
38.283	0.000	0.00	0.00	0.00	0.0	0.000
38.300	0.000	0.00	0.00	0.00	0.0	0.000
38.316	0.000	0.00	0.00	0.00	0.0	0.000
38.333	0.000	0.00	0.00	0.00	0.0	0.000
38.350	0.000	0.00	0.00	0.00	0.0	0.000
38.366	0.000	0.00	0.00	0.00	0.0	0.000
38.383	0.000	0.00	0.00	0.00	0.0	0.000
38.400	0.000	0.00	0.00	0.00	0.0	0.000
38.416	0.000	0.00	0.00	0.00	0.0	0.000
38.433	0.000	0.00	0.00	0.00	0.0	0.000
38.450	0.000	0.00	0.00	0.00	0.0	0.000
38.466	0.000	0.00	0.00	0.00	0.0	0.000
38.483	0.000	0.00	0.00	0.00	0.0	0.000
38.500	0.000	0.00	0.00	0.00	0.0	0.000
38.516	0.000	0.00	0.00	0.00	0.0	0.000
38.533	0.000	0.00	0.00	0.00	0.0	0.000
38.550	0.000	0.00	0.00	0.00	0.0	0.000
38.566	0.000	0.00	0.00	0.00	0.0	0.000
38.583	0.000	0.00	0.00	0.00	0.0	0.000
38.600	0.000	0.00	0.00	0.00	0.0	0.000
38.616	0.000	0.00	0.00	0.00	0.0	0.000
38.633	0.000	0.00	0.00	0.00	0.0	0.000
38.650	0.000	0.00	0.00	0.00	0.0	0.000
38.666	0.000	0.00	0.00	0.00	0.0	0.000
38.683	0.000	0.00	0.00	0.00	0.0	0.000
38.700	0.000	0.00	0.00	0.00	0.0	0.000
38.716	0.000	0.00	0.00	0.00	0.0	0.000
38.733	0.000	0.00	0.00	0.00	0.0	0.000
38.750	0.000	0.00	0.00	0.00	0.0	0.000
38.766	0.000	0.00	0.00	0.00	0.0	0.000
38.783	0.000	0.00	0.00	0.00	0.0	0.000
38.800	0.000	0.00	0.00	0.00	0.0	0.000
38.816	0.000	0.00	0.00	0.00	0.0	0.000
38.833	0.000	0.00	0.00	0.00	0.0	0.000
38.850	0.000	0.00	0.00	0.00	0.0	0.000
38.866	0.000	0.00	0.00	0.00	0.0	0.000
38.883	0.000	0.00	0.00	0.00	0.0	0.000
38.900	0.000	0.00	0.00	0.00	0.0	0.000
38.916	0.000	0.00	0.00	0.00	0.0	0.000
38.933	0.000	0.00	0.00	0.00	0.0	0.000
38.950	0.000	0.00	0.00	0.00	0.0	0.000
38.966	0.000	0.00	0.00	0.00	0.0	0.000
38.983	0.000	0.00	0.00	0.00	0.0	0.000
39.000	0.000	0.00	0.00	0.00	0.0	0.000
39.016	0.000	0.00	0.00	0.00	0.0	0.000
39.033	0.000	0.00	0.00	0.00	0.0	0.000
39.050	0.000	0.00	0.00	0.00	0.0	0.000
39.066	0.000	0.00	0.00	0.00	0.0	0.000

39.083	0.000	0.00	0.00	0.00	0.0	0.000
39.100	0.000	0.00	0.00	0.00	0.0	0.000
39.116	0.000	0.00	0.00	0.00	0.0	0.000
39.133	0.000	0.00	0.00	0.00	0.0	0.000
39.150	0.000	0.00	0.00	0.00	0.0	0.000
39.166	0.000	0.00	0.00	0.00	0.0	0.000
39.183	0.000	0.00	0.00	0.00	0.0	0.000
39.200	0.000	0.00	0.00	0.00	0.0	0.000
39.216	0.000	0.00	0.00	0.00	0.0	0.000
39.233	0.000	0.00	0.00	0.00	0.0	0.000
39.250	0.000	0.00	0.00	0.00	0.0	0.000
39.266	0.000	0.00	0.00	0.00	0.0	0.000
39.283	0.000	0.00	0.00	0.00	0.0	0.000
39.300	0.000	0.00	0.00	0.00	0.0	0.000
39.316	0.000	0.00	0.00	0.00	0.0	0.000
39.333	0.000	0.00	0.00	0.00	0.0	0.000
39.350	0.000	0.00	0.00	0.00	0.0	0.000
39.366	0.000	0.00	0.00	0.00	0.0	0.000
39.383	0.000	0.00	0.00	0.00	0.0	0.000
39.400	0.000	0.00	0.00	0.00	0.0	0.000
39.416	0.000	0.00	0.00	0.00	0.0	0.000
39.433	0.000	0.00	0.00	0.00	0.0	0.000
39.450	0.000	0.00	0.00	0.00	0.0	0.000
39.466	0.000	0.00	0.00	0.00	0.0	0.000
39.483	0.000	0.00	0.00	0.00	0.0	0.000
39.500	0.000	0.00	0.00	0.00	0.0	0.000
39.516	0.000	0.00	0.00	0.00	0.0	0.000
39.533	0.000	0.00	0.00	0.00	0.0	0.000
39.550	0.000	0.00	0.00	0.00	0.0	0.000
39.566	0.000	0.00	0.00	0.00	0.0	0.000
39.583	0.000	0.00	0.00	0.00	0.0	0.000
39.600	0.000	0.00	0.00	0.00	0.0	0.000
39.616	0.000	0.00	0.00	0.00	0.0	0.000
39.633	0.000	0.00	0.00	0.00	0.0	0.000
39.650	0.000	0.00	0.00	0.00	0.0	0.000
39.666	0.000	0.00	0.00	0.00	0.0	0.000
39.683	0.000	0.00	0.00	0.00	0.0	0.000
39.700	0.000	0.00	0.00	0.00	0.0	0.000
39.716	0.000	0.00	0.00	0.00	0.0	0.000
39.733	0.000	0.00	0.00	0.00	0.0	0.000
39.750	0.000	0.00	0.00	0.00	0.0	0.000
39.766	0.000	0.00	0.00	0.00	0.0	0.000
39.783	0.000	0.00	0.00	0.00	0.0	0.000
39.800	0.000	0.00	0.00	0.00	0.0	0.000
39.816	0.000	0.00	0.00	0.00	0.0	0.000
39.833	0.000	0.00	0.00	0.00	0.0	0.000
39.850	0.000	0.00	0.00	0.00	0.0	0.000
39.866	0.000	0.00	0.00	0.00	0.0	0.000
39.883	0.000	0.00	0.00	0.00	0.0	0.000
39.900	0.000	0.00	0.00	0.00	0.0	0.000

39.916	0.000	0.00	0.00	0.00	0.0	0.000
39.933	0.000	0.00	0.00	0.00	0.0	0.000
39.950	0.000	0.00	0.00	0.00	0.0	0.000
39.966	0.000	0.00	0.00	0.00	0.0	0.000
39.983	0.000	0.00	0.00	0.00	0.0	0.000
40.000	0.000	0.00	0.00	0.00	0.0	0.000
40.016	0.000	0.00	0.00	0.00	0.0	0.000
40.033	0.000	0.00	0.00	0.00	0.0	0.000
40.050	0.000	0.00	0.00	0.00	0.0	0.000
40.066	0.000	0.00	0.00	0.00	0.0	0.000
40.083	0.000	0.00	0.00	0.00	0.0	0.000
40.100	0.000	0.00	0.00	0.00	0.0	0.000
40.116	0.000	0.00	0.00	0.00	0.0	0.000
40.133	0.000	0.00	0.00	0.00	0.0	0.000
40.150	0.000	0.00	0.00	0.00	0.0	0.000
40.166	0.000	0.00	0.00	0.00	0.0	0.000
40.183	0.000	0.00	0.00	0.00	0.0	0.000
40.200	0.000	0.00	0.00	0.00	0.0	0.000
40.216	0.000	0.00	0.00	0.00	0.0	0.000
40.233	0.000	0.00	0.00	0.00	0.0	0.000
40.250	0.000	0.00	0.00	0.00	0.0	0.000
40.266	0.000	0.00	0.00	0.00	0.0	0.000
40.283	0.000	0.00	0.00	0.00	0.0	0.000
40.300	0.000	0.00	0.00	0.00	0.0	0.000
40.316	0.000	0.00	0.00	0.00	0.0	0.000
40.333	0.000	0.00	0.00	0.00	0.0	0.000
40.350	0.000	0.00	0.00	0.00	0.0	0.000
40.366	0.000	0.00	0.00	0.00	0.0	0.000
40.383	0.000	0.00	0.00	0.00	0.0	0.000
40.400	0.000	0.00	0.00	0.00	0.0	0.000
40.416	0.000	0.00	0.00	0.00	0.0	0.000
40.433	0.000	0.00	0.00	0.00	0.0	0.000
40.450	0.000	0.00	0.00	0.00	0.0	0.000
40.466	0.000	0.00	0.00	0.00	0.0	0.000
40.483	0.000	0.00	0.00	0.00	0.0	0.000
40.500	0.000	0.00	0.00	0.00	0.0	0.000
40.516	0.000	0.00	0.00	0.00	0.0	0.000
40.533	0.000	0.00	0.00	0.00	0.0	0.000
40.550	0.000	0.00	0.00	0.00	0.0	0.000
40.566	0.000	0.00	0.00	0.00	0.0	0.000
40.583	0.000	0.00	0.00	0.00	0.0	0.000
40.600	0.000	0.00	0.00	0.00	0.0	0.000
40.616	0.000	0.00	0.00	0.00	0.0	0.000
40.633	0.000	0.00	0.00	0.00	0.0	0.000
40.650	0.000	0.00	0.00	0.00	0.0	0.000
40.666	0.000	0.00	0.00	0.00	0.0	0.000
40.683	0.000	0.00	0.00	0.00	0.0	0.000
40.700	0.000	0.00	0.00	0.00	0.0	0.000
40.716	0.000	0.00	0.00	0.00	0.0	0.000
40.733	0.000	0.00	0.00	0.00	0.0	0.000

40.750	0.000	0.00	0.00	0.00	0.0	0.000
40.766	0.000	0.00	0.00	0.00	0.0	0.000
40.783	0.000	0.00	0.00	0.00	0.0	0.000
40.800	0.000	0.00	0.00	0.00	0.0	0.000
40.816	0.000	0.00	0.00	0.00	0.0	0.000
40.833	0.000	0.00	0.00	0.00	0.0	0.000
40.850	0.000	0.00	0.00	0.00	0.0	0.000
40.866	0.000	0.00	0.00	0.00	0.0	0.000
40.883	0.000	0.00	0.00	0.00	0.0	0.000
40.900	0.000	0.00	0.00	0.00	0.0	0.000
40.916	0.000	0.00	0.00	0.00	0.0	0.000
40.933	0.000	0.00	0.00	0.00	0.0	0.000
40.950	0.000	0.00	0.00	0.00	0.0	0.000
40.966	0.000	0.00	0.00	0.00	0.0	0.000
40.983	0.000	0.00	0.00	0.00	0.0	0.000
41.000	0.000	0.00	0.00	0.00	0.0	0.000
41.016	0.000	0.00	0.00	0.00	0.0	0.000
41.033	0.000	0.00	0.00	0.00	0.0	0.000
41.050	0.000	0.00	0.00	0.00	0.0	0.000
41.066	0.000	0.00	0.00	0.00	0.0	0.000
41.083	0.000	0.00	0.00	0.00	0.0	0.000
41.100	0.000	0.00	0.00	0.00	0.0	0.000
41.116	0.000	0.00	0.00	0.00	0.0	0.000
41.133	0.000	0.00	0.00	0.00	0.0	0.000
41.150	0.000	0.00	0.00	0.00	0.0	0.000
41.166	0.000	0.00	0.00	0.00	0.0	0.000
41.183	0.000	0.00	0.00	0.00	0.0	0.000
41.200	0.000	0.00	0.00	0.00	0.0	0.000
41.216	0.000	0.00	0.00	0.00	0.0	0.000
41.233	0.000	0.00	0.00	0.00	0.0	0.000
41.250	0.000	0.00	0.00	0.00	0.0	0.000
41.266	0.000	0.00	0.00	0.00	0.0	0.000
41.283	0.000	0.00	0.00	0.00	0.0	0.000
41.300	0.000	0.00	0.00	0.00	0.0	0.000
41.316	0.000	0.00	0.00	0.00	0.0	0.000
41.333	0.000	0.00	0.00	0.00	0.0	0.000
41.350	0.000	0.00	0.00	0.00	0.0	0.000
41.366	0.000	0.00	0.00	0.00	0.0	0.000
41.383	0.000	0.00	0.00	0.00	0.0	0.000
41.400	0.000	0.00	0.00	0.00	0.0	0.000
41.416	0.000	0.00	0.00	0.00	0.0	0.000
41.433	0.000	0.00	0.00	0.00	0.0	0.000
41.450	0.000	0.00	0.00	0.00	0.0	0.000
41.466	0.000	0.00	0.00	0.00	0.0	0.000
41.483	0.000	0.00	0.00	0.00	0.0	0.000
41.500	0.000	0.00	0.00	0.00	0.0	0.000
41.516	0.000	0.00	0.00	0.00	0.0	0.000
41.533	0.000	0.00	0.00	0.00	0.0	0.000
41.550	0.000	0.00	0.00	0.00	0.0	0.000
41.566	0.000	0.00	0.00	0.00	0.0	0.000

41.583	0.000	0.00	0.00	0.00	0.0	0.000
41.600	0.000	0.00	0.00	0.00	0.0	0.000
41.616	0.000	0.00	0.00	0.00	0.0	0.000
41.633	0.000	0.00	0.00	0.00	0.0	0.000
41.650	0.000	0.00	0.00	0.00	0.0	0.000
41.666	0.000	0.00	0.00	0.00	0.0	0.000
41.683	0.000	0.00	0.00	0.00	0.0	0.000
41.700	0.000	0.00	0.00	0.00	0.0	0.000
41.716	0.000	0.00	0.00	0.00	0.0	0.000
41.733	0.000	0.00	0.00	0.00	0.0	0.000
41.750	0.000	0.00	0.00	0.00	0.0	0.000
41.766	0.000	0.00	0.00	0.00	0.0	0.000
41.783	0.000	0.00	0.00	0.00	0.0	0.000
41.800	0.000	0.00	0.00	0.00	0.0	0.000
41.816	0.000	0.00	0.00	0.00	0.0	0.000
41.833	0.000	0.00	0.00	0.00	0.0	0.000
41.850	0.000	0.00	0.00	0.00	0.0	0.000
41.866	0.000	0.00	0.00	0.00	0.0	0.000
41.883	0.000	0.00	0.00	0.00	0.0	0.000
41.900	0.000	0.00	0.00	0.00	0.0	0.000
41.916	0.000	0.00	0.00	0.00	0.0	0.000
41.933	0.000	0.00	0.00	0.00	0.0	0.000
41.950	0.000	0.00	0.00	0.00	0.0	0.000
41.966	0.000	0.00	0.00	0.00	0.0	0.000
41.983	0.000	0.00	0.00	0.00	0.0	0.000
42.000	0.000	0.00	0.00	0.00	0.0	0.000
42.016	0.000	0.00	0.00	0.00	0.0	0.000
42.033	0.000	0.00	0.00	0.00	0.0	0.000
42.050	0.000	0.00	0.00	0.00	0.0	0.000
42.066	0.000	0.00	0.00	0.00	0.0	0.000
42.083	0.000	0.00	0.00	0.00	0.0	0.000
42.100	0.000	0.00	0.00	0.00	0.0	0.000
42.116	0.000	0.00	0.00	0.00	0.0	0.000
42.133	0.000	0.00	0.00	0.00	0.0	0.000
42.150	0.000	0.00	0.00	0.00	0.0	0.000
42.166	0.000	0.00	0.00	0.00	0.0	0.000
42.183	0.000	0.00	0.00	0.00	0.0	0.000
42.200	0.000	0.00	0.00	0.00	0.0	0.000
42.216	0.000	0.00	0.00	0.00	0.0	0.000
42.233	0.000	0.00	0.00	0.00	0.0	0.000
42.250	0.000	0.00	0.00	0.00	0.0	0.000
42.266	0.000	0.00	0.00	0.00	0.0	0.000
42.283	0.000	0.00	0.00	0.00	0.0	0.000
42.300	0.000	0.00	0.00	0.00	0.0	0.000
42.316	0.000	0.00	0.00	0.00	0.0	0.000
42.333	0.000	0.00	0.00	0.00	0.0	0.000
42.350	0.000	0.00	0.00	0.00	0.0	0.000
42.366	0.000	0.00	0.00	0.00	0.0	0.000
42.383	0.000	0.00	0.00	0.00	0.0	0.000
42.400	0.000	0.00	0.00	0.00	0.0	0.000

42.416	0.000	0.00	0.00	0.00	0.0	0.000
42.433	0.000	0.00	0.00	0.00	0.0	0.000
42.450	0.000	0.00	0.00	0.00	0.0	0.000
42.466	0.000	0.00	0.00	0.00	0.0	0.000
42.483	0.000	0.00	0.00	0.00	0.0	0.000
42.500	0.000	0.00	0.00	0.00	0.0	0.000
42.516	0.000	0.00	0.00	0.00	0.0	0.000
42.533	0.000	0.00	0.00	0.00	0.0	0.000
42.550	0.000	0.00	0.00	0.00	0.0	0.000
42.566	0.000	0.00	0.00	0.00	0.0	0.000
42.583	0.000	0.00	0.00	0.00	0.0	0.000
42.600	0.000	0.00	0.00	0.00	0.0	0.000
42.616	0.000	0.00	0.00	0.00	0.0	0.000
42.633	0.000	0.00	0.00	0.00	0.0	0.000
42.650	0.000	0.00	0.00	0.00	0.0	0.000
42.666	0.000	0.00	0.00	0.00	0.0	0.000
42.683	0.000	0.00	0.00	0.00	0.0	0.000
42.700	0.000	0.00	0.00	0.00	0.0	0.000
42.716	0.000	0.00	0.00	0.00	0.0	0.000
42.733	0.000	0.00	0.00	0.00	0.0	0.000
42.750	0.000	0.00	0.00	0.00	0.0	0.000
42.766	0.000	0.00	0.00	0.00	0.0	0.000
42.783	0.000	0.00	0.00	0.00	0.0	0.000
42.800	0.000	0.00	0.00	0.00	0.0	0.000
42.816	0.000	0.00	0.00	0.00	0.0	0.000
42.833	0.000	0.00	0.00	0.00	0.0	0.000
42.850	0.000	0.00	0.00	0.00	0.0	0.000
42.866	0.000	0.00	0.00	0.00	0.0	0.000
42.883	0.000	0.00	0.00	0.00	0.0	0.000
42.900	0.000	0.00	0.00	0.00	0.0	0.000
42.916	0.000	0.00	0.00	0.00	0.0	0.000
42.933	0.000	0.00	0.00	0.00	0.0	0.000
42.950	0.000	0.00	0.00	0.00	0.0	0.000
42.966	0.000	0.00	0.00	0.00	0.0	0.000
42.983	0.000	0.00	0.00	0.00	0.0	0.000
43.000	0.000	0.00	0.00	0.00	0.0	0.000
43.016	0.000	0.00	0.00	0.00	0.0	0.000
43.033	0.000	0.00	0.00	0.00	0.0	0.000
43.050	0.000	0.00	0.00	0.00	0.0	0.000
43.066	0.000	0.00	0.00	0.00	0.0	0.000
43.083	0.000	0.00	0.00	0.00	0.0	0.000
43.100	0.000	0.00	0.00	0.00	0.0	0.000
43.116	0.000	0.00	0.00	0.00	0.0	0.000
43.133	0.000	0.00	0.00	0.00	0.0	0.000
43.150	0.000	0.00	0.00	0.00	0.0	0.000
43.166	0.000	0.00	0.00	0.00	0.0	0.000
43.183	0.000	0.00	0.00	0.00	0.0	0.000
43.200	0.000	0.00	0.00	0.00	0.0	0.000
43.216	0.000	0.00	0.00	0.00	0.0	0.000
43.233	0.000	0.00	0.00	0.00	0.0	0.000

43.250	0.000	0.00	0.00	0.00	0.0	0.000
43.266	0.000	0.00	0.00	0.00	0.0	0.000
43.283	0.000	0.00	0.00	0.00	0.0	0.000
43.300	0.000	0.00	0.00	0.00	0.0	0.000
43.316	0.000	0.00	0.00	0.00	0.0	0.000
43.333	0.000	0.00	0.00	0.00	0.0	0.000
43.350	0.000	0.00	0.00	0.00	0.0	0.000
43.366	0.000	0.00	0.00	0.00	0.0	0.000
43.383	0.000	0.00	0.00	0.00	0.0	0.000
43.400	0.000	0.00	0.00	0.00	0.0	0.000
43.416	0.000	0.00	0.00	0.00	0.0	0.000
43.433	0.000	0.00	0.00	0.00	0.0	0.000
43.450	0.000	0.00	0.00	0.00	0.0	0.000
43.466	0.000	0.00	0.00	0.00	0.0	0.000
43.483	0.000	0.00	0.00	0.00	0.0	0.000
43.500	0.000	0.00	0.00	0.00	0.0	0.000
43.516	0.000	0.00	0.00	0.00	0.0	0.000
43.533	0.000	0.00	0.00	0.00	0.0	0.000
43.550	0.000	0.00	0.00	0.00	0.0	0.000
43.566	0.000	0.00	0.00	0.00	0.0	0.000
43.583	0.000	0.00	0.00	0.00	0.0	0.000
43.600	0.000	0.00	0.00	0.00	0.0	0.000
43.616	0.000	0.00	0.00	0.00	0.0	0.000
43.633	0.000	0.00	0.00	0.00	0.0	0.000
43.650	0.000	0.00	0.00	0.00	0.0	0.000
43.666	0.000	0.00	0.00	0.00	0.0	0.000
43.683	0.000	0.00	0.00	0.00	0.0	0.000
43.700	0.000	0.00	0.00	0.00	0.0	0.000
43.716	0.000	0.00	0.00	0.00	0.0	0.000
43.733	0.000	0.00	0.00	0.00	0.0	0.000
43.750	0.000	0.00	0.00	0.00	0.0	0.000
43.766	0.000	0.00	0.00	0.00	0.0	0.000
43.783	0.000	0.00	0.00	0.00	0.0	0.000
43.800	0.000	0.00	0.00	0.00	0.0	0.000
43.816	0.000	0.00	0.00	0.00	0.0	0.000
43.833	0.000	0.00	0.00	0.00	0.0	0.000
43.850	0.000	0.00	0.00	0.00	0.0	0.000
43.866	0.000	0.00	0.00	0.00	0.0	0.000
43.883	0.000	0.00	0.00	0.00	0.0	0.000
43.900	0.000	0.00	0.00	0.00	0.0	0.000
43.916	0.000	0.00	0.00	0.00	0.0	0.000
43.933	0.000	0.00	0.00	0.00	0.0	0.000
43.950	0.000	0.00	0.00	0.00	0.0	0.000
43.966	0.000	0.00	0.00	0.00	0.0	0.000
43.983	0.000	0.00	0.00	0.00	0.0	0.000
44.000	0.000	0.00	0.00	0.00	0.0	0.000
44.016	0.000	0.00	0.00	0.00	0.0	0.000
44.033	0.000	0.00	0.00	0.00	0.0	0.000
44.049	0.000	0.00	0.00	0.00	0.0	0.000
44.066	0.000	0.00	0.00	0.00	0.0	0.000

44.083	0.000	0.00	0.00	0.00	0.0	0.000
44.099	0.000	0.00	0.00	0.00	0.0	0.000
44.116	0.000	0.00	0.00	0.00	0.0	0.000
44.133	0.000	0.00	0.00	0.00	0.0	0.000
44.149	0.000	0.00	0.00	0.00	0.0	0.000
44.166	0.000	0.00	0.00	0.00	0.0	0.000
44.183	0.000	0.00	0.00	0.00	0.0	0.000
44.199	0.000	0.00	0.00	0.00	0.0	0.000
44.216	0.000	0.00	0.00	0.00	0.0	0.000
44.233	0.000	0.00	0.00	0.00	0.0	0.000
44.249	0.000	0.00	0.00	0.00	0.0	0.000
44.266	0.000	0.00	0.00	0.00	0.0	0.000
44.283	0.000	0.00	0.00	0.00	0.0	0.000
44.299	0.000	0.00	0.00	0.00	0.0	0.000
44.316	0.000	0.00	0.00	0.00	0.0	0.000
44.333	0.000	0.00	0.00	0.00	0.0	0.000
44.349	0.000	0.00	0.00	0.00	0.0	0.000
44.366	0.000	0.00	0.00	0.00	0.0	0.000
44.383	0.000	0.00	0.00	0.00	0.0	0.000
44.399	0.000	0.00	0.00	0.00	0.0	0.000
44.416	0.000	0.00	0.00	0.00	0.0	0.000
44.433	0.000	0.00	0.00	0.00	0.0	0.000
44.449	0.000	0.00	0.00	0.00	0.0	0.000
44.466	0.000	0.00	0.00	0.00	0.0	0.000
44.483	0.000	0.00	0.00	0.00	0.0	0.000
44.499	0.000	0.00	0.00	0.00	0.0	0.000
44.516	0.000	0.00	0.00	0.00	0.0	0.000
44.533	0.000	0.00	0.00	0.00	0.0	0.000
44.549	0.000	0.00	0.00	0.00	0.0	0.000
44.566	0.000	0.00	0.00	0.00	0.0	0.000
44.583	0.000	0.00	0.00	0.00	0.0	0.000
44.599	0.000	0.00	0.00	0.00	0.0	0.000
44.616	0.000	0.00	0.00	0.00	0.0	0.000
44.633	0.000	0.00	0.00	0.00	0.0	0.000
44.649	0.000	0.00	0.00	0.00	0.0	0.000
44.666	0.000	0.00	0.00	0.00	0.0	0.000
44.683	0.000	0.00	0.00	0.00	0.0	0.000
44.699	0.000	0.00	0.00	0.00	0.0	0.000
44.716	0.000	0.00	0.00	0.00	0.0	0.000
44.733	0.000	0.00	0.00	0.00	0.0	0.000
44.749	0.000	0.00	0.00	0.00	0.0	0.000
44.766	0.000	0.00	0.00	0.00	0.0	0.000
44.783	0.000	0.00	0.00	0.00	0.0	0.000
44.799	0.000	0.00	0.00	0.00	0.0	0.000
44.816	0.000	0.00	0.00	0.00	0.0	0.000
44.833	0.000	0.00	0.00	0.00	0.0	0.000
44.849	0.000	0.00	0.00	0.00	0.0	0.000
44.866	0.000	0.00	0.00	0.00	0.0	0.000
44.883	0.000	0.00	0.00	0.00	0.0	0.000
44.899	0.000	0.00	0.00	0.00	0.0	0.000

44.916	0.000	0.00	0.00	0.00	0.0	0.000
44.933	0.000	0.00	0.00	0.00	0.0	0.000
44.949	0.000	0.00	0.00	0.00	0.0	0.000
44.966	0.000	0.00	0.00	0.00	0.0	0.000
44.983	0.000	0.00	0.00	0.00	0.0	0.000
44.999	0.000	0.00	0.00	0.00	0.0	0.000
45.016	0.000	0.00	0.00	0.00	0.0	0.000
45.033	0.000	0.00	0.00	0.00	0.0	0.000
45.049	0.000	0.00	0.00	0.00	0.0	0.000
45.066	0.000	0.00	0.00	0.00	0.0	0.000
45.083	0.000	0.00	0.00	0.00	0.0	0.000
45.099	0.000	0.00	0.00	0.00	0.0	0.000
45.116	0.000	0.00	0.00	0.00	0.0	0.000
45.133	0.000	0.00	0.00	0.00	0.0	0.000
45.149	0.000	0.00	0.00	0.00	0.0	0.000
45.166	0.000	0.00	0.00	0.00	0.0	0.000
45.183	0.000	0.00	0.00	0.00	0.0	0.000
45.199	0.000	0.00	0.00	0.00	0.0	0.000
45.216	0.000	0.00	0.00	0.00	0.0	0.000
45.233	0.000	0.00	0.00	0.00	0.0	0.000
45.249	0.000	0.00	0.00	0.00	0.0	0.000
45.266	0.000	0.00	0.00	0.00	0.0	0.000
45.283	0.000	0.00	0.00	0.00	0.0	0.000
45.299	0.000	0.00	0.00	0.00	0.0	0.000
45.316	0.000	0.00	0.00	0.00	0.0	0.000
45.333	0.000	0.00	0.00	0.00	0.0	0.000
45.349	0.000	0.00	0.00	0.00	0.0	0.000
45.366	0.000	0.00	0.00	0.00	0.0	0.000
45.383	0.000	0.00	0.00	0.00	0.0	0.000
45.399	0.000	0.00	0.00	0.00	0.0	0.000
45.416	0.000	0.00	0.00	0.00	0.0	0.000
45.433	0.000	0.00	0.00	0.00	0.0	0.000
45.449	0.000	0.00	0.00	0.00	0.0	0.000
45.466	0.000	0.00	0.00	0.00	0.0	0.000
45.483	0.000	0.00	0.00	0.00	0.0	0.000
45.499	0.000	0.00	0.00	0.00	0.0	0.000
45.516	0.000	0.00	0.00	0.00	0.0	0.000
45.533	0.000	0.00	0.00	0.00	0.0	0.000
45.549	0.000	0.00	0.00	0.00	0.0	0.000
45.566	0.000	0.00	0.00	0.00	0.0	0.000
45.583	0.000	0.00	0.00	0.00	0.0	0.000
45.599	0.000	0.00	0.00	0.00	0.0	0.000
45.616	0.000	0.00	0.00	0.00	0.0	0.000
45.633	0.000	0.00	0.00	0.00	0.0	0.000
45.649	0.000	0.00	0.00	0.00	0.0	0.000
45.666	0.000	0.00	0.00	0.00	0.0	0.000
45.683	0.000	0.00	0.00	0.00	0.0	0.000
45.699	0.000	0.00	0.00	0.00	0.0	0.000
45.716	0.000	0.00	0.00	0.00	0.0	0.000
45.733	0.000	0.00	0.00	0.00	0.0	0.000

45.749	0.000	0.00	0.00	0.00	0.0	0.000
45.766	0.000	0.00	0.00	0.00	0.0	0.000
45.783	0.000	0.00	0.00	0.00	0.0	0.000
45.799	0.000	0.00	0.00	0.00	0.0	0.000
45.816	0.000	0.00	0.00	0.00	0.0	0.000
45.833	0.000	0.00	0.00	0.00	0.0	0.000
45.849	0.000	0.00	0.00	0.00	0.0	0.000
45.866	0.000	0.00	0.00	0.00	0.0	0.000
45.883	0.000	0.00	0.00	0.00	0.0	0.000
45.899	0.000	0.00	0.00	0.00	0.0	0.000
45.916	0.000	0.00	0.00	0.00	0.0	0.000
45.933	0.000	0.00	0.00	0.00	0.0	0.000
45.949	0.000	0.00	0.00	0.00	0.0	0.000
45.966	0.000	0.00	0.00	0.00	0.0	0.000
45.983	0.000	0.00	0.00	0.00	0.0	0.000
45.999	0.000	0.00	0.00	0.00	0.0	0.000
46.016	0.000	0.00	0.00	0.00	0.0	0.000
46.033	0.000	0.00	0.00	0.00	0.0	0.000
46.049	0.000	0.00	0.00	0.00	0.0	0.000
46.066	0.000	0.00	0.00	0.00	0.0	0.000
46.083	0.000	0.00	0.00	0.00	0.0	0.000
46.099	0.000	0.00	0.00	0.00	0.0	0.000
46.116	0.000	0.00	0.00	0.00	0.0	0.000
46.133	0.000	0.00	0.00	0.00	0.0	0.000
46.149	0.000	0.00	0.00	0.00	0.0	0.000
46.166	0.000	0.00	0.00	0.00	0.0	0.000
46.183	0.000	0.00	0.00	0.00	0.0	0.000
46.199	0.000	0.00	0.00	0.00	0.0	0.000
46.216	0.000	0.00	0.00	0.00	0.0	0.000
46.233	0.000	0.00	0.00	0.00	0.0	0.000
46.249	0.000	0.00	0.00	0.00	0.0	0.000
46.266	0.000	0.00	0.00	0.00	0.0	0.000
46.283	0.000	0.00	0.00	0.00	0.0	0.000
46.299	0.000	0.00	0.00	0.00	0.0	0.000
46.316	0.000	0.00	0.00	0.00	0.0	0.000
46.333	0.000	0.00	0.00	0.00	0.0	0.000
46.349	0.000	0.00	0.00	0.00	0.0	0.000
46.366	0.000	0.00	0.00	0.00	0.0	0.000
46.383	0.000	0.00	0.00	0.00	0.0	0.000
46.399	0.000	0.00	0.00	0.00	0.0	0.000
46.416	0.000	0.00	0.00	0.00	0.0	0.000
46.433	0.000	0.00	0.00	0.00	0.0	0.000
46.449	0.000	0.00	0.00	0.00	0.0	0.000
46.466	0.000	0.00	0.00	0.00	0.0	0.000
46.483	0.000	0.00	0.00	0.00	0.0	0.000
46.499	0.000	0.00	0.00	0.00	0.0	0.000
46.516	0.000	0.00	0.00	0.00	0.0	0.000
46.533	0.000	0.00	0.00	0.00	0.0	0.000
46.549	0.000	0.00	0.00	0.00	0.0	0.000
46.566	0.000	0.00	0.00	0.00	0.0	0.000

46.583	0.000	0.00	0.00	0.00	0.0	0.000
46.599	0.000	0.00	0.00	0.00	0.0	0.000
46.616	0.000	0.00	0.00	0.00	0.0	0.000
46.633	0.000	0.00	0.00	0.00	0.0	0.000
46.649	0.000	0.00	0.00	0.00	0.0	0.000
46.666	0.000	0.00	0.00	0.00	0.0	0.000
46.683	0.000	0.00	0.00	0.00	0.0	0.000
46.699	0.000	0.00	0.00	0.00	0.0	0.000
46.716	0.000	0.00	0.00	0.00	0.0	0.000
46.733	0.000	0.00	0.00	0.00	0.0	0.000
46.749	0.000	0.00	0.00	0.00	0.0	0.000
46.766	0.000	0.00	0.00	0.00	0.0	0.000
46.783	0.000	0.00	0.00	0.00	0.0	0.000
46.799	0.000	0.00	0.00	0.00	0.0	0.000
46.816	0.000	0.00	0.00	0.00	0.0	0.000
46.833	0.000	0.00	0.00	0.00	0.0	0.000
46.849	0.000	0.00	0.00	0.00	0.0	0.000
46.866	0.000	0.00	0.00	0.00	0.0	0.000
46.883	0.000	0.00	0.00	0.00	0.0	0.000
46.899	0.000	0.00	0.00	0.00	0.0	0.000
46.916	0.000	0.00	0.00	0.00	0.0	0.000
46.933	0.000	0.00	0.00	0.00	0.0	0.000
46.949	0.000	0.00	0.00	0.00	0.0	0.000
46.966	0.000	0.00	0.00	0.00	0.0	0.000
46.983	0.000	0.00	0.00	0.00	0.0	0.000
46.999	0.000	0.00	0.00	0.00	0.0	0.000
47.016	0.000	0.00	0.00	0.00	0.0	0.000
47.033	0.000	0.00	0.00	0.00	0.0	0.000
47.049	0.000	0.00	0.00	0.00	0.0	0.000
47.066	0.000	0.00	0.00	0.00	0.0	0.000
47.083	0.000	0.00	0.00	0.00	0.0	0.000
47.099	0.000	0.00	0.00	0.00	0.0	0.000
47.116	0.000	0.00	0.00	0.00	0.0	0.000
47.133	0.000	0.00	0.00	0.00	0.0	0.000
47.149	0.000	0.00	0.00	0.00	0.0	0.000
47.166	0.000	0.00	0.00	0.00	0.0	0.000
47.183	0.000	0.00	0.00	0.00	0.0	0.000
47.199	0.000	0.00	0.00	0.00	0.0	0.000
47.216	0.000	0.00	0.00	0.00	0.0	0.000
47.233	0.000	0.00	0.00	0.00	0.0	0.000
47.249	0.000	0.00	0.00	0.00	0.0	0.000
47.266	0.000	0.00	0.00	0.00	0.0	0.000
47.283	0.000	0.00	0.00	0.00	0.0	0.000
47.299	0.000	0.00	0.00	0.00	0.0	0.000
47.316	0.000	0.00	0.00	0.00	0.0	0.000
47.333	0.000	0.00	0.00	0.00	0.0	0.000
47.349	0.000	0.00	0.00	0.00	0.0	0.000
47.366	0.000	0.00	0.00	0.00	0.0	0.000
47.383	0.000	0.00	0.00	0.00	0.0	0.000
47.399	0.000	0.00	0.00	0.00	0.0	0.000

47.416	0.000	0.00	0.00	0.00	0.0	0.000
47.433	0.000	0.00	0.00	0.00	0.0	0.000
47.449	0.000	0.00	0.00	0.00	0.0	0.000
47.466	0.000	0.00	0.00	0.00	0.0	0.000
47.483	0.000	0.00	0.00	0.00	0.0	0.000
47.499	0.000	0.00	0.00	0.00	0.0	0.000
47.516	0.000	0.00	0.00	0.00	0.0	0.000
47.533	0.000	0.00	0.00	0.00	0.0	0.000
47.549	0.000	0.00	0.00	0.00	0.0	0.000
47.566	0.000	0.00	0.00	0.00	0.0	0.000
47.583	0.000	0.00	0.00	0.00	0.0	0.000
47.599	0.000	0.00	0.00	0.00	0.0	0.000
47.616	0.000	0.00	0.00	0.00	0.0	0.000
47.633	0.000	0.00	0.00	0.00	0.0	0.000
47.649	0.000	0.00	0.00	0.00	0.0	0.000
47.666	0.000	0.00	0.00	0.00	0.0	0.000
47.683	0.000	0.00	0.00	0.00	0.0	0.000
47.699	0.000	0.00	0.00	0.00	0.0	0.000
47.716	0.000	0.00	0.00	0.00	0.0	0.000
47.733	0.000	0.00	0.00	0.00	0.0	0.000
47.749	0.000	0.00	0.00	0.00	0.0	0.000
47.766	0.000	0.00	0.00	0.00	0.0	0.000
47.783	0.000	0.00	0.00	0.00	0.0	0.000
47.799	0.000	0.00	0.00	0.00	0.0	0.000
47.816	0.000	0.00	0.00	0.00	0.0	0.000
47.833	0.000	0.00	0.00	0.00	0.0	0.000
47.849	0.000	0.00	0.00	0.00	0.0	0.000
47.866	0.000	0.00	0.00	0.00	0.0	0.000
47.883	0.000	0.00	0.00	0.00	0.0	0.000
47.899	0.000	0.00	0.00	0.00	0.0	0.000
47.916	0.000	0.00	0.00	0.00	0.0	0.000
47.933	0.000	0.00	0.00	0.00	0.0	0.000
47.949	0.000	0.00	0.00	0.00	0.0	0.000
47.966	0.000	0.00	0.00	0.00	0.0	0.000
47.983	0.000	0.00	0.00	0.00	0.0	0.000
47.999	0.000	0.00	0.00	0.00	0.0	0.000

PROCESS SUMMARY OF STORAGE:
INFLOW VOLUME = 0.800 AF
BASIN STORAGE = 0.000 AF (WITH 0.000 AF INITIALLY FILLED)
OUTFLOW VOLUME = 0.800 AF
LOSS VOLUME = 0.000 AF

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FLOW PROCESS FROM NODE 100.00 TO NODE 405.00 IS CODE = 1.2

>>>>>SUBAREA RUNOFF (SMALL AREA UNIT-HYDROGRAPH ANALYSIS) <<<<<

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  (SMALL AREA UNIT-HYDROGRAPH ADDED TO STREAM #2)

    RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
    TOTAL CATCHMENT AREA(ACRES) =    2.16
    SOIL-LOSS RATE, Fm,(INCH/HR) =  0.020
    LOW LOSS FRACTION = 0.042
    TIME OF CONCENTRATION(MIN.) =  8.95
    SMALL AREA PEAK Q COMPUTED USING PEAK FLOW RATE FORMULA
    ORANGE COUNTY "VALLEY" RAINFALL VALUES ARE USED:
    RETURN FREQUENCY(YEARS) = 100
       5-MINUTE POINT RAINFALL VALUE(INCHES) =  0.52
      30-MINUTE POINT RAINFALL VALUE(INCHES) =  1.09
       1-HOUR   POINT RAINFALL VALUE(INCHES) =  1.45
       3-HOUR   POINT RAINFALL VALUE(INCHES) =  2.43
       6-HOUR   POINT RAINFALL VALUE(INCHES) =  3.36
      24-HOUR   POINT RAINFALL VALUE(INCHES) =  5.63

----------------------------------------------------------------------------
    TOTAL CATCHMENT   RUNOFF  VOLUME(ACRE-FEET) =     0.87
    TOTAL CATCHMENT SOIL-LOSS VOLUME(ACRE-FEET) =     0.14

----------------------------------------------------------------------------
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============================================================================

                      2 4 - H O U R    S T O R M
                   R U N O F F    H Y D R O G R A P H

============================================================================
               HYDROGRAPH IN  ONE-MINUTE UNIT INTERVALS(CFS)
        (Notes: Time indicated is at END of Each Unit Intervals.
                Peak 5-minute rainfall intensity is modeled as
                a constant value for entire 5-minute period.)
----------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.        2.1       4.3       6.4       8.6
----------------------------------------------------------------------------
   0.017      0.0000      0.01  Q        .         .         .         .
   0.033      0.0000      0.02  Q        .         .         .         .
   0.050      0.0001      0.04  Q        .         .         .         .
   0.067      0.0002      0.05  Q        .         .         .         .
   0.083      0.0002      0.06  Q        .         .         .         .
   0.100      0.0004      0.08  Q        .         .         .         .
   0.117      0.0005      0.09  Q        .         .         .         .
   0.133      0.0006      0.11  Q        .         .         .         .
   0.150      0.0008      0.12  Q        .         .         .         .
   0.167      0.0010      0.14  Q        .         .         .         .
   0.183      0.0012      0.15  Q        .         .         .         .
   0.200      0.0014      0.16  Q        .         .         .         .
   0.217      0.0016      0.16  Q        .         .         .         .
   0.233      0.0019      0.16  Q        .         .         .         .
```

0.250	0.0021	0.16	Q	.	.	.	.
0.267	0.0023	0.16	Q	.	.	.	.
0.283	0.0026	0.16	Q	.	.	.	.
0.300	0.0028	0.16	Q	.	.	.	.
0.317	0.0030	0.16	Q	.	.	.	.
0.333	0.0032	0.16	Q	.	.	.	.
0.350	0.0035	0.16	Q	.	.	.	.
0.367	0.0037	0.16	Q	.	.	.	.
0.383	0.0039	0.16	Q	.	.	.	.
0.400	0.0041	0.16	Q	.	.	.	.
0.417	0.0044	0.16	Q	.	.	.	.
0.433	0.0046	0.16	Q	.	.	.	.
0.450	0.0048	0.16	Q	.	.	.	.
0.467	0.0050	0.16	Q	.	.	.	.
0.483	0.0053	0.16	Q	.	.	.	.
0.500	0.0055	0.16	Q	.	.	.	.
0.517	0.0057	0.17	Q	.	.	.	.
0.533	0.0059	0.17	Q	.	.	.	.
0.550	0.0062	0.17	Q	.	.	.	.
0.567	0.0064	0.17	Q	.	.	.	.
0.583	0.0066	0.17	Q	.	.	.	.
0.600	0.0069	0.17	Q	.	.	.	.
0.617	0.0071	0.17	Q	.	.	.	.
0.633	0.0073	0.17	Q	.	.	.	.
0.650	0.0075	0.17	Q	.	.	.	.
0.667	0.0078	0.17	Q	.	.	.	.
0.683	0.0080	0.17	Q	.	.	.	.
0.700	0.0082	0.17	Q	.	.	.	.
0.717	0.0085	0.17	Q	.	.	.	.
0.733	0.0087	0.17	Q	.	.	.	.
0.750	0.0089	0.17	Q	.	.	.	.
0.767	0.0092	0.17	Q	.	.	.	.
0.783	0.0094	0.17	Q	.	.	.	.
0.800	0.0096	0.17	Q	.	.	.	.
0.817	0.0098	0.17	Q	.	.	.	.
0.833	0.0101	0.17	Q	.	.	.	.
0.850	0.0103	0.17	Q	.	.	.	.
0.867	0.0105	0.17	Q	.	.	.	.
0.883	0.0108	0.17	Q	.	.	.	.
0.900	0.0110	0.17	Q	.	.	.	.
0.917	0.0112	0.17	Q	.	.	.	.
0.933	0.0115	0.17	Q	.	.	.	.
0.950	0.0117	0.17	Q	.	.	.	.
0.967	0.0119	0.17	Q	.	.	.	.
0.983	0.0122	0.17	Q	.	.	.	.
1.000	0.0124	0.17	Q	.	.	.	.
1.017	0.0126	0.17	Q	.	.	.	.
1.033	0.0129	0.17	Q	.	.	.	.
1.050	0.0131	0.17	Q	.	.	.	.
1.067	0.0133	0.17	Q	.	.	.	.

1.083	0.0135	0.17	Q	.	.	.	.
1.100	0.0138	0.17	Q	.	.	.	.
1.117	0.0140	0.17	Q	.	.	.	.
1.133	0.0142	0.17	Q	.	.	.	.
1.150	0.0145	0.17	Q	.	.	.	.
1.167	0.0147	0.17	Q	.	.	.	.
1.183	0.0149	0.17	Q	.	.	.	.
1.200	0.0152	0.17	Q	.	.	.	.
1.217	0.0154	0.17	Q	.	.	.	.
1.233	0.0157	0.17	Q	.	.	.	.
1.250	0.0159	0.17	Q	.	.	.	.
1.267	0.0161	0.17	Q	.	.	.	.
1.283	0.0164	0.17	Q	.	.	.	.
1.300	0.0166	0.17	Q	.	.	.	.
1.317	0.0168	0.17	Q	.	.	.	.
1.333	0.0171	0.17	Q	.	.	.	.
1.350	0.0173	0.17	Q	.	.	.	.
1.367	0.0175	0.17	Q	.	.	.	.
1.383	0.0178	0.17	Q	.	.	.	.
1.400	0.0180	0.17	Q	.	.	.	.
1.417	0.0182	0.17	Q	.	.	.	.
1.433	0.0185	0.17	Q	.	.	.	.
1.450	0.0187	0.17	Q	.	.	.	.
1.467	0.0190	0.17	Q	.	.	.	.
1.483	0.0192	0.17	Q	.	.	.	.
1.500	0.0194	0.17	Q	.	.	.	.
1.517	0.0197	0.17	Q	.	.	.	.
1.533	0.0199	0.17	Q	.	.	.	.
1.550	0.0201	0.17	Q	.	.	.	.
1.567	0.0204	0.17	Q	.	.	.	.
1.583	0.0206	0.17	Q	.	.	.	.
1.600	0.0209	0.17	Q	.	.	.	.
1.617	0.0211	0.17	Q	.	.	.	.
1.633	0.0213	0.17	Q	.	.	.	.
1.650	0.0216	0.17	Q	.	.	.	.
1.667	0.0218	0.17	Q	.	.	.	.
1.683	0.0220	0.17	QV	.	.	.	.
1.700	0.0223	0.17	QV	.	.	.	.
1.717	0.0225	0.17	QV	.	.	.	.
1.733	0.0228	0.17	QV	.	.	.	.
1.750	0.0230	0.17	QV	.	.	.	.
1.767	0.0232	0.17	QV	.	.	.	.
1.783	0.0235	0.17	QV	.	.	.	.
1.800	0.0237	0.17	QV	.	.	.	.
1.817	0.0240	0.17	QV	.	.	.	.
1.833	0.0242	0.17	QV	.	.	.	.
1.850	0.0244	0.17	QV	.	.	.	.
1.867	0.0247	0.17	QV	.	.	.	.
1.883	0.0249	0.18	QV	.	.	.	.
1.900	0.0252	0.18	QV	.	.	.	.

1.917	0.0254	0.18	QV	.	.	.	.
1.933	0.0256	0.18	QV	.	.	.	.
1.950	0.0259	0.18	QV	.	.	.	.
1.967	0.0261	0.18	QV	.	.	.	.
1.983	0.0264	0.18	QV	.	.	.	.
2.000	0.0266	0.18	QV	.	.	.	.
2.017	0.0269	0.18	QV	.	.	.	.
2.033	0.0271	0.18	QV	.	.	.	.
2.050	0.0273	0.18	QV	.	.	.	.
2.067	0.0276	0.18	QV	.	.	.	.
2.083	0.0278	0.18	QV	.	.	.	.
2.100	0.0281	0.18	QV	.	.	.	.
2.117	0.0283	0.18	QV	.	.	.	.
2.133	0.0286	0.18	QV	.	.	.	.
2.150	0.0288	0.18	QV	.	.	.	.
2.167	0.0290	0.18	QV	.	.	.	.
2.183	0.0293	0.18	QV	.	.	.	.
2.200	0.0295	0.18	QV	.	.	.	.
2.217	0.0298	0.18	QV	.	.	.	.
2.233	0.0300	0.18	QV	.	.	.	.
2.250	0.0303	0.18	QV	.	.	.	.
2.267	0.0305	0.18	QV	.	.	.	.
2.283	0.0308	0.18	QV	.	.	.	.
2.300	0.0310	0.18	QV	.	.	.	.
2.317	0.0313	0.18	QV	.	.	.	.
2.333	0.0315	0.18	QV	.	.	.	.
2.350	0.0317	0.18	QV	.	.	.	.
2.367	0.0320	0.18	QV	.	.	.	.
2.383	0.0322	0.18	QV	.	.	.	.
2.400	0.0325	0.18	QV	.	.	.	.
2.417	0.0327	0.18	QV	.	.	.	.
2.433	0.0330	0.18	QV	.	.	.	.
2.450	0.0332	0.18	QV	.	.	.	.
2.467	0.0335	0.18	QV	.	.	.	.
2.483	0.0337	0.18	QV	.	.	.	.
2.500	0.0340	0.18	QV	.	.	.	.
2.517	0.0342	0.18	QV	.	.	.	.
2.533	0.0345	0.18	QV	.	.	.	.
2.550	0.0347	0.18	QV	.	.	.	.
2.567	0.0350	0.18	QV	.	.	.	.
2.583	0.0352	0.18	QV	.	.	.	.
2.600	0.0355	0.18	QV	.	.	.	.
2.617	0.0357	0.18	QV	.	.	.	.
2.633	0.0360	0.18	QV	.	.	.	.
2.650	0.0362	0.18	QV	.	.	.	.
2.667	0.0365	0.18	QV	.	.	.	.
2.683	0.0367	0.18	QV	.	.	.	.
2.700	0.0370	0.18	QV	.	.	.	.
2.717	0.0372	0.18	QV	.	.	.	.
2.733	0.0375	0.18	QV	.	.	.	.

2.750	0.0377	0.18	QV	.	.	.	.
2.767	0.0380	0.18	QV	.	.	.	.
2.783	0.0382	0.18	QV	.	.	.	.
2.800	0.0385	0.18	QV	.	.	.	.
2.817	0.0387	0.18	QV	.	.	.	.
2.833	0.0390	0.18	QV	.	.	.	.
2.850	0.0392	0.18	QV	.	.	.	.
2.867	0.0395	0.18	QV	.	.	.	.
2.883	0.0397	0.18	QV	.	.	.	.
2.900	0.0400	0.18	QV	.	.	.	.
2.917	0.0402	0.18	QV	.	.	.	.
2.933	0.0405	0.18	QV	.	.	.	.
2.950	0.0407	0.18	QV	.	.	.	.
2.967	0.0410	0.18	QV	.	.	.	.
2.983	0.0412	0.18	QV	.	.	.	.
3.000	0.0415	0.18	QV	.	.	.	.
3.017	0.0417	0.18	QV	.	.	.	.
3.033	0.0420	0.18	QV	.	.	.	.
3.050	0.0423	0.18	QV	.	.	.	.
3.067	0.0425	0.18	QV	.	.	.	.
3.083	0.0428	0.18	QV	.	.	.	.
3.100	0.0430	0.19	QV	.	.	.	.
3.117	0.0433	0.19	QV	.	.	.	.
3.133	0.0435	0.19	QV	.	.	.	.
3.150	0.0438	0.19	Q V	.	.	.	.
3.167	0.0440	0.19	Q V	.	.	.	.
3.183	0.0443	0.19	Q V	.	.	.	.
3.200	0.0445	0.19	Q V	.	.	.	.
3.217	0.0448	0.19	Q V	.	.	.	.
3.233	0.0451	0.19	Q V	.	.	.	.
3.250	0.0453	0.19	Q V	.	.	.	.
3.267	0.0456	0.19	Q V	.	.	.	.
3.283	0.0458	0.19	Q V	.	.	.	.
3.300	0.0461	0.19	Q V	.	.	.	.
3.317	0.0463	0.19	Q V	.	.	.	.
3.333	0.0466	0.19	Q V	.	.	.	.
3.350	0.0469	0.19	Q V	.	.	.	.
3.367	0.0471	0.19	Q V	.	.	.	.
3.383	0.0474	0.19	Q V	.	.	.	.
3.400	0.0476	0.19	Q V	.	.	.	.
3.417	0.0479	0.19	Q V	.	.	.	.
3.433	0.0482	0.19	Q V	.	.	.	.
3.450	0.0484	0.19	Q V	.	.	.	.
3.467	0.0487	0.19	Q V	.	.	.	.
3.483	0.0489	0.19	Q V	.	.	.	.
3.500	0.0492	0.19	Q V	.	.	.	.
3.517	0.0495	0.19	Q V	.	.	.	.
3.533	0.0497	0.19	Q V	.	.	.	.
3.550	0.0500	0.19	Q V	.	.	.	.
3.567	0.0502	0.19	Q V	.	.	.	.

3.583	0.0505	0.19	Q V	.	.	.	.
3.600	0.0508	0.19	Q V	.	.	.	.
3.617	0.0510	0.19	Q V	.	.	.	.
3.633	0.0513	0.19	Q V	.	.	.	.
3.650	0.0515	0.19	Q V	.	.	.	.
3.667	0.0518	0.19	Q V	.	.	.	.
3.683	0.0521	0.19	Q V	.	.	.	.
3.700	0.0523	0.19	Q V	.	.	.	.
3.717	0.0526	0.19	Q V	.	.	.	.
3.733	0.0529	0.19	Q V	.	.	.	.
3.750	0.0531	0.19	Q V	.	.	.	.
3.767	0.0534	0.19	Q V	.	.	.	.
3.783	0.0536	0.19	Q V	.	.	.	.
3.800	0.0539	0.19	Q V	.	.	.	.
3.817	0.0542	0.19	Q V	.	.	.	.
3.833	0.0544	0.19	Q V	.	.	.	.
3.850	0.0547	0.19	Q V	.	.	.	.
3.867	0.0550	0.19	Q V	.	.	.	.
3.883	0.0552	0.19	Q V	.	.	.	.
3.900	0.0555	0.19	Q V	.	.	.	.
3.917	0.0558	0.19	Q V	.	.	.	.
3.933	0.0560	0.19	Q V	.	.	.	.
3.950	0.0563	0.19	Q V	.	.	.	.
3.967	0.0566	0.19	Q V	.	.	.	.
3.983	0.0568	0.19	Q V	.	.	.	.
4.000	0.0571	0.19	Q V	.	.	.	.
4.017	0.0574	0.19	Q V	.	.	.	.
4.033	0.0576	0.19	Q V	.	.	.	.
4.050	0.0579	0.19	Q V	.	.	.	.
4.067	0.0582	0.19	Q V	.	.	.	.
4.083	0.0584	0.19	Q V	.	.	.	.
4.100	0.0587	0.19	Q V	.	.	.	.
4.117	0.0590	0.19	Q V	.	.	.	.
4.133	0.0592	0.19	Q V	.	.	.	.
4.150	0.0595	0.20	Q V	.	.	.	.
4.167	0.0598	0.20	Q V	.	.	.	.
4.183	0.0600	0.20	Q V	.	.	.	.
4.200	0.0603	0.20	Q V	.	.	.	.
4.217	0.0606	0.20	Q V	.	.	.	.
4.233	0.0608	0.20	Q V	.	.	.	.
4.250	0.0611	0.20	Q V	.	.	.	.
4.267	0.0614	0.20	Q V	.	.	.	.
4.283	0.0617	0.20	Q V	.	.	.	.
4.300	0.0619	0.20	Q V	.	.	.	.
4.317	0.0622	0.20	Q V	.	.	.	.
4.333	0.0625	0.20	Q V	.	.	.	.
4.350	0.0627	0.20	Q V	.	.	.	.
4.367	0.0630	0.20	Q V	.	.	.	.
4.383	0.0633	0.20	Q V	.	.	.	.
4.400	0.0636	0.20	Q V	.	.	.	.

4.417	0.0638	0.20	Q	V	.	.	.	.
4.433	0.0641	0.20	Q	V	.	.	.	.
4.450	0.0644	0.20	Q	V	.	.	.	.
4.467	0.0646	0.20	Q	V	.	.	.	.
4.483	0.0649	0.20	Q	V	.	.	.	.
4.500	0.0652	0.20	Q	V	.	.	.	.
4.517	0.0655	0.20	Q	V	.	.	.	.
4.533	0.0657	0.20	Q	V	.	.	.	.
4.550	0.0660	0.20	Q	V	.	.	.	.
4.567	0.0663	0.20	Q	V	.	.	.	.
4.583	0.0666	0.20	Q	V	.	.	.	.
4.600	0.0668	0.20	Q	V	.	.	.	.
4.617	0.0671	0.20	Q	V	.	.	.	.
4.633	0.0674	0.20	Q	V	.	.	.	.
4.650	0.0677	0.20	Q	V	.	.	.	.
4.667	0.0679	0.20	Q	V	.	.	.	.
4.683	0.0682	0.20	Q	V	.	.	.	.
4.700	0.0685	0.20	Q	V	.	.	.	.
4.717	0.0688	0.20	Q	V	.	.	.	.
4.733	0.0691	0.20	Q	V	.	.	.	.
4.750	0.0693	0.20	Q	V	.	.	.	.
4.767	0.0696	0.20	Q	V	.	.	.	.
4.783	0.0699	0.20	Q	V	.	.	.	.
4.800	0.0702	0.20	Q	V	.	.	.	.
4.817	0.0704	0.20	Q	V	.	.	.	.
4.833	0.0707	0.20	Q	V	.	.	.	.
4.850	0.0710	0.20	Q	V	.	.	.	.
4.867	0.0713	0.20	Q	V	.	.	.	.
4.883	0.0716	0.20	Q	V	.	.	.	.
4.900	0.0718	0.20	Q	V	.	.	.	.
4.917	0.0721	0.20	Q	V	.	.	.	.
4.933	0.0724	0.20	Q	V	.	.	.	.
4.950	0.0727	0.20	Q	V	.	.	.	.
4.967	0.0730	0.20	Q	V	.	.	.	.
4.983	0.0732	0.20	Q	V	.	.	.	.
5.000	0.0735	0.20	Q	V	.	.	.	.
5.017	0.0738	0.20	Q	V	.	.	.	.
5.033	0.0741	0.20	Q	V	.	.	.	.
5.050	0.0744	0.20	Q	V	.	.	.	.
5.067	0.0747	0.21	Q	V	.	.	.	.
5.083	0.0749	0.21	Q	V	.	.	.	.
5.100	0.0752	0.21	Q	V	.	.	.	.
5.117	0.0755	0.21	Q	V	.	.	.	.
5.133	0.0758	0.21	Q	V	.	.	.	.
5.150	0.0761	0.21	Q	V	.	.	.	.
5.167	0.0764	0.21	Q	V	.	.	.	.
5.183	0.0766	0.21	Q	V	.	.	.	.
5.200	0.0769	0.21	Q	V	.	.	.	.
5.217	0.0772	0.21	Q	V	.	.	.	.
5.233	0.0775	0.21	Q	V	.	.	.	.

5.250	0.0778	0.21	Q	V	.	.	.	.
5.267	0.0781	0.21	Q	V	.	.	.	.
5.283	0.0783	0.21	Q	V	.	.	.	.
5.300	0.0786	0.21	Q	V	.	.	.	.
5.317	0.0789	0.21	Q	V	.	.	.	.
5.333	0.0792	0.21	Q	V	.	.	.	.
5.350	0.0795	0.21	Q	V	.	.	.	.
5.367	0.0798	0.21	Q	V	.	.	.	.
5.383	0.0801	0.21	Q	V	.	.	.	.
5.400	0.0804	0.21	Q	V	.	.	.	.
5.417	0.0806	0.21	Q	V	.	.	.	.
5.433	0.0809	0.21	Q	V	.	.	.	.
5.450	0.0812	0.21	Q	V	.	.	.	.
5.467	0.0815	0.21	Q	V	.	.	.	.
5.483	0.0818	0.21	Q	V	.	.	.	.
5.500	0.0821	0.21	Q	V	.	.	.	.
5.517	0.0824	0.21	Q	V	.	.	.	.
5.533	0.0827	0.21	Q	V	.	.	.	.
5.550	0.0830	0.21	Q	V	.	.	.	.
5.567	0.0833	0.21	Q	V	.	.	.	.
5.583	0.0835	0.21	Q	V	.	.	.	.
5.600	0.0838	0.21	Q	V	.	.	.	.
5.617	0.0841	0.21	Q	V	.	.	.	.
5.633	0.0844	0.21	Q	V	.	.	.	.
5.650	0.0847	0.21	Q	V	.	.	.	.
5.667	0.0850	0.21	Q	V	.	.	.	.
5.683	0.0853	0.21	Q	V	.	.	.	.
5.700	0.0856	0.21	Q	V	.	.	.	.
5.717	0.0859	0.21	Q	V	.	.	.	.
5.733	0.0862	0.21	Q	V	.	.	.	.
5.750	0.0865	0.21	Q	V	.	.	.	.
5.767	0.0868	0.21	Q	V	.	.	.	.
5.783	0.0871	0.21	Q	V	.	.	.	.
5.800	0.0874	0.21	Q	V	.	.	.	.
5.817	0.0876	0.21	Q	V	.	.	.	.
5.833	0.0879	0.21	Q	V	.	.	.	.
5.850	0.0882	0.21	Q	V	.	.	.	.
5.867	0.0885	0.21	.Q	V	.	.	.	.
5.883	0.0888	0.21	.Q	V	.	.	.	.
5.900	0.0891	0.22	.Q	V	.	.	.	.
5.917	0.0894	0.22	.Q	V	.	.	.	.
5.933	0.0897	0.22	.Q	V	.	.	.	.
5.950	0.0900	0.22	.Q	V	.	.	.	.
5.967	0.0903	0.22	.Q	V	.	.	.	.
5.983	0.0906	0.22	.Q	V	.	.	.	.
6.000	0.0909	0.22	.Q	V	.	.	.	.
6.017	0.0912	0.22	.Q	V	.	.	.	.
6.033	0.0915	0.22	.Q	V	.	.	.	.
6.050	0.0918	0.22	.Q	V	.	.	.	.
6.067	0.0921	0.22	.Q	V	.	.	.	.

6.083	0.0924	0.22	.Q	V	.	.	.	.
6.100	0.0927	0.22	.Q	V	.	.	.	.
6.117	0.0930	0.22	.Q	V	.	.	.	.
6.133	0.0933	0.22	.Q	V	.	.	.	.
6.150	0.0936	0.22	.Q	V	.	.	.	.
6.167	0.0939	0.22	.Q	V	.	.	.	.
6.183	0.0942	0.22	.Q	V	.	.	.	.
6.200	0.0945	0.22	.Q	V	.	.	.	.
6.217	0.0948	0.22	.Q	V	.	.	.	.
6.233	0.0951	0.22	.Q	V	.	.	.	.
6.250	0.0954	0.22	.Q	V	.	.	.	.
6.267	0.0957	0.22	.Q	V	.	.	.	.
6.283	0.0960	0.22	.Q	V	.	.	.	.
6.300	0.0963	0.22	.Q	V	.	.	.	.
6.317	0.0966	0.22	.Q	V	.	.	.	.
6.333	0.0970	0.22	.Q	V	.	.	.	.
6.350	0.0973	0.22	.Q	V	.	.	.	.
6.367	0.0976	0.22	.Q	V	.	.	.	.
6.383	0.0979	0.22	.Q	V	.	.	.	.
6.400	0.0982	0.22	.Q	V	.	.	.	.
6.417	0.0985	0.22	.Q	V	.	.	.	.
6.433	0.0988	0.22	.Q	V	.	.	.	.
6.450	0.0991	0.22	.Q	V	.	.	.	.
6.467	0.0994	0.22	.Q	V	.	.	.	.
6.483	0.0997	0.22	.Q	V	.	.	.	.
6.500	0.1000	0.22	.Q	V	.	.	.	.
6.517	0.1003	0.22	.Q	V	.	.	.	.
6.533	0.1006	0.22	.Q	V	.	.	.	.
6.550	0.1009	0.22	.Q	V	.	.	.	.
6.567	0.1013	0.22	.Q	V	.	.	.	.
6.583	0.1016	0.23	.Q	V	.	.	.	.
6.600	0.1019	0.23	.Q	V	.	.	.	.
6.617	0.1022	0.23	.Q	V	.	.	.	.
6.633	0.1025	0.23	.Q	V	.	.	.	.
6.650	0.1028	0.23	.Q	V	.	.	.	.
6.667	0.1031	0.23	.Q	V	.	.	.	.
6.683	0.1034	0.23	.Q	V	.	.	.	.
6.700	0.1037	0.23	.Q	V	.	.	.	.
6.717	0.1041	0.23	.Q	V	.	.	.	.
6.733	0.1044	0.23	.Q	V	.	.	.	.
6.750	0.1047	0.23	.Q	V	.	.	.	.
6.767	0.1050	0.23	.Q	V	.	.	.	.
6.783	0.1053	0.23	.Q	V	.	.	.	.
6.800	0.1056	0.23	.Q	V	.	.	.	.
6.817	0.1059	0.23	.Q	V	.	.	.	.
6.833	0.1062	0.23	.Q	V	.	.	.	.
6.850	0.1066	0.23	.Q	V	.	.	.	.
6.867	0.1069	0.23	.Q	V	.	.	.	.
6.883	0.1072	0.23	.Q	V	.	.	.	.
6.900	0.1075	0.23	.Q	V	.	.	.	.

6.917	0.1078	0.23	.Q	V	.	.	.	.
6.933	0.1081	0.23	.Q	V	.	.	.	.
6.950	0.1085	0.23	.Q	V	.	.	.	.
6.967	0.1088	0.23	.Q	V	.	.	.	.
6.983	0.1091	0.23	.Q	V	.	.	.	.
7.000	0.1094	0.23	.Q	V	.	.	.	.
7.017	0.1097	0.23	.Q	V	.	.	.	.
7.033	0.1101	0.23	.Q	V	.	.	.	.
7.050	0.1104	0.23	.Q	V	.	.	.	.
7.067	0.1107	0.23	.Q	V	.	.	.	.
7.083	0.1110	0.23	.Q	V	.	.	.	.
7.100	0.1113	0.23	.Q	V	.	.	.	.
7.117	0.1117	0.23	.Q	V	.	.	.	.
7.133	0.1120	0.23	.Q	V	.	.	.	.
7.150	0.1123	0.23	.Q	V	.	.	.	.
7.167	0.1126	0.23	.Q	V	.	.	.	.
7.183	0.1129	0.23	.Q	V	.	.	.	.
7.200	0.1133	0.23	.Q	V	.	.	.	.
7.217	0.1136	0.24	.Q	V	.	.	.	.
7.233	0.1139	0.24	.Q	V	.	.	.	.
7.250	0.1142	0.24	.Q	V	.	.	.	.
7.267	0.1146	0.24	.Q	V	.	.	.	.
7.283	0.1149	0.24	.Q	V	.	.	.	.
7.300	0.1152	0.24	.Q	V	.	.	.	.
7.317	0.1155	0.24	.Q	V	.	.	.	.
7.333	0.1159	0.24	.Q	V	.	.	.	.
7.350	0.1162	0.24	.Q	V	.	.	.	.
7.367	0.1165	0.24	.Q	V	.	.	.	.
7.383	0.1168	0.24	.Q	V	.	.	.	.
7.400	0.1172	0.24	.Q	V	.	.	.	.
7.417	0.1175	0.24	.Q	V	.	.	.	.
7.433	0.1178	0.24	.Q	V	.	.	.	.
7.450	0.1182	0.24	.Q	V	.	.	.	.
7.467	0.1185	0.24	.Q	V	.	.	.	.
7.483	0.1188	0.24	.Q	V	.	.	.	.
7.500	0.1192	0.24	.Q	V	.	.	.	.
7.517	0.1195	0.24	.Q	V	.	.	.	.
7.533	0.1198	0.24	.Q	V	.	.	.	.
7.550	0.1201	0.24	.Q	V	.	.	.	.
7.567	0.1205	0.24	.Q	V	.	.	.	.
7.583	0.1208	0.24	.Q	V	.	.	.	.
7.600	0.1211	0.24	.Q	V	.	.	.	.
7.617	0.1215	0.24	.Q	V	.	.	.	.
7.633	0.1218	0.24	.Q	V	.	.	.	.
7.650	0.1221	0.24	.Q	V	.	.	.	.
7.667	0.1225	0.24	.Q	V	.	.	.	.
7.683	0.1228	0.24	.Q	V	.	.	.	.
7.700	0.1231	0.24	.Q	V	.	.	.	.
7.717	0.1235	0.24	.Q	V	.	.	.	.
7.733	0.1238	0.24	.Q	V	.	.	.	.

7.750	0.1242	0.24	.Q	V	.	.	.	.
7.767	0.1245	0.24	.Q	V	.	.	.	.
7.783	0.1248	0.25	.Q	V	.	.	.	.
7.800	0.1252	0.25	.Q	V	.	.	.	.
7.817	0.1255	0.25	.Q	V	.	.	.	.
7.833	0.1258	0.25	.Q	V	.	.	.	.
7.850	0.1262	0.25	.Q	V	.	.	.	.
7.867	0.1265	0.25	.Q	V	.	.	.	.
7.883	0.1269	0.25	.Q	V	.	.	.	.
7.900	0.1272	0.25	.Q	V	.	.	.	.
7.917	0.1275	0.25	.Q	V	.	.	.	.
7.933	0.1279	0.25	.Q	V	.	.	.	.
7.950	0.1282	0.25	.Q	V	.	.	.	.
7.967	0.1286	0.25	.Q	V	.	.	.	.
7.983	0.1289	0.25	.Q	V	.	.	.	.
8.000	0.1292	0.25	.Q	V	.	.	.	.
8.017	0.1296	0.25	.Q	V	.	.	.	.
8.033	0.1299	0.25	.Q	V	.	.	.	.
8.050	0.1303	0.25	.Q	V	.	.	.	.
8.067	0.1306	0.25	.Q	V	.	.	.	.
8.083	0.1310	0.25	.Q	V	.	.	.	.
8.100	0.1313	0.25	.Q	V	.	.	.	.
8.117	0.1317	0.25	.Q	V	.	.	.	.
8.133	0.1320	0.25	.Q	V	.	.	.	.
8.150	0.1324	0.25	.Q	V	.	.	.	.
8.167	0.1327	0.25	.Q	V	.	.	.	.
8.183	0.1330	0.25	.Q	V	.	.	.	.
8.200	0.1334	0.25	.Q	V	.	.	.	.
8.217	0.1337	0.25	.Q	V	.	.	.	.
8.233	0.1341	0.25	.Q	V	.	.	.	.
8.250	0.1344	0.25	.Q	V	.	.	.	.
8.267	0.1348	0.25	.Q	V	.	.	.	.
8.283	0.1351	0.25	.Q	V	.	.	.	.
8.300	0.1355	0.25	.Q	V	.	.	.	.
8.317	0.1358	0.25	.Q	V	.	.	.	.
8.333	0.1362	0.26	.Q	V	.	.	.	.
8.350	0.1365	0.26	.Q	V	.	.	.	.
8.367	0.1369	0.26	.Q	V	.	.	.	.
8.383	0.1373	0.26	.Q	V	.	.	.	.
8.400	0.1376	0.26	.Q	V	.	.	.	.
8.417	0.1380	0.26	.Q	V	.	.	.	.
8.433	0.1383	0.26	.Q	V	.	.	.	.
8.450	0.1387	0.26	.Q	V	.	.	.	.
8.467	0.1390	0.26	.Q	V	.	.	.	.
8.483	0.1394	0.26	.Q	V	.	.	.	.
8.500	0.1397	0.26	.Q	V	.	.	.	.
8.517	0.1401	0.26	.Q	V	.	.	.	.
8.533	0.1405	0.26	.Q	V	.	.	.	.
8.550	0.1408	0.26	.Q	V	.	.	.	.
8.567	0.1412	0.26	.Q	V	.	.	.	.

8.583	0.1415	0.26	.Q	V	.	.	.	.
8.600	0.1419	0.26	.Q	V	.	.	.	.
8.617	0.1422	0.26	.Q	V	.	.	.	.
8.633	0.1426	0.26	.Q	V	.	.	.	.
8.650	0.1430	0.26	.Q	V	.	.	.	.
8.667	0.1433	0.26	.Q	V	.	.	.	.
8.683	0.1437	0.26	.Q	V	.	.	.	.
8.700	0.1441	0.26	.Q	V	.	.	.	.
8.717	0.1444	0.26	.Q	V	.	.	.	.
8.733	0.1448	0.26	.Q	V	.	.	.	.
8.750	0.1451	0.26	.Q	V	.	.	.	.
8.767	0.1455	0.26	.Q	V	.	.	.	.
8.783	0.1459	0.27	.Q	V	.	.	.	.
8.800	0.1462	0.27	.Q	V	.	.	.	.
8.817	0.1466	0.27	.Q	V	.	.	.	.
8.833	0.1470	0.27	.Q	V	.	.	.	.
8.850	0.1473	0.27	.Q	V	.	.	.	.
8.867	0.1477	0.27	.Q	V	.	.	.	.
8.883	0.1481	0.27	.Q	V	.	.	.	.
8.900	0.1484	0.27	.Q	V	.	.	.	.
8.917	0.1488	0.27	.Q	V	.	.	.	.
8.933	0.1492	0.27	.Q	V	.	.	.	.
8.950	0.1496	0.27	.Q	V	.	.	.	.
8.967	0.1499	0.27	.Q	V	.	.	.	.
8.983	0.1503	0.27	.Q	V	.	.	.	.
9.000	0.1507	0.27	.Q	V	.	.	.	.
9.017	0.1510	0.27	.Q	V	.	.	.	.
9.033	0.1514	0.27	.Q	V	.	.	.	.
9.050	0.1518	0.27	.Q	V	.	.	.	.
9.067	0.1522	0.27	.Q	V	.	.	.	.
9.083	0.1525	0.27	.Q	V	.	.	.	.
9.100	0.1529	0.27	.Q	V	.	.	.	.
9.117	0.1533	0.27	.Q	V	.	.	.	.
9.133	0.1537	0.27	.Q	V	.	.	.	.
9.150	0.1540	0.27	.Q	V	.	.	.	.
9.167	0.1544	0.27	.Q	V	.	.	.	.
9.183	0.1548	0.27	.Q	V	.	.	.	.
9.200	0.1552	0.27	.Q	V	.	.	.	.
9.217	0.1556	0.28	.Q	V	.	.	.	.
9.233	0.1559	0.28	.Q	V	.	.	.	.
9.250	0.1563	0.28	.Q	V	.	.	.	.
9.267	0.1567	0.28	.Q	V	.	.	.	.
9.283	0.1571	0.28	.Q	V	.	.	.	.
9.300	0.1575	0.28	.Q	V	.	.	.	.
9.317	0.1578	0.28	.Q	V	.	.	.	.
9.333	0.1582	0.28	.Q	V	.	.	.	.
9.350	0.1586	0.28	.Q	V	.	.	.	.
9.367	0.1590	0.28	.Q	V	.	.	.	.
9.383	0.1594	0.28	.Q	V	.	.	.	.
9.400	0.1598	0.28	.Q	V	.	.	.	.

9.417	0.1602	0.28	.Q	V	.	.	.	.
9.433	0.1605	0.28	.Q	V	.	.	.	.
9.450	0.1609	0.28	.Q	V	.	.	.	.
9.467	0.1613	0.28	.Q	V	.	.	.	.
9.483	0.1617	0.28	.Q	V	.	.	.	.
9.500	0.1621	0.28	.Q	V	.	.	.	.
9.517	0.1625	0.28	.Q	V	.	.	.	.
9.533	0.1629	0.28	.Q	V	.	.	.	.
9.550	0.1633	0.28	.Q	V	.	.	.	.
9.567	0.1637	0.28	.Q	V	.	.	.	.
9.583	0.1641	0.29	.Q	V	.	.	.	.
9.600	0.1644	0.29	.Q	V	.	.	.	.
9.617	0.1648	0.29	.Q	V	.	.	.	.
9.633	0.1652	0.29	.Q	V	.	.	.	.
9.650	0.1656	0.29	.Q	V	.	.	.	.
9.667	0.1660	0.29	.Q	V	.	.	.	.
9.683	0.1664	0.29	.Q	V	.	.	.	.
9.700	0.1668	0.29	.Q	V	.	.	.	.
9.717	0.1672	0.29	.Q	V	.	.	.	.
9.733	0.1676	0.29	.Q	V	.	.	.	.
9.750	0.1680	0.29	.Q	V	.	.	.	.
9.767	0.1684	0.29	.Q	V	.	.	.	.
9.783	0.1688	0.29	.Q	V	.	.	.	.
9.800	0.1692	0.29	.Q	V	.	.	.	.
9.817	0.1696	0.29	.Q	V	.	.	.	.
9.833	0.1700	0.29	.Q	V	.	.	.	.
9.850	0.1704	0.29	.Q	V	.	.	.	.
9.867	0.1708	0.29	.Q	V	.	.	.	.
9.883	0.1712	0.29	.Q	V	.	.	.	.
9.900	0.1716	0.29	.Q	V	.	.	.	.
9.917	0.1720	0.29	.Q	V	.	.	.	.
9.933	0.1724	0.30	.Q	V	.	.	.	.
9.950	0.1729	0.30	.Q	V	.	.	.	.
9.967	0.1733	0.30	.Q	V	.	.	.	.
9.983	0.1737	0.30	.Q	V	.	.	.	.
10.000	0.1741	0.30	.Q	V	.	.	.	.
10.017	0.1745	0.30	.Q	V	.	.	.	.
10.033	0.1749	0.30	.Q	V	.	.	.	.
10.050	0.1753	0.30	.Q		V	.	.	.
10.067	0.1757	0.30	.Q		V	.	.	.
10.083	0.1761	0.30	.Q		V	.	.	.
10.100	0.1765	0.30	.Q		V	.	.	.
10.117	0.1770	0.30	.Q		V	.	.	.
10.133	0.1774	0.30	.Q		V	.	.	.
10.150	0.1778	0.30	.Q		V	.	.	.
10.167	0.1782	0.30	.Q		V	.	.	.
10.183	0.1786	0.30	.Q		V	.	.	.
10.200	0.1790	0.30	.Q		V	.	.	.
10.217	0.1795	0.30	.Q		V	.	.	.
10.233	0.1799	0.30	.Q		V	.	.	.

10.250	0.1803	0.31	.Q	V	.	.	.
10.267	0.1807	0.31	.Q	V	.	.	.
10.283	0.1811	0.31	.Q	V	.	.	.
10.300	0.1816	0.31	.Q	V	.	.	.
10.317	0.1820	0.31	.Q	V	.	.	.
10.333	0.1824	0.31	.Q	V	.	.	.
10.350	0.1828	0.31	.Q	V	.	.	.
10.367	0.1833	0.31	.Q	V	.	.	.
10.383	0.1837	0.31	.Q	V	.	.	.
10.400	0.1841	0.31	.Q	V	.	.	.
10.417	0.1845	0.31	.Q	V	.	.	.
10.433	0.1850	0.31	.Q	V	.	.	.
10.450	0.1854	0.31	.Q	V	.	.	.
10.467	0.1858	0.31	.Q	V	.	.	.
10.483	0.1863	0.31	.Q	V	.	.	.
10.500	0.1867	0.31	.Q	V	.	.	.
10.517	0.1871	0.31	.Q	V	.	.	.
10.533	0.1876	0.31	.Q	V	.	.	.
10.550	0.1880	0.32	.Q	V	.	.	.
10.567	0.1884	0.32	.Q	V	.	.	.
10.583	0.1889	0.32	.Q	V	.	.	.
10.600	0.1893	0.32	.Q	V	.	.	.
10.617	0.1897	0.32	.Q	V	.	.	.
10.633	0.1902	0.32	.Q	V	.	.	.
10.650	0.1906	0.32	.Q	V	.	.	.
10.667	0.1910	0.32	.Q	V	.	.	.
10.683	0.1915	0.32	.Q	V	.	.	.
10.700	0.1919	0.32	.Q	V	.	.	.
10.717	0.1924	0.32	.Q	V	.	.	.
10.733	0.1928	0.32	.Q	V	.	.	.
10.750	0.1933	0.32	.Q	V	.	.	.
10.767	0.1937	0.32	.Q	V	.	.	.
10.783	0.1942	0.32	.Q	V	.	.	.
10.800	0.1946	0.33	.Q	V	.	.	.
10.817	0.1950	0.33	.Q	V	.	.	.
10.833	0.1955	0.33	.Q	V	.	.	.
10.850	0.1959	0.33	.Q	V	.	.	.
10.867	0.1964	0.33	.Q	V	.	.	.
10.883	0.1968	0.33	.Q	V.	.	.	.
10.900	0.1973	0.33	.Q	V.	.	.	.
10.917	0.1977	0.33	.Q	V.	.	.	.
10.933	0.1982	0.33	.Q	V.	.	.	.
10.950	0.1987	0.33	.Q	V.	.	.	.
10.967	0.1991	0.33	.Q	V.	.	.	.
10.983	0.1996	0.33	.Q	V.	.	.	.
11.000	0.2000	0.33	.Q	V.	.	.	.
11.017	0.2005	0.33	.Q	V.	.	.	.
11.033	0.2009	0.33	.Q	V.	.	.	.
11.050	0.2014	0.33	.Q	V.	.	.	.
11.067	0.2019	0.34	.Q	V.	.	.	.

11.083	0.2023	0.34	.Q	V.	.	.	.
11.100	0.2028	0.34	.Q	V.	.	.	.
11.117	0.2033	0.34	.Q	V.	.	.	.
11.133	0.2037	0.34	.Q	V.	.	.	.
11.150	0.2042	0.34	.Q	V.	.	.	.
11.167	0.2047	0.34	.Q	V.	.	.	.
11.183	0.2051	0.34	.Q	V.	.	.	.
11.200	0.2056	0.34	.Q	V.	.	.	.
11.217	0.2061	0.34	.Q	V.	.	.	.
11.233	0.2065	0.34	.Q	V.	.	.	.
11.250	0.2070	0.34	.Q	V.	.	.	.
11.267	0.2075	0.34	.Q	V.	.	.	.
11.283	0.2079	0.34	.Q	V.	.	.	.
11.300	0.2084	0.34	.Q	V.	.	.	.
11.317	0.2089	0.35	.Q	V.	.	.	.
11.333	0.2094	0.35	.Q	V.	.	.	.
11.350	0.2099	0.35	.Q	V.	.	.	.
11.367	0.2103	0.35	.Q	V.	.	.	.
11.383	0.2108	0.35	.Q	V.	.	.	.
11.400	0.2113	0.35	.Q	V.	.	.	.
11.417	0.2118	0.35	.Q	V.	.	.	.
11.433	0.2123	0.35	.Q	V.	.	.	.
11.450	0.2128	0.35	.Q	V.	.	.	.
11.467	0.2132	0.35	.Q	V.	.	.	.
11.483	0.2137	0.35	.Q	V.	.	.	.
11.500	0.2142	0.35	.Q	V.	.	.	.
11.517	0.2147	0.35	.Q	V.	.	.	.
11.533	0.2152	0.35	.Q	V.	.	.	.
11.550	0.2157	0.36	.Q	V.	.	.	.
11.567	0.2162	0.36	.Q	V.	.	.	.
11.583	0.2167	0.36	.Q	V.	.	.	.
11.600	0.2172	0.36	.Q	V.	.	.	.
11.617	0.2177	0.36	.Q	V.	.	.	.
11.633	0.2181	0.36	.Q	V.	.	.	.
11.650	0.2186	0.36	.Q	V	.	.	.
11.667	0.2191	0.36	.Q	V	.	.	.
11.683	0.2197	0.36	.Q	V	.	.	.
11.700	0.2202	0.37	.Q	V	.	.	.
11.717	0.2207	0.37	.Q	V	.	.	.
11.733	0.2212	0.37	.Q	V	.	.	.
11.750	0.2217	0.37	.Q	V	.	.	.
11.767	0.2222	0.37	.Q	V	.	.	.
11.783	0.2227	0.37	.Q	V	.	.	.
11.800	0.2232	0.37	.Q	V	.	.	.
11.817	0.2237	0.37	.Q	V	.	.	.
11.833	0.2242	0.37	.Q	V	.	.	.
11.850	0.2247	0.37	.Q	V	.	.	.
11.867	0.2252	0.37	.Q	V	.	.	.
11.883	0.2257	0.37	.Q	V	.	.	.
11.900	0.2263	0.37	.Q	V	.	.	.

11.917	0.2268	0.38	.Q	V	.	.	.
11.933	0.2273	0.38	.Q	V	.	.	.
11.950	0.2278	0.38	.Q	V	.	.	.
11.967	0.2283	0.38	.Q	V	.	.	.
11.983	0.2289	0.38	.Q	V	.	.	.
12.000	0.2294	0.38	.Q	V	.	.	.
12.017	0.2299	0.39	.Q	V	.	.	.
12.033	0.2305	0.39	.Q	V	.	.	.
12.050	0.2310	0.39	.Q	V	.	.	.
12.067	0.2316	0.40	.Q	V	.	.	.
12.083	0.2321	0.40	.Q	V	.	.	.
12.100	0.2327	0.40	.Q	V	.	.	.
12.117	0.2332	0.41	.Q	V	.	.	.
12.133	0.2338	0.41	.Q	V	.	.	.
12.150	0.2344	0.42	.Q	V	.	.	.
12.167	0.2350	0.43	. Q	V	.	.	.
12.183	0.2356	0.44	. Q	V	.	.	.
12.200	0.2362	0.45	. Q	V	.	.	.
12.217	0.2368	0.46	. Q	V	.	.	.
12.233	0.2375	0.47	. Q	V	.	.	.
12.250	0.2381	0.48	. Q	V	.	.	.
12.267	0.2388	0.49	. Q	V	.	.	.
12.283	0.2395	0.50	. Q	V	.	.	.
12.300	0.2402	0.50	. Q	V	.	.	.
12.317	0.2409	0.50	. Q	.V	.	.	.
12.333	0.2416	0.50	. Q	.V	.	.	.
12.350	0.2423	0.50	. Q	.V	.	.	.
12.367	0.2430	0.50	. Q	.V	.	.	.
12.383	0.2437	0.50	. Q	.V	.	.	.
12.400	0.2443	0.50	. Q	.V	.	.	.
12.417	0.2450	0.51	. Q	.V	.	.	.
12.433	0.2457	0.51	. Q	.V	.	.	.
12.450	0.2464	0.51	. Q	.V	.	.	.
12.467	0.2471	0.51	. Q	.V	.	.	.
12.483	0.2479	0.51	. Q	.V	.	.	.
12.500	0.2486	0.51	. Q	.V	.	.	.
12.517	0.2493	0.52	. Q	.V	.	.	.
12.533	0.2500	0.52	. Q	.V	.	.	.
12.550	0.2507	0.52	. Q	.V	.	.	.
12.567	0.2514	0.52	. Q	.V	.	.	.
12.583	0.2521	0.52	. Q	.V	.	.	.
12.600	0.2528	0.52	. Q	.V	.	.	.
12.617	0.2536	0.52	. Q	.V	.	.	.
12.633	0.2543	0.52	. Q	.V	.	.	.
12.650	0.2550	0.53	. Q	.V	.	.	.
12.667	0.2557	0.53	. Q	.V	.	.	.
12.683	0.2565	0.53	. Q	.V	.	.	.
12.700	0.2572	0.53	. Q	.V	.	.	.
12.717	0.2579	0.53	. Q	.V	.	.	.
12.733	0.2586	0.53	. Q	.V	.	.	.

12.750	0.2594	0.53	. Q	.V	.	.	.
12.767	0.2601	0.53	. Q	.V	.	.	.
12.783	0.2609	0.54	. Q	.V	.	.	.
12.800	0.2616	0.54	. Q	.V	.	.	.
12.817	0.2623	0.54	. Q	.V	.	.	.
12.833	0.2631	0.54	. Q	. V	.	.	.
12.850	0.2638	0.54	. Q	. V	.	.	.
12.867	0.2646	0.55	. Q	. V	.	.	.
12.883	0.2653	0.55	. Q	. V	.	.	.
12.900	0.2661	0.55	. Q	. V	.	.	.
12.917	0.2668	0.55	. Q	. V	.	.	.
12.933	0.2676	0.55	. Q	. V	.	.	.
12.950	0.2684	0.55	. Q	. V	.	.	.
12.967	0.2691	0.55	. Q	. V	.	.	.
12.983	0.2699	0.55	. Q	. V	.	.	.
13.000	0.2706	0.55	. Q	. V	.	.	.
13.017	0.2714	0.55	. Q	. V	.	.	.
13.033	0.2722	0.56	. Q	. V	.	.	.
13.050	0.2729	0.56	. Q	. V	.	.	.
13.067	0.2737	0.56	. Q	. V	.	.	.
13.083	0.2745	0.56	. Q	. V	.	.	.
13.100	0.2753	0.57	. Q	. V	.	.	.
13.117	0.2761	0.57	. Q	. V	.	.	.
13.133	0.2768	0.57	. Q	. V	.	.	.
13.150	0.2776	0.57	. Q	. V	.	.	.
13.167	0.2784	0.57	. Q	. V	.	.	.
13.183	0.2792	0.58	. Q	. V	.	.	.
13.200	0.2800	0.58	. Q	. V	.	.	.
13.217	0.2808	0.58	. Q	. V	.	.	.
13.233	0.2816	0.58	. Q	. V	.	.	.
13.250	0.2824	0.58	. Q	. V	.	.	.
13.267	0.2832	0.58	. Q	. V	.	.	.
13.283	0.2840	0.58	. Q	. V	.	.	.
13.300	0.2848	0.58	. Q	. V	.	.	.
13.317	0.2856	0.59	. Q	. V	.	.	.
13.333	0.2864	0.59	. Q	. V	.	.	.
13.350	0.2872	0.59	. Q	. V	.	.	.
13.367	0.2881	0.59	. Q	. V	.	.	.
13.383	0.2889	0.60	. Q	. V	.	.	.
13.400	0.2897	0.60	. Q	. V	.	.	.
13.417	0.2905	0.60	. Q	. V	.	.	.
13.433	0.2914	0.60	. Q	. V	.	.	.
13.450	0.2922	0.61	. Q	. V	.	.	.
13.467	0.2930	0.61	. Q	. V	.	.	.
13.483	0.2939	0.61	. Q	. V	.	.	.
13.500	0.2947	0.61	. Q	. V	.	.	.
13.517	0.2955	0.61	. Q	. V	.	.	.
13.533	0.2964	0.61	. Q	. V	.	.	.
13.550	0.2972	0.62	. Q	. V	.	.	.
13.567	0.2981	0.62	. Q	. V	.	.	.

13.583	0.2989	0.62	. Q	.	V	.	.	.
13.600	0.2998	0.62	. Q	.	V	.	.	.
13.617	0.3007	0.62	. Q	.	V	.	.	.
13.633	0.3015	0.62	. Q	.	V	.	.	.
13.650	0.3024	0.63	. Q	.	V	.	.	.
13.667	0.3032	0.63	. Q	.	V	.	.	.
13.683	0.3041	0.63	. Q	.	V	.	.	.
13.700	0.3050	0.64	. Q	.	V	.	.	.
13.717	0.3059	0.64	. Q	.	V	.	.	.
13.733	0.3068	0.64	. Q	.	V	.	.	.
13.750	0.3076	0.65	. Q	.	V	.	.	.
13.767	0.3085	0.65	. Q	.	V	.	.	.
13.783	0.3094	0.65	. Q	.	V	.	.	.
13.800	0.3103	0.65	. Q	.	V	.	.	.
13.817	0.3112	0.65	. Q	.	V	.	.	.
13.833	0.3121	0.66	. Q	.	V	.	.	.
13.850	0.3130	0.66	. Q	.	V	.	.	.
13.867	0.3139	0.66	. Q	.	V	.	.	.
13.883	0.3149	0.66	. Q	.	V	.	.	.
13.900	0.3158	0.66	. Q	.	V	.	.	.
13.917	0.3167	0.66	. Q	.	V	.	.	.
13.933	0.3176	0.67	. Q	.	V	.	.	.
13.950	0.3185	0.67	. Q	.	V	.	.	.
13.967	0.3195	0.68	. Q	.	V	.	.	.
13.983	0.3204	0.68	. Q	.	V	.	.	.
14.000	0.3213	0.68	. Q	.	V	.	.	.
14.017	0.3223	0.69	. Q	.	V	.	.	.
14.033	0.3232	0.69	. Q	.	V	.	.	.
14.050	0.3242	0.69	. Q	.	V	.	.	.
14.067	0.3251	0.70	. Q	.	V	.	.	.
14.083	0.3261	0.70	. Q	.	V	.	.	.
14.100	0.3271	0.70	. Q	.	V	.	.	.
14.117	0.3281	0.71	. Q	.	V	.	.	.
14.133	0.3290	0.71	. Q	.	V	.	.	.
14.150	0.3300	0.71	. Q	.	V	.	.	.
14.167	0.3310	0.71	. Q	.	V	.	.	.
14.183	0.3320	0.72	. Q	.	V	.	.	.
14.200	0.3330	0.72	. Q	.	V	.	.	.
14.217	0.3340	0.72	. Q	.	V	.	.	.
14.233	0.3350	0.73	. Q	.	V	.	.	.
14.250	0.3360	0.73	. Q	.	V	.	.	.
14.267	0.3370	0.73	. Q	.	V	.	.	.
14.283	0.3380	0.74	. Q	.	V	.	.	.
14.300	0.3390	0.74	. Q	.	V	.	.	.
14.317	0.3400	0.75	. Q	.	V	.	.	.
14.333	0.3411	0.75	. Q	.	V	.	.	.
14.350	0.3421	0.76	. Q	.	V	.	.	.
14.367	0.3432	0.76	. Q	.	V	.	.	.
14.383	0.3442	0.77	. Q	.	V	.	.	.
14.400	0.3453	0.77	. Q	.	V	.	.	.

14.417	0.3464	0.77	.	Q	.	V	.	.	.	
14.433	0.3474	0.77	.	Q	.	V	.	.	.	
14.450	0.3485	0.78	.	Q	.	V	.	.	.	
14.467	0.3496	0.78	.	Q	.	V	.	.	.	
14.483	0.3506	0.78	.	Q	.	V	.	.	.	
14.500	0.3517	0.78	.	Q	.	V	.	.	.	
14.517	0.3528	0.79	.	Q	.	V	.	.	.	
14.533	0.3539	0.79	.	Q	.	V	.	.	.	
14.550	0.3550	0.80	.	Q	.	V	.	.	.	
14.567	0.3561	0.81	.	Q	.	V	.	.	.	
14.583	0.3572	0.81	.	Q	.	V	.	.	.	
14.600	0.3584	0.82	.	Q	.	V	.	.	.	
14.617	0.3595	0.82	.	Q	.	V	.	.	.	
14.633	0.3606	0.83	.	Q	.	V	.	.	.	
14.650	0.3618	0.84	.	Q	.	V	.	.	.	
14.667	0.3630	0.84	.	Q	.	V	.	.	.	
14.683	0.3641	0.85	.	Q	.	V	.	.	.	
14.700	0.3653	0.85	.	Q	.	V	.	.	.	
14.717	0.3665	0.85	.	Q	.	V	.	.	.	
14.733	0.3677	0.86	.	Q	.	V	.	.	.	
14.750	0.3688	0.86	.	Q	.	V	.	.	.	
14.767	0.3700	0.87	.	Q	.	V	.	.	.	
14.783	0.3712	0.87	.	Q	.	V	.	.	.	
14.800	0.3724	0.87	.	Q	.	V	.	.	.	
14.817	0.3736	0.88	.	Q	.	V	.	.	.	
14.833	0.3749	0.89	.	Q	.	V	.	.	.	
14.850	0.3761	0.89	.	Q	.	V	.	.	.	
14.867	0.3773	0.90	.	Q	.	V	.	.	.	
14.883	0.3786	0.91	.	Q	.	V	.	.	.	
14.900	0.3799	0.92	.	Q	.	V	.	.	.	
14.917	0.3811	0.93	.	Q	.	V	.	.	.	
14.933	0.3824	0.94	.	Q	.	V	.	.	.	
14.950	0.3838	0.95	.	Q	.	V	.	.	.	
14.967	0.3851	0.96	.	Q	.	V	.	.	.	
14.983	0.3864	0.96	.	Q	.	V	.	.	.	
15.000	0.3877	0.97	.	Q	.	V	.	.	.	
15.017	0.3891	0.97	.	Q	.	V	.	.	.	
15.033	0.3904	0.98	.	Q	.	V	.	.	.	
15.050	0.3918	0.98	.	Q	.	V	.	.	.	
15.067	0.3931	0.99	.	Q	.	V	.	.	.	
15.083	0.3945	1.00	.	Q	.	V	.	.	.	
15.100	0.3959	1.00	.	Q	.	V	.	.	.	
15.117	0.3973	1.01	.	Q	.	V	.	.	.	
15.133	0.3987	1.02	.	Q	.	V	.	.	.	
15.150	0.4001	1.04	.	Q	.	V	.	.	.	
15.167	0.4016	1.05	.	Q	.	V	.	.	.	
15.183	0.4030	1.06	.	Q	.	V	.	.	.	
15.200	0.4045	1.08	.	Q	.	V	.	.	.	
15.217	0.4060	1.09	.	Q	.	V	.	.	.	
15.233	0.4075	1.11	.	Q	.	V	.	.	.	

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15.250      0.4091      1.12  .    Q    .       V .         .         .
15.267      0.4106      1.13  .    Q    .       V .         .         .
15.283      0.4122      1.14  .    Q    .       V .         .         .
15.300      0.4138      1.15  .    Q    .       V .         .         .
15.317      0.4154      1.16  .    Q    .       V .         .         .
15.333      0.4170      1.17  .    Q    .        V.         .         .
15.350      0.4186      1.18  .    Q    .        V.         .         .
15.367      0.4203      1.19  .    Q    .        V.         .         .
15.383      0.4219      1.19  .    Q    .        V.         .         .
15.400      0.4236      1.20  .    Q    .        V.         .         .
15.417      0.4252      1.21  .    Q    .        V.         .         .
15.433      0.4269      1.22  .    Q    .        V.         .         .
15.450      0.4286      1.22  .    Q    .        V.         .         .
15.467      0.4303      1.23  .    Q    .        V.         .         .
15.483      0.4320      1.24  .    Q    .        V.         .         .
15.500      0.4337      1.24  .    Q    .        V.         .         .
15.517      0.4354      1.25  .    Q    .        V.         .         .
15.533      0.4372      1.26  .    Q    .        V.         .         .
15.550      0.4389      1.26  .    Q    .         V         .         .
15.567      0.4407      1.27  .    Q    .         V         .         .
15.583      0.4424      1.29  .     Q   .         V         .         .
15.600      0.4442      1.31  .     Q   .         V         .         .
15.617      0.4461      1.33  .     Q   .         V         .         .
15.633      0.4479      1.35  .     Q   .         V         .         .
15.650      0.4498      1.37  .     Q   .         V         .         .
15.667      0.4517      1.38  .     Q   .         V         .         .
15.683      0.4536      1.40  .     Q   .         V         .         .
15.700      0.4556      1.42  .     Q   .         V         .         .
15.717      0.4576      1.46  .     Q   .         V         .         .
15.733      0.4597      1.53  .      Q  .         .V        .         .
15.750      0.4619      1.60  .      Q  .         .V        .         .
15.767      0.4642      1.67  .      Q  .         .V        .         .
15.783      0.4666      1.74  .       Q .         .V        .         .
15.800      0.4691      1.81  .       Q .         .V        .         .
15.817      0.4717      1.88  .       Q .         .V        .         .
15.833      0.4744      1.95  .        Q.         .V        .         .
15.850      0.4771      2.02  .        Q.         .V        .         .
15.867      0.4800      2.09  .        Q.         .V        .         .
15.883      0.4830      2.18  .         Q         . V       .         .
15.900      0.4861      2.26  .         Q         . V       .         .
15.917      0.4894      2.35  .         Q         . V       .         .
15.933      0.4927      2.43  .         .Q        . V       .         .
15.950      0.4962      2.52  .         .Q        . V       .         .
15.967      0.4998      2.60  .         . Q       . V       .         .
15.983      0.5035      2.69  .         . Q       .  V      .         .
16.000      0.5073      2.78  .         . Q       .  V      .         .
16.017      0.5116      3.14  .         .   Q     .  V      .         .
16.033      0.5168      3.78  .         .      Q  .  V      .         .
16.050      0.5229      4.43  .         .         Q  V      .         .
16.067      0.5299      5.07  .         .         .  QV     .         .
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16.083      0.5378      5.72  .         .         .   V Q   .         .
16.100      0.5466      6.36  .         .         .   V    Q.         .
16.117      0.5562      7.00  .         .         .    V    . Q       .
16.133      0.5667      7.65  .         .         .    V    .    Q    .
16.150      0.5786      8.58  .         .         .     V   .         Q
16.167      0.5898      8.16  .         .         .     V   .       Q .
16.183      0.6000      7.38  .         .         .      V  .   Q     .
16.200      0.6091      6.61  .         .         .      V  Q         .
16.217      0.6171      5.84  .         .         .      QV .         .
16.233      0.6241      5.07  .         .         .  Q    V .         .
16.250      0.6300      4.29  .         .        Q       V .         .
16.267      0.6349      3.52  .         .     Q   .        V.         .
16.283      0.6386      2.75  .         . Q       .        V.         .
16.300      0.6414      1.98  .       Q.          .        V.         .
16.317      0.6436      1.64  .      Q  .         .        V.         .
16.333      0.6458      1.58  .      Q  .         .        V.         .
16.350      0.6479      1.53  .      Q  .         .        V.         .
16.367      0.6500      1.48  .     Q   .         .        V.         .
16.383      0.6519      1.42  .     Q   .         .        V.         .
16.400      0.6538      1.37  .     Q   .         .        V.         .
16.417      0.6556      1.32  .     Q   .         .        V.         .
16.433      0.6574      1.26  .    Q    .         .         V         .
16.450      0.6590      1.21  .    Q    .         .         V         .
16.467      0.6607      1.18  .    Q    .         .         V         .
16.483      0.6623      1.17  .    Q    .         .         V         .
16.500      0.6639      1.15  .    Q    .         .         V         .
16.517      0.6654      1.14  .    Q    .         .         V         .
16.533      0.6670      1.13  .    Q    .         .         V         .
16.550      0.6685      1.11  .    Q    .         .         V         .
16.567      0.6700      1.10  .    Q    .         .         V         .
16.583      0.6715      1.08  .    Q    .         .         V         .
16.600      0.6730      1.07  .   Q     .         .         V         .
16.617      0.6744      1.05  .   Q     .         .         V         .
16.633      0.6759      1.03  .   Q     .         .         V         .
16.650      0.6773      1.02  .   Q     .         .         V         .
16.667      0.6786      1.00  .   Q     .         .         .V        .
16.683      0.6800      0.98  .   Q     .         .         .V        .
16.700      0.6813      0.97  .   Q     .         .         .V        .
16.717      0.6826      0.95  .   Q     .         .         .V        .
16.733      0.6839      0.93  .   Q     .         .         .V        .
16.750      0.6852      0.92  .   Q     .         .         .V        .
16.767      0.6864      0.91  .   Q     .         .         .V        .
16.783      0.6877      0.89  .   Q     .         .         .V        .
16.800      0.6889      0.88  .   Q     .         .         .V        .
16.817      0.6901      0.87  .   Q     .         .         .V        .
16.833      0.6913      0.86  .   Q     .         .         .V        .
16.850      0.6924      0.85  .  Q      .         .         .V        .
16.867      0.6936      0.84  .  Q      .         .         .V        .
16.883      0.6947      0.83  .  Q      .         .         .V        .
16.900      0.6959      0.82  .  Q      .         .         .V        .
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16.917	0.6970	0.81	.	Q	.	.	.V	.
16.933	0.6981	0.80	.	Q	.	.	.V	.
16.950	0.6992	0.79	.	Q	.	.	.V	.
16.967	0.7002	0.78	.	Q	.	.	. V	.
16.983	0.7013	0.77	.	Q	.	.	. V	.
17.000	0.7024	0.77	.	Q	.	.	. V	.
17.017	0.7034	0.76	.	Q	.	.	. V	.
17.033	0.7044	0.75	.	Q	.	.	. V	.
17.050	0.7055	0.74	.	Q	.	.	. V	.
17.067	0.7065	0.74	.	Q	.	.	. V	.
17.083	0.7075	0.73	.	Q	.	.	. V	.
17.100	0.7085	0.72	.	Q	.	.	. V	.
17.117	0.7095	0.72	.	Q	.	.	. V	.
17.133	0.7104	0.71	.	Q	.	.	. V	.
17.150	0.7114	0.70	.	Q	.	.	. V	.
17.167	0.7124	0.69	.	Q	.	.	. V	.
17.183	0.7133	0.69	.	Q	.	.	. V	.
17.200	0.7142	0.68	.	Q	.	.	. V	.
17.217	0.7152	0.68	.	Q	.	.	. V	.
17.233	0.7161	0.67	.	Q	.	.	. V	.
17.250	0.7170	0.67	.	Q	.	.	. V	.
17.267	0.7179	0.66	.	Q	.	.	. V	.
17.283	0.7188	0.66	.	Q	.	.	. V	.
17.300	0.7197	0.65	.	Q	.	.	. V	.
17.317	0.7206	0.65	.	Q	.	.	. V	.
17.333	0.7215	0.64	.	Q	.	.	. V	.
17.350	0.7224	0.64	.	Q	.	.	. V	.
17.367	0.7232	0.63	.	Q	.	.	. V	.
17.383	0.7241	0.63	.	Q	.	.	. V	.
17.400	0.7250	0.62	.	Q	.	.	. V	.
17.417	0.7258	0.62	.	Q	.	.	. V	.
17.433	0.7267	0.61	.	Q	.	.	. V	.
17.450	0.7275	0.61	.	Q	.	.	. V	.
17.467	0.7283	0.61	.	Q	.	.	. V	.
17.483	0.7292	0.60	.	Q	.	.	. V	.
17.500	0.7300	0.60	.	Q	.	.	. V	.
17.517	0.7308	0.59	.	Q	.	.	. V	.
17.533	0.7316	0.59	.	Q	.	.	. V	.
17.550	0.7324	0.59	.	Q	.	.	. V	.
17.567	0.7332	0.58	.	Q	.	.	. V	.
17.583	0.7340	0.58	.	Q	.	.	. V	.
17.600	0.7348	0.58	.	Q	.	.	. V	.
17.617	0.7356	0.57	.	Q	.	.	. V	.
17.633	0.7364	0.57	.	Q	.	.	. V	.
17.650	0.7372	0.56	.	Q	.	.	. V	.
17.667	0.7379	0.56	.	Q	.	.	. V	.
17.683	0.7387	0.56	.	Q	.	.	. V	.
17.700	0.7395	0.56	.	Q	.	.	. V	.
17.717	0.7402	0.55	.	Q	.	.	. V	.
17.733	0.7410	0.55	.	Q	.	.	. V	.

17.750	0.7417	0.55	. Q	.	.	.	V	.
17.767	0.7425	0.54	. Q	.	.	.	V	.
17.783	0.7432	0.54	. Q	.	.	.	V	.
17.800	0.7440	0.54	. Q	.	.	.	V	.
17.817	0.7447	0.53	. Q	.	.	.	V	.
17.833	0.7454	0.53	. Q	.	.	.	V	.
17.850	0.7462	0.53	. Q	.	.	.	V	.
17.867	0.7469	0.53	. Q	.	.	.	V	.
17.883	0.7476	0.52	. Q	.	.	.	V	.
17.900	0.7483	0.52	. Q	.	.	.	V	.
17.917	0.7491	0.52	. Q	.	.	.	V	.
17.933	0.7498	0.52	. Q	.	.	.	V	.
17.950	0.7505	0.51	. Q	.	.	.	V	.
17.967	0.7512	0.51	. Q	.	.	.	V	.
17.983	0.7519	0.51	. Q	.	.	.	V	.
18.000	0.7526	0.51	. Q	.	.	.	V	.
18.017	0.7533	0.50	. Q	.	.	.	V	.
18.033	0.7540	0.50	. Q	.	.	.	V	.
18.050	0.7546	0.50	. Q	.	.	.	V	.
18.067	0.7553	0.50	. Q	.	.	.	V	.
18.083	0.7560	0.49	. Q	.	.	.	V	.
18.100	0.7567	0.49	. Q	.	.	.	V	.
18.117	0.7573	0.48	. Q	.	.	.	V	.
18.133	0.7580	0.46	. Q	.	.	.	V	.
18.150	0.7586	0.45	. Q	.	.	.	V	.
18.167	0.7592	0.44	. Q	.	.	.	V	.
18.183	0.7598	0.42	.Q	.	.	.	V	.
18.200	0.7603	0.41	.Q	.	.	.	V	.
18.217	0.7609	0.40	.Q	.	.	.	V	.
18.233	0.7614	0.38	.Q	.	.	.	V	.
18.250	0.7619	0.38	.Q	.	.	.	V	.
18.267	0.7625	0.37	.Q	.	.	.	V	.
18.283	0.7630	0.37	.Q	.	.	.	V	.
18.300	0.7635	0.37	.Q	.	.	.	V	.
18.317	0.7640	0.37	.Q	.	.	.	V	.
18.333	0.7645	0.37	.Q	.	.	.	V	.
18.350	0.7650	0.36	.Q	.	.	.	V	.
18.367	0.7655	0.36	.Q	.	.	.	V	.
18.383	0.7660	0.36	.Q	.	.	.	V	.
18.400	0.7665	0.36	.Q	.	.	.	V	.
18.417	0.7670	0.36	.Q	.	.	.	V	.
18.433	0.7675	0.36	.Q	.	.	.	V	.
18.450	0.7679	0.35	.Q	.	.	.	V	.
18.467	0.7684	0.35	.Q	.	.	.	V	.
18.483	0.7689	0.35	.Q	.	.	.	V	.
18.500	0.7694	0.35	.Q	.	.	.	V	.
18.517	0.7699	0.35	.Q	.	.	.	V	.
18.533	0.7704	0.35	.Q	.	.	.	V	.
18.550	0.7708	0.34	.Q	.	.	.	V	.
18.567	0.7713	0.34	.Q	.	.	.	V	.

18.583	0.7718	0.34	.Q	.	.	.	V	.
18.600	0.7722	0.34	.Q	.	.	.	V	.
18.617	0.7727	0.34	.Q	.	.	.	V	.
18.633	0.7732	0.34	.Q	.	.	.	V	.
18.650	0.7736	0.34	.Q	.	.	.	V	.
18.667	0.7741	0.33	.Q	.	.	.	V	.
18.683	0.7746	0.33	.Q	.	.	.	V	.
18.700	0.7750	0.33	.Q	.	.	.	V	.
18.717	0.7755	0.33	.Q	.	.	.	V	.
18.733	0.7759	0.33	.Q	.	.	.	V	.
18.750	0.7764	0.33	.Q	.	.	.	V	.
18.767	0.7768	0.33	.Q	.	.	.	V	.
18.783	0.7773	0.33	.Q	.	.	.	V	.
18.800	0.7777	0.32	.Q	.	.	.	V	.
18.817	0.7782	0.32	.Q	.	.	.	V	.
18.833	0.7786	0.32	.Q	.	.	.	V	.
18.850	0.7791	0.32	.Q	.	.	.	V	.
18.867	0.7795	0.32	.Q	.	.	.	V	.
18.883	0.7799	0.32	.Q	.	.	.	V	.
18.900	0.7804	0.32	.Q	.	.	.	V	.
18.917	0.7808	0.32	.Q	.	.	.	V	.
18.933	0.7812	0.31	.Q	.	.	.	V	.
18.950	0.7817	0.31	.Q	.	.	.	V	.
18.967	0.7821	0.31	.Q	.	.	.	V	.
18.983	0.7825	0.31	.Q	.	.	.	V	.
19.000	0.7830	0.31	.Q	.	.	.	V	.
19.017	0.7834	0.31	.Q	.	.	.	V	.
19.033	0.7838	0.31	.Q	.	.	.	V	.
19.050	0.7842	0.31	.Q	.	.	.	V	.
19.067	0.7846	0.31	.Q	.	.	.	V	.
19.083	0.7851	0.30	.Q	.	.	.	V	.
19.100	0.7855	0.30	.Q	.	.	.	V	.
19.117	0.7859	0.30	.Q	.	.	.	V	.
19.133	0.7863	0.30	.Q	.	.	.	V	.
19.150	0.7867	0.30	.Q	.	.	.	V	.
19.167	0.7871	0.30	.Q	.	.	.	V	.
19.183	0.7875	0.30	.Q	.	.	.	V	.
19.200	0.7880	0.30	.Q	.	.	.	V	.
19.217	0.7884	0.30	.Q	.	.	.	V	.
19.233	0.7888	0.29	.Q	.	.	.	V	.
19.250	0.7892	0.29	.Q	.	.	.	V	.
19.267	0.7896	0.29	.Q	.	.	.	V	.
19.283	0.7900	0.29	.Q	.	.	.	V	.
19.300	0.7904	0.29	.Q	.	.	.	V	.
19.317	0.7908	0.29	.Q	.	.	.	V	.
19.333	0.7912	0.29	.Q	.	.	.	V	.
19.350	0.7916	0.29	.Q	.	.	.	V	.
19.367	0.7920	0.29	.Q	.	.	.	V	.
19.383	0.7924	0.29	.Q	.	.	.	V	.
19.400	0.7928	0.29	.Q	.	.	.	V	.

19.417	0.7931	0.28	.Q	.	.	.	V	.
19.433	0.7935	0.28	.Q	.	.	.	V	.
19.450	0.7939	0.28	.Q	.	.	.	V	.
19.467	0.7943	0.28	.Q	.	.	.	V	.
19.483	0.7947	0.28	.Q	.	.	.	V	.
19.500	0.7951	0.28	.Q	.	.	.	V	.
19.517	0.7955	0.28	.Q	.	.	.	V	.
19.533	0.7959	0.28	.Q	.	.	.	V	.
19.550	0.7962	0.28	.Q	.	.	.	V	.
19.567	0.7966	0.28	.Q	.	.	.	V	.
19.583	0.7970	0.28	.Q	.	.	.	V	.
19.600	0.7974	0.27	.Q	.	.	.	V	.
19.617	0.7978	0.27	.Q	.	.	.	V	.
19.633	0.7981	0.27	.Q	.	.	.	V	.
19.650	0.7985	0.27	.Q	.	.	.	V	.
19.667	0.7989	0.27	.Q	.	.	.	V	.
19.683	0.7993	0.27	.Q	.	.	.	V	.
19.700	0.7996	0.27	.Q	.	.	.	V	.
19.717	0.8000	0.27	.Q	.	.	.	V	.
19.733	0.8004	0.27	.Q	.	.	.	V	.
19.750	0.8007	0.27	.Q	.	.	.	V	.
19.767	0.8011	0.27	.Q	.	.	.	V	.
19.783	0.8015	0.27	.Q	.	.	.	V	.
19.800	0.8018	0.27	.Q	.	.	.	V	.
19.817	0.8022	0.26	.Q	.	.	.	V	.
19.833	0.8026	0.26	.Q	.	.	.	V	.
19.850	0.8029	0.26	.Q	.	.	.	V	.
19.867	0.8033	0.26	.Q	.	.	.	V	.
19.883	0.8037	0.26	.Q	.	.	.	V	.
19.900	0.8040	0.26	.Q	.	.	.	V	.
19.917	0.8044	0.26	.Q	.	.	.	V	.
19.933	0.8047	0.26	.Q	.	.	.	V	.
19.950	0.8051	0.26	.Q	.	.	.	V	.
19.967	0.8054	0.26	.Q	.	.	.	V	.
19.983	0.8058	0.26	.Q	.	.	.	V	.
20.000	0.8061	0.26	.Q	.	.	.	V	.
20.017	0.8065	0.26	.Q	.	.	.	V	.
20.033	0.8069	0.26	.Q	.	.	.	V	.
20.050	0.8072	0.25	.Q	.	.	.	V	.
20.067	0.8076	0.25	.Q	.	.	.	V	.
20.083	0.8079	0.25	.Q	.	.	.	V	.
20.100	0.8082	0.25	.Q	.	.	.	V	.
20.117	0.8086	0.25	.Q	.	.	.	V	.
20.133	0.8089	0.25	.Q	.	.	.	V	.
20.150	0.8093	0.25	.Q	.	.	.	V	.
20.167	0.8096	0.25	.Q	.	.	.	V	.
20.183	0.8100	0.25	.Q	.	.	.	V	.
20.200	0.8103	0.25	.Q	.	.	.	V	.
20.217	0.8107	0.25	.Q	.	.	.	V	.
20.233	0.8110	0.25	.Q	.	.	.	V	.

20.250	0.8113	0.25	.Q	.	.	.	V	.
20.267	0.8117	0.25	.Q	.	.	.	V	.
20.283	0.8120	0.25	.Q	.	.	.	V	.
20.300	0.8124	0.24	.Q	.	.	.	V	.
20.317	0.8127	0.24	.Q	.	.	.	V	.
20.333	0.8130	0.24	.Q	.	.	.	V	.
20.350	0.8134	0.24	.Q	.	.	.	V	.
20.367	0.8137	0.24	.Q	.	.	.	V	.
20.383	0.8140	0.24	.Q	.	.	.	V	.
20.400	0.8144	0.24	.Q	.	.	.	V	.
20.417	0.8147	0.24	.Q	.	.	.	V	.
20.433	0.8150	0.24	.Q	.	.	.	V	.
20.450	0.8154	0.24	.Q	.	.	.	V	.
20.467	0.8157	0.24	.Q	.	.	.	V	.
20.483	0.8160	0.24	.Q	.	.	.	V	.
20.500	0.8163	0.24	.Q	.	.	.	V	.
20.517	0.8167	0.24	.Q	.	.	.	V	.
20.533	0.8170	0.24	.Q	.	.	.	V	.
20.550	0.8173	0.24	.Q	.	.	.	V	.
20.567	0.8176	0.24	.Q	.	.	.	V	.
20.583	0.8180	0.24	.Q	.	.	.	V	.
20.600	0.8183	0.23	.Q	.	.	.	V	.
20.617	0.8186	0.23	.Q	.	.	.	V	.
20.633	0.8189	0.23	.Q	.	.	.	V	.
20.650	0.8193	0.23	.Q	.	.	.	V	.
20.667	0.8196	0.23	.Q	.	.	.	V	.
20.683	0.8199	0.23	.Q	.	.	.	V	.
20.700	0.8202	0.23	.Q	.	.	.	V	.
20.717	0.8205	0.23	.Q	.	.	.	V	.
20.733	0.8208	0.23	.Q	.	.	.	V	.
20.750	0.8212	0.23	.Q	.	.	.	V	.
20.767	0.8215	0.23	.Q	.	.	.	V	.
20.783	0.8218	0.23	.Q	.	.	.	V	.
20.800	0.8221	0.23	.Q	.	.	.	V	.
20.817	0.8224	0.23	.Q	.	.	.	V	.
20.833	0.8227	0.23	.Q	.	.	.	V	.
20.850	0.8230	0.23	.Q	.	.	.	V	.
20.867	0.8234	0.23	.Q	.	.	.	V	.
20.883	0.8237	0.23	.Q	.	.	.	V	.
20.900	0.8240	0.23	.Q	.	.	.	V	.
20.917	0.8243	0.22	.Q	.	.	.	V	.
20.933	0.8246	0.22	.Q	.	.	.	V	.
20.950	0.8249	0.22	.Q	.	.	.	V	.
20.967	0.8252	0.22	.Q	.	.	.	V	.
20.983	0.8255	0.22	.Q	.	.	.	V	.
21.000	0.8258	0.22	.Q	.	.	.	V	.
21.017	0.8261	0.22	.Q	.	.	.	V	.
21.033	0.8264	0.22	.Q	.	.	.	V	.
21.050	0.8267	0.22	.Q	.	.	.	V	.
21.067	0.8270	0.22	.Q	.	.	.	V	.

21.083	0.8273	0.22	.Q	.	.	.	V .
21.100	0.8276	0.22	.Q	.	.	.	V .
21.117	0.8280	0.22	.Q	.	.	.	V .
21.133	0.8283	0.22	.Q	.	.	.	V .
21.150	0.8286	0.22	.Q	.	.	.	V .
21.167	0.8289	0.22	.Q	.	.	.	V .
21.183	0.8292	0.22	.Q	.	.	.	V .
21.200	0.8294	0.22	.Q	.	.	.	V .
21.217	0.8297	0.22	.Q	.	.	.	V .
21.233	0.8300	0.22	.Q	.	.	.	V .
21.250	0.8303	0.22	.Q	.	.	.	V .
21.267	0.8306	0.21	.Q	.	.	.	V .
21.283	0.8309	0.21	Q	.	.	.	V .
21.300	0.8312	0.21	Q	.	.	.	V .
21.317	0.8315	0.21	Q	.	.	.	V .
21.333	0.8318	0.21	Q	.	.	.	V .
21.350	0.8321	0.21	Q	.	.	.	V .
21.367	0.8324	0.21	Q	.	.	.	V .
21.383	0.8327	0.21	Q	.	.	.	V .
21.400	0.8330	0.21	Q	.	.	.	V .
21.417	0.8333	0.21	Q	.	.	.	V .
21.433	0.8336	0.21	Q	.	.	.	V .
21.450	0.8339	0.21	Q	.	.	.	V .
21.467	0.8341	0.21	Q	.	.	.	V .
21.483	0.8344	0.21	Q	.	.	.	V .
21.500	0.8347	0.21	Q	.	.	.	V .
21.517	0.8350	0.21	Q	.	.	.	V .
21.533	0.8353	0.21	Q	.	.	.	V .
21.550	0.8356	0.21	Q	.	.	.	V .
21.567	0.8359	0.21	Q	.	.	.	V .
21.583	0.8361	0.21	Q	.	.	.	V .
21.600	0.8364	0.21	Q	.	.	.	V .
21.617	0.8367	0.21	Q	.	.	.	V .
21.633	0.8370	0.21	Q	.	.	.	V .
21.650	0.8373	0.21	Q	.	.	.	V .
21.667	0.8376	0.21	Q	.	.	.	V .
21.683	0.8378	0.20	Q	.	.	.	V .
21.700	0.8381	0.20	Q	.	.	.	V .
21.717	0.8384	0.20	Q	.	.	.	V .
21.733	0.8387	0.20	Q	.	.	.	V .
21.750	0.8390	0.20	Q	.	.	.	V .
21.767	0.8393	0.20	Q	.	.	.	V .
21.783	0.8395	0.20	Q	.	.	.	V .
21.800	0.8398	0.20	Q	.	.	.	V .
21.817	0.8401	0.20	Q	.	.	.	V .
21.833	0.8404	0.20	Q	.	.	.	V .
21.850	0.8406	0.20	Q	.	.	.	V .
21.867	0.8409	0.20	Q	.	.	.	V .
21.883	0.8412	0.20	Q	.	.	.	V .
21.900	0.8415	0.20	Q	.	.	.	V .

21.917	0.8417	0.20	Q	.	.	.	V .
21.933	0.8420	0.20	Q	.	.	.	V .
21.950	0.8423	0.20	Q	.	.	.	V .
21.967	0.8426	0.20	Q	.	.	.	V .
21.983	0.8428	0.20	Q	.	.	.	V .
22.000	0.8431	0.20	Q	.	.	.	V .
22.017	0.8434	0.20	Q	.	.	.	V .
22.033	0.8436	0.20	Q	.	.	.	V .
22.050	0.8439	0.20	Q	.	.	.	V .
22.067	0.8442	0.20	Q	.	.	.	V .
22.083	0.8445	0.20	Q	.	.	.	V .
22.100	0.8447	0.20	Q	.	.	.	V .
22.117	0.8450	0.20	Q	.	.	.	V .
22.133	0.8453	0.19	Q	.	.	.	V .
22.150	0.8455	0.19	Q	.	.	.	V .
22.167	0.8458	0.19	Q	.	.	.	V .
22.183	0.8461	0.19	Q	.	.	.	V .
22.200	0.8463	0.19	Q	.	.	.	V .
22.217	0.8466	0.19	Q	.	.	.	V .
22.233	0.8469	0.19	Q	.	.	.	V .
22.250	0.8471	0.19	Q	.	.	.	V .
22.267	0.8474	0.19	Q	.	.	.	V .
22.283	0.8477	0.19	Q	.	.	.	V .
22.300	0.8479	0.19	Q	.	.	.	V .
22.317	0.8482	0.19	Q	.	.	.	V .
22.333	0.8485	0.19	Q	.	.	.	V .
22.350	0.8487	0.19	Q	.	.	.	V .
22.367	0.8490	0.19	Q	.	.	.	V .
22.383	0.8492	0.19	Q	.	.	.	V .
22.400	0.8495	0.19	Q	.	.	.	V .
22.417	0.8498	0.19	Q	.	.	.	V .
22.433	0.8500	0.19	Q	.	.	.	V .
22.450	0.8503	0.19	Q	.	.	.	V .
22.467	0.8505	0.19	Q	.	.	.	V .
22.483	0.8508	0.19	Q	.	.	.	V .
22.500	0.8511	0.19	Q	.	.	.	V .
22.517	0.8513	0.19	Q	.	.	.	V .
22.533	0.8516	0.19	Q	.	.	.	V .
22.550	0.8518	0.19	Q	.	.	.	V .
22.567	0.8521	0.19	Q	.	.	.	V .
22.583	0.8523	0.19	Q	.	.	.	V .
22.600	0.8526	0.19	Q	.	.	.	V .
22.617	0.8529	0.19	Q	.	.	.	V.
22.633	0.8531	0.19	Q	.	.	.	V.
22.650	0.8534	0.19	Q	.	.	.	V.
22.667	0.8536	0.18	Q	.	.	.	V.
22.683	0.8539	0.18	Q	.	.	.	V.
22.700	0.8541	0.18	Q	.	.	.	V.
22.717	0.8544	0.18	Q	.	.	.	V.
22.733	0.8546	0.18	Q	.	.	.	V.

22.750	0.8549	0.18	Q	.	.	.	V.
22.767	0.8551	0.18	Q	.	.	.	V.
22.783	0.8554	0.18	Q	.	.	.	V.
22.800	0.8556	0.18	Q	.	.	.	V.
22.817	0.8559	0.18	Q	.	.	.	V.
22.833	0.8561	0.18	Q	.	.	.	V.
22.850	0.8564	0.18	Q	.	.	.	V.
22.867	0.8566	0.18	Q	.	.	.	V.
22.883	0.8569	0.18	Q	.	.	.	V.
22.900	0.8571	0.18	Q	.	.	.	V.
22.917	0.8574	0.18	Q	.	.	.	V.
22.933	0.8576	0.18	Q	.	.	.	V.
22.950	0.8579	0.18	Q	.	.	.	V.
22.967	0.8581	0.18	Q	.	.	.	V.
22.983	0.8584	0.18	Q	.	.	.	V.
23.000	0.8586	0.18	Q	.	.	.	V.
23.017	0.8589	0.18	Q	.	.	.	V.
23.033	0.8591	0.18	Q	.	.	.	V.
23.050	0.8594	0.18	Q	.	.	.	V.
23.067	0.8596	0.18	Q	.	.	.	V.
23.083	0.8599	0.18	Q	.	.	.	V.
23.100	0.8601	0.18	Q	.	.	.	V.
23.117	0.8603	0.18	Q	.	.	.	V.
23.133	0.8606	0.18	Q	.	.	.	V.
23.150	0.8608	0.18	Q	.	.	.	V.
23.167	0.8611	0.18	Q	.	.	.	V.
23.183	0.8613	0.18	Q	.	.	.	V.
23.200	0.8616	0.18	Q	.	.	.	V.
23.217	0.8618	0.18	Q	.	.	.	V.
23.233	0.8620	0.18	Q	.	.	.	V.
23.250	0.8623	0.18	Q	.	.	.	V.
23.267	0.8625	0.17	Q	.	.	.	V.
23.283	0.8628	0.17	Q	.	.	.	V.
23.300	0.8630	0.17	Q	.	.	.	V.
23.317	0.8632	0.17	Q	.	.	.	V.
23.333	0.8635	0.17	Q	.	.	.	V.
23.350	0.8637	0.17	Q	.	.	.	V.
23.367	0.8640	0.17	Q	.	.	.	V.
23.383	0.8642	0.17	Q	.	.	.	V.
23.400	0.8644	0.17	Q	.	.	.	V.
23.417	0.8647	0.17	Q	.	.	.	V.
23.433	0.8649	0.17	Q	.	.	.	V.
23.450	0.8651	0.17	Q	.	.	.	V.
23.467	0.8654	0.17	Q	.	.	.	V.
23.483	0.8656	0.17	Q	.	.	.	V.
23.500	0.8659	0.17	Q	.	.	.	V.
23.517	0.8661	0.17	Q	.	.	.	V.
23.533	0.8663	0.17	Q	.	.	.	V.
23.550	0.8666	0.17	Q	.	.	.	V.
23.567	0.8668	0.17	Q	.	.	.	V.

23.583	0.8670	0.17	Q	.	.	.	V.
23.600	0.8673	0.17	Q	.	.	.	V.
23.617	0.8675	0.17	Q	.	.	.	V.
23.633	0.8677	0.17	Q	.	.	.	V.
23.650	0.8680	0.17	Q	.	.	.	V.
23.667	0.8682	0.17	Q	.	.	.	V.
23.683	0.8684	0.17	Q	.	.	.	V.
23.700	0.8687	0.17	Q	.	.	.	V.
23.717	0.8689	0.17	Q	.	.	.	V.
23.733	0.8691	0.17	Q	.	.	.	V.
23.750	0.8694	0.17	Q	.	.	.	V.
23.767	0.8696	0.17	Q	.	.	.	V.
23.783	0.8698	0.17	Q	.	.	.	V.
23.800	0.8700	0.17	Q	.	.	.	V.
23.817	0.8703	0.17	Q	.	.	.	V.
23.833	0.8705	0.17	Q	.	.	.	V.
23.850	0.8707	0.17	Q	.	.	.	V.
23.867	0.8710	0.17	Q	.	.	.	V.
23.883	0.8712	0.17	Q	.	.	.	V.
23.900	0.8714	0.17	Q	.	.	.	V.
23.917	0.8716	0.17	Q	.	.	.	V.
23.933	0.8719	0.17	Q	.	.	.	V.
23.950	0.8721	0.17	Q	.	.	.	V.
23.967	0.8723	0.16	Q	.	.	.	V.
23.983	0.8726	0.16	Q	.	.	.	V.
24.000	0.8728	0.16	Q	.	.	.	V.
24.017	0.8730	0.16	Q	.	.	.	V.
24.033	0.8732	0.16	Q	.	.	.	V.
24.050	0.8735	0.16	Q	.	.	.	V.
24.067	0.8737	0.16	Q	.	.	.	V.
24.083	0.8739	0.14	Q	.	.	.	V.
24.100	0.8740	0.12	Q	.	.	.	V.
24.117	0.8742	0.11	Q	.	.	.	V.
24.133	0.8743	0.09	Q	.	.	.	V.
24.150	0.8744	0.07	Q	.	.	.	V.
24.167	0.8745	0.05	Q	.	.	.	V.
24.183	0.8745	0.03	Q	.	.	.	V.
24.200	0.8745	0.01	Q	.	.	.	V.

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
(Note: 100% of Peak Flow Rate estimate assumed to have
an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
0%	1452.0
10%	635.0
20%	160.0
30%	100.0

40%	75.0
50%	65.0
60%	45.0
70%	35.0
80%	25.0
90%	10.0

****
FLOW PROCESS FROM NODE 405.00 TO NODE 405.00 IS CODE = 7

>>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
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****
FLOW PROCESS FROM NODE 405.00 TO NODE 104.00 IS CODE = 4

>>>>>MODEL PIPEFLOW ROUTING OF STREAM #1<<<<<
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MODEL PIPEFLOW ROUTING OF STREAM 1 WHERE
STORAGE EFFECTS ARE NEGLECTED WITHIN THE PIPE, FLOW
VELOCITIES ARE ESTIMATED BY ASSUMING STEADY FLOW FOR
EACH UNIT INTERVAL(NORMAL DEPTH, Dn), AND FLOWS IN EXCESS
OF (.82)(DIAMETER) ARE PONDED AT THE UPSTREAM INLET:
UNIT INTERVAL FLOW VELOCITY COMPUTED USING Dn UP TO
(0.938)(DIAMETER):

PIPELENGTH(FT) = 114.00 MANNINGS FACTOR = 0.011
UPSTREAM ELEVATION(FT) = 614.00
DOWNSTREAM ELEVATION(FT) = 613.00
PIPE DIAMETER(FT) = 2.00

NORMAL DEPTH VELOCITY PIPE ROUTING RESULTS:

TIME (HRS)	INFLOW (CFS)	VELOCITY (FPS)	OUTFLOW (CFS)	UPSTREAM PONDING(AF)
0.017	0.01	0.50	0.00	0.000
0.033	0.02	0.50	0.00	0.000
0.050	0.04	0.50	0.00	0.000
0.067	0.06	0.50	0.00	0.000
0.083	0.08	0.50	0.01	0.000
0.100	0.10	0.50	0.03	0.000
0.117	0.12	0.50	0.04	0.000
0.133	0.14	0.50	0.06	0.000

0.150	0.16	0.54	0.08	0.000
0.167	0.19	0.61	0.10	0.000
0.183	0.21	0.69	0.12	0.000
0.200	0.23	0.75	0.19	0.000
0.217	0.24	0.78	0.31	0.000
0.233	0.24	0.80	0.28	0.000
0.250	0.25	0.82	0.25	0.000
0.267	0.25	0.84	0.26	0.000
0.283	0.26	0.86	0.26	0.000
0.300	0.26	0.88	0.27	0.000
0.317	0.27	0.89	0.27	0.000
0.333	0.27	0.90	0.27	0.000
0.350	0.28	0.92	0.28	0.000
0.367	0.28	0.93	0.28	0.000
0.383	0.28	0.94	0.28	0.000
0.400	0.29	0.95	0.29	0.000
0.417	0.29	0.96	0.29	0.000
0.433	0.29	0.96	0.30	0.000
0.450	0.29	0.97	0.29	0.000
0.467	0.30	0.98	0.30	0.000
0.483	0.30	0.99	0.30	0.000
0.500	0.30	0.99	0.30	0.000
0.517	0.30	1.00	0.30	0.000
0.533	0.30	1.00	0.30	0.000
0.550	0.30	1.01	0.30	0.000
0.567	0.31	1.01	0.31	0.000
0.583	0.31	1.01	0.31	0.000
0.600	0.31	1.02	0.31	0.000
0.617	0.31	1.02	0.31	0.000
0.633	0.31	1.03	0.31	0.000
0.650	0.31	1.03	0.31	0.000
0.667	0.31	1.03	0.31	0.000
0.683	0.31	1.03	0.31	0.000
0.700	0.31	1.04	0.31	0.000
0.717	0.31	1.04	0.31	0.000
0.733	0.31	1.04	0.31	0.000
0.750	0.31	1.04	0.31	0.000
0.767	0.32	1.04	0.32	0.000
0.783	0.32	1.05	0.32	0.000
0.800	0.32	1.05	0.32	0.000
0.817	0.32	1.05	0.32	0.000
0.833	0.32	1.05	0.32	0.000
0.850	0.32	1.05	0.32	0.000
0.867	0.32	1.05	0.32	0.000
0.883	0.32	1.06	0.32	0.000
0.900	0.32	1.06	0.32	0.000
0.917	0.32	1.06	0.32	0.000
0.933	0.32	1.06	0.32	0.000
0.950	0.32	1.06	0.32	0.000
0.967	0.32	1.06	0.32	0.000

0.983	0.32	1.06	0.32	0.000
1.000	0.32	1.06	0.32	0.000
1.017	0.32	1.07	0.32	0.000
1.033	0.32	1.07	0.32	0.000
1.050	0.32	1.07	0.32	0.000
1.067	0.32	1.07	0.32	0.000
1.083	0.32	1.07	0.32	0.000
1.100	0.32	1.07	0.32	0.000
1.117	0.32	1.07	0.32	0.000
1.133	0.32	1.07	0.32	0.000
1.150	0.32	1.07	0.32	0.000
1.167	0.32	1.07	0.32	0.000
1.183	0.32	1.07	0.32	0.000
1.200	0.33	1.08	0.33	0.000
1.217	0.33	1.08	0.33	0.000
1.233	0.33	1.08	0.33	0.000
1.250	0.33	1.08	0.33	0.000
1.267	0.33	1.08	0.33	0.000
1.283	0.33	1.08	0.33	0.000
1.300	0.33	1.08	0.33	0.000
1.317	0.33	1.08	0.33	0.000
1.333	0.33	1.08	0.33	0.000
1.350	0.33	1.08	0.33	0.000
1.367	0.33	1.08	0.33	0.000
1.383	0.33	1.08	0.33	0.000
1.400	0.33	1.08	0.33	0.000
1.417	0.33	1.09	0.33	0.000
1.433	0.33	1.09	0.33	0.000
1.450	0.33	1.09	0.33	0.000
1.467	0.33	1.09	0.33	0.000
1.483	0.33	1.09	0.33	0.000
1.500	0.33	1.09	0.33	0.000
1.517	0.33	1.09	0.33	0.000
1.533	0.33	1.09	0.33	0.000
1.550	0.33	1.09	0.33	0.000
1.567	0.33	1.09	0.33	0.000
1.583	0.33	1.09	0.33	0.000
1.600	0.33	1.10	0.33	0.000
1.617	0.33	1.10	0.33	0.000
1.633	0.33	1.10	0.33	0.000
1.650	0.33	1.10	0.33	0.000
1.667	0.33	1.10	0.33	0.000
1.683	0.33	1.10	0.33	0.000
1.700	0.33	1.10	0.33	0.000
1.717	0.33	1.10	0.33	0.000
1.733	0.33	1.10	0.33	0.000
1.750	0.33	1.10	0.33	0.000
1.767	0.33	1.10	0.33	0.000
1.783	0.33	1.10	0.33	0.000
1.800	0.33	1.11	0.33	0.000

1.817	0.33	1.11	0.33	0.000
1.833	0.33	1.11	0.33	0.000
1.850	0.33	1.11	0.33	0.000
1.867	0.33	1.11	0.33	0.000
1.883	0.34	1.11	0.34	0.000
1.900	0.34	1.11	0.34	0.000
1.917	0.34	1.11	0.34	0.000
1.933	0.34	1.11	0.34	0.000
1.950	0.34	1.11	0.34	0.000
1.967	0.34	1.11	0.34	0.000
1.983	0.34	1.11	0.34	0.000
2.000	0.34	1.11	0.34	0.000
2.017	0.34	1.11	0.34	0.000
2.033	0.34	1.12	0.34	0.000
2.050	0.34	1.12	0.34	0.000
2.067	0.34	1.12	0.34	0.000
2.083	0.34	1.12	0.34	0.000
2.100	0.34	1.12	0.34	0.000
2.117	0.34	1.12	0.34	0.000
2.133	0.34	1.12	0.34	0.000
2.150	0.34	1.12	0.34	0.000
2.167	0.34	1.12	0.34	0.000
2.183	0.34	1.12	0.34	0.000
2.200	0.34	1.12	0.34	0.000
2.217	0.34	1.13	0.34	0.000
2.233	0.34	1.13	0.34	0.000
2.250	0.34	1.13	0.34	0.000
2.267	0.34	1.13	0.34	0.000
2.283	0.34	1.13	0.34	0.000
2.300	0.34	1.13	0.34	0.000
2.317	0.34	1.13	0.34	0.000
2.333	0.34	1.13	0.34	0.000
2.350	0.34	1.13	0.34	0.000
2.367	0.34	1.13	0.34	0.000
2.383	0.34	1.13	0.34	0.000
2.400	0.34	1.14	0.34	0.000
2.417	0.34	1.14	0.34	0.000
2.433	0.34	1.14	0.34	0.000
2.450	0.34	1.14	0.34	0.000
2.467	0.34	1.14	0.34	0.000
2.483	0.34	1.14	0.34	0.000
2.500	0.34	1.14	0.34	0.000
2.517	0.34	1.14	0.34	0.000
2.533	0.34	1.14	0.34	0.000
2.550	0.34	1.14	0.34	0.000
2.567	0.35	1.14	0.35	0.000
2.583	0.35	1.14	0.35	0.000
2.600	0.35	1.14	0.35	0.000
2.617	0.35	1.15	0.35	0.000
2.633	0.35	1.15	0.35	0.000

2.650	0.35	1.15	0.35	0.000
2.667	0.35	1.15	0.35	0.000
2.683	0.35	1.15	0.35	0.000
2.700	0.35	1.15	0.35	0.000
2.717	0.35	1.15	0.35	0.000
2.733	0.35	1.15	0.35	0.000
2.750	0.35	1.15	0.35	0.000
2.767	0.35	1.15	0.35	0.000
2.783	0.35	1.16	0.35	0.000
2.800	0.35	1.16	0.35	0.000
2.817	0.35	1.16	0.35	0.000
2.833	0.35	1.16	0.35	0.000
2.850	0.35	1.16	0.35	0.000
2.867	0.35	1.16	0.35	0.000
2.883	0.35	1.16	0.35	0.000
2.900	0.35	1.16	0.35	0.000
2.917	0.35	1.16	0.35	0.000
2.933	0.35	1.16	0.35	0.000
2.950	0.35	1.16	0.35	0.000
2.967	0.35	1.17	0.35	0.000
2.983	0.35	1.17	0.35	0.000
3.000	0.35	1.17	0.35	0.000
3.017	0.35	1.17	0.35	0.000
3.033	0.35	1.17	0.35	0.000
3.050	0.35	1.17	0.35	0.000
3.067	0.35	1.17	0.35	0.000
3.083	0.35	1.17	0.35	0.000
3.100	0.35	1.17	0.35	0.000
3.117	0.35	1.17	0.35	0.000
3.133	0.35	1.17	0.35	0.000
3.150	0.35	1.17	0.35	0.000
3.167	0.36	1.18	0.36	0.000
3.183	0.36	1.18	0.36	0.000
3.200	0.36	1.18	0.36	0.000
3.217	0.36	1.18	0.36	0.000
3.233	0.36	1.18	0.36	0.000
3.250	0.36	1.18	0.36	0.000
3.267	0.36	1.18	0.36	0.000
3.283	0.36	1.18	0.36	0.000
3.300	0.36	1.18	0.36	0.000
3.317	0.36	1.19	0.36	0.000
3.333	0.36	1.19	0.36	0.000
3.350	0.36	1.19	0.36	0.000
3.367	0.36	1.19	0.36	0.000
3.383	0.36	1.19	0.36	0.000
3.400	0.36	1.19	0.36	0.000
3.417	0.36	1.19	0.36	0.000
3.433	0.36	1.19	0.36	0.000
3.450	0.36	1.19	0.36	0.000
3.467	0.36	1.19	0.36	0.000

3.483	0.36	1.19	0.36	0.000
3.500	0.36	1.19	0.36	0.000
3.517	0.36	1.20	0.36	0.000
3.533	0.36	1.20	0.36	0.000
3.550	0.36	1.20	0.36	0.000
3.567	0.36	1.20	0.36	0.000
3.583	0.36	1.20	0.36	0.000
3.600	0.36	1.20	0.36	0.000
3.617	0.36	1.20	0.36	0.000
3.633	0.36	1.20	0.36	0.000
3.650	0.36	1.20	0.36	0.000
3.667	0.36	1.21	0.36	0.000
3.683	0.36	1.21	0.36	0.000
3.700	0.36	1.21	0.36	0.000
3.717	0.36	1.21	0.36	0.000
3.733	0.37	1.21	0.37	0.000
3.750	0.37	1.21	0.37	0.000
3.767	0.37	1.21	0.37	0.000
3.783	0.37	1.21	0.37	0.000
3.800	0.37	1.21	0.37	0.000
3.817	0.37	1.21	0.37	0.000
3.833	0.37	1.22	0.37	0.000
3.850	0.37	1.22	0.37	0.000
3.867	0.37	1.22	0.37	0.000
3.883	0.37	1.22	0.37	0.000
3.900	0.37	1.22	0.37	0.000
3.917	0.37	1.22	0.37	0.000
3.933	0.37	1.22	0.37	0.000
3.950	0.37	1.22	0.37	0.000
3.967	0.37	1.22	0.37	0.000
3.983	0.37	1.22	0.37	0.000
4.000	0.37	1.23	0.37	0.000
4.017	0.37	1.23	0.37	0.000
4.033	0.37	1.23	0.37	0.000
4.050	0.37	1.23	0.37	0.000
4.067	0.37	1.23	0.37	0.000
4.083	0.37	1.23	0.37	0.000
4.100	0.37	1.23	0.37	0.000
4.117	0.37	1.23	0.37	0.000
4.133	0.37	1.23	0.37	0.000
4.150	0.37	1.24	0.37	0.000
4.167	0.37	1.24	0.37	0.000
4.183	0.37	1.24	0.37	0.000
4.200	0.37	1.24	0.37	0.000
4.217	0.37	1.24	0.37	0.000
4.233	0.38	1.24	0.38	0.000
4.250	0.38	1.24	0.38	0.000
4.267	0.38	1.24	0.38	0.000
4.283	0.38	1.24	0.38	0.000
4.300	0.38	1.25	0.38	0.000

4.317	0.38	1.25	0.38	0.000
4.333	0.38	1.25	0.38	0.000
4.350	0.38	1.25	0.38	0.000
4.367	0.38	1.25	0.38	0.000
4.383	0.38	1.25	0.38	0.000
4.400	0.38	1.25	0.38	0.000
4.417	0.38	1.25	0.38	0.000
4.433	0.38	1.25	0.38	0.000
4.450	0.38	1.26	0.38	0.000
4.467	0.38	1.26	0.38	0.000
4.483	0.38	1.26	0.38	0.000
4.500	0.38	1.26	0.38	0.000
4.517	0.38	1.26	0.38	0.000
4.533	0.38	1.26	0.38	0.000
4.550	0.38	1.26	0.38	0.000
4.567	0.38	1.26	0.38	0.000
4.583	0.38	1.26	0.38	0.000
4.600	0.38	1.27	0.38	0.000
4.617	0.38	1.27	0.38	0.000
4.633	0.38	1.27	0.38	0.000
4.650	0.38	1.27	0.38	0.000
4.667	0.38	1.27	0.38	0.000
4.683	0.38	1.27	0.38	0.000
4.700	0.38	1.27	0.38	0.000
4.717	0.38	1.27	0.38	0.000
4.733	0.38	1.27	0.38	0.000
4.750	0.39	1.28	0.39	0.000
4.767	0.39	1.28	0.39	0.000
4.783	0.39	1.28	0.39	0.000
4.800	0.39	1.28	0.39	0.000
4.817	0.39	1.28	0.39	0.000
4.833	0.39	1.28	0.39	0.000
4.850	0.39	1.28	0.39	0.000
4.867	0.39	1.28	0.39	0.000
4.883	0.39	1.29	0.39	0.000
4.900	0.39	1.29	0.39	0.000
4.917	0.39	1.29	0.39	0.000
4.933	0.39	1.29	0.39	0.000
4.950	0.39	1.29	0.39	0.000
4.967	0.39	1.29	0.39	0.000
4.983	0.39	1.29	0.39	0.000
5.000	0.39	1.29	0.39	0.000
5.017	0.39	1.29	0.39	0.000
5.033	0.39	1.30	0.39	0.000
5.050	0.39	1.30	0.39	0.000
5.067	0.39	1.30	0.39	0.000
5.083	0.39	1.30	0.39	0.000
5.100	0.39	1.30	0.39	0.000
5.117	0.39	1.30	0.39	0.000
5.133	0.39	1.30	0.39	0.000

5.150	0.39	1.30	0.39	0.000
5.167	0.39	1.31	0.39	0.000
5.183	0.39	1.31	0.39	0.000
5.200	0.40	1.31	0.40	0.000
5.217	0.40	1.31	0.40	0.000
5.233	0.40	1.31	0.40	0.000
5.250	0.40	1.31	0.40	0.000
5.267	0.40	1.31	0.40	0.000
5.283	0.40	1.31	0.40	0.000
5.300	0.40	1.32	0.40	0.000
5.317	0.40	1.32	0.40	0.000
5.333	0.40	1.32	0.40	0.000
5.350	0.40	1.32	0.40	0.000
5.367	0.40	1.32	0.40	0.000
5.383	0.40	1.32	0.40	0.000
5.400	0.40	1.32	0.40	0.000
5.417	0.40	1.33	0.40	0.000
5.433	0.40	1.33	0.40	0.000
5.450	0.40	1.33	0.40	0.000
5.467	0.40	1.33	0.40	0.000
5.483	0.40	1.33	0.40	0.000
5.500	0.40	1.33	0.40	0.000
5.517	0.40	1.33	0.40	0.000
5.533	0.40	1.33	0.40	0.000
5.550	0.40	1.33	0.40	0.000
5.567	0.40	1.34	0.40	0.000
5.583	0.40	1.34	0.40	0.000
5.600	0.40	1.34	0.40	0.000
5.617	0.40	1.34	0.40	0.000
5.633	0.41	1.34	0.41	0.000
5.650	0.41	1.34	0.41	0.000
5.667	0.41	1.34	0.41	0.000
5.683	0.41	1.35	0.41	0.000
5.700	0.41	1.35	0.41	0.000
5.717	0.41	1.35	0.41	0.000
5.733	0.41	1.35	0.41	0.000
5.750	0.41	1.35	0.41	0.000
5.767	0.41	1.35	0.41	0.000
5.783	0.41	1.35	0.41	0.000
5.800	0.41	1.35	0.41	0.000
5.817	0.41	1.36	0.41	0.000
5.833	0.41	1.36	0.41	0.000
5.850	0.41	1.36	0.41	0.000
5.867	0.41	1.36	0.41	0.000
5.883	0.41	1.36	0.41	0.000
5.900	0.41	1.36	0.41	0.000
5.917	0.41	1.36	0.41	0.000
5.933	0.41	1.37	0.41	0.000
5.950	0.41	1.37	0.41	0.000
5.967	0.41	1.37	0.41	0.000

5.983	0.41	1.37	0.41	0.000
6.000	0.41	1.37	0.41	0.000
6.017	0.42	1.37	0.42	0.000
6.033	0.42	1.38	0.42	0.000
6.050	0.42	1.38	0.42	0.000
6.067	0.42	1.38	0.42	0.000
6.083	0.42	1.38	0.42	0.000
6.100	0.42	1.38	0.42	0.000
6.117	0.42	1.38	0.42	0.000
6.133	0.42	1.38	0.42	0.000
6.150	0.42	1.38	0.42	0.000
6.167	0.42	1.38	0.42	0.000
6.183	0.42	1.39	0.42	0.000
6.200	0.42	1.39	0.42	0.000
6.217	0.42	1.39	0.42	0.000
6.233	0.42	1.39	0.42	0.000
6.250	0.42	1.39	0.42	0.000
6.267	0.42	1.40	0.42	0.000
6.283	0.42	1.40	0.42	0.000
6.300	0.42	1.40	0.42	0.000
6.317	0.42	1.40	0.42	0.000
6.333	0.42	1.40	0.42	0.000
6.350	0.42	1.40	0.42	0.000
6.367	0.42	1.40	0.42	0.000
6.383	0.42	1.40	0.42	0.000
6.400	0.42	1.41	0.42	0.000
6.417	0.43	1.41	0.43	0.000
6.433	0.43	1.41	0.43	0.000
6.450	0.43	1.41	0.43	0.000
6.467	0.43	1.41	0.43	0.000
6.483	0.43	1.41	0.43	0.000
6.500	0.43	1.41	0.43	0.000
6.517	0.43	1.42	0.43	0.000
6.533	0.43	1.42	0.43	0.000
6.550	0.43	1.42	0.43	0.000
6.567	0.43	1.42	0.43	0.000
6.583	0.43	1.42	0.43	0.000
6.600	0.43	1.43	0.43	0.000
6.617	0.43	1.43	0.43	0.000
6.633	0.43	1.43	0.43	0.000
6.650	0.43	1.43	0.43	0.000
6.667	0.43	1.43	0.43	0.000
6.683	0.43	1.43	0.43	0.000
6.700	0.43	1.43	0.43	0.000
6.717	0.43	1.43	0.43	0.000
6.733	0.43	1.44	0.43	0.000
6.750	0.43	1.44	0.43	0.000
6.767	0.43	1.44	0.43	0.000
6.783	0.44	1.44	0.44	0.000
6.800	0.44	1.44	0.44	0.000

6.817	0.44	1.44	0.44	0.000
6.833	0.44	1.45	0.44	0.000
6.850	0.44	1.45	0.44	0.000
6.867	0.44	1.45	0.44	0.000
6.883	0.44	1.45	0.44	0.000
6.900	0.44	1.45	0.44	0.000
6.917	0.44	1.46	0.44	0.000
6.933	0.44	1.46	0.44	0.000
6.950	0.44	1.46	0.44	0.000
6.967	0.44	1.46	0.44	0.000
6.983	0.44	1.46	0.44	0.000
7.000	0.44	1.46	0.44	0.000
7.017	0.44	1.46	0.44	0.000
7.033	0.44	1.47	0.44	0.000
7.050	0.44	1.47	0.44	0.000
7.067	0.44	1.47	0.44	0.000
7.083	0.44	1.47	0.44	0.000
7.100	0.44	1.47	0.44	0.000
7.117	0.45	1.47	0.45	0.000
7.133	0.45	1.48	0.45	0.000
7.150	0.45	1.48	0.45	0.000
7.167	0.45	1.48	0.45	0.000
7.183	0.45	1.48	0.45	0.000
7.200	0.45	1.48	0.45	0.000
7.217	0.45	1.49	0.45	0.000
7.233	0.45	1.49	0.45	0.000
7.250	0.45	1.49	0.45	0.000
7.267	0.45	1.49	0.45	0.000
7.283	0.45	1.49	0.45	0.000
7.300	0.45	1.49	0.45	0.000
7.317	0.45	1.49	0.45	0.000
7.333	0.45	1.50	0.45	0.000
7.350	0.45	1.50	0.45	0.000
7.367	0.45	1.50	0.45	0.000
7.383	0.45	1.50	0.45	0.000
7.400	0.45	1.50	0.45	0.000
7.417	0.45	1.51	0.45	0.000
7.433	0.46	1.51	0.46	0.000
7.450	0.46	1.51	0.46	0.000
7.467	0.46	1.51	0.46	0.000
7.483	0.46	1.51	0.46	0.000
7.500	0.46	1.52	0.46	0.000
7.517	0.46	1.52	0.46	0.000
7.533	0.46	1.52	0.46	0.000
7.550	0.46	1.52	0.46	0.000
7.567	0.46	1.52	0.46	0.000
7.583	0.46	1.52	0.46	0.000
7.600	0.46	1.53	0.46	0.000
7.617	0.46	1.53	0.46	0.000
7.633	0.46	1.53	0.46	0.000

7.650	0.46	1.53	0.46	0.000
7.667	0.46	1.53	0.46	0.000
7.683	0.46	1.53	0.46	0.000
7.700	0.46	1.54	0.46	0.000
7.717	0.46	1.54	0.47	0.000
7.733	0.47	1.54	0.47	0.000
7.750	0.47	1.54	0.47	0.000
7.767	0.47	1.55	0.47	0.000
7.783	0.47	1.55	0.47	0.000
7.800	0.47	1.55	0.47	0.000
7.817	0.47	1.55	0.47	0.000
7.833	0.47	1.55	0.47	0.000
7.850	0.47	1.55	0.47	0.000
7.867	0.47	1.56	0.47	0.000
7.883	0.47	1.56	0.47	0.000
7.900	0.47	1.56	0.47	0.000
7.917	0.47	1.56	0.47	0.000
7.933	0.47	1.56	0.47	0.000
7.950	0.47	1.57	0.47	0.000
7.967	0.47	1.57	0.47	0.000
7.983	0.47	1.57	0.47	0.000
8.000	0.47	1.57	0.47	0.000
8.017	0.48	1.57	0.48	0.000
8.033	0.48	1.58	0.48	0.000
8.050	0.48	1.58	0.48	0.000
8.067	0.48	1.58	0.48	0.000
8.083	0.48	1.58	0.48	0.000
8.100	0.48	1.59	0.48	0.000
8.117	0.48	1.59	0.48	0.000
8.133	0.48	1.59	0.48	0.000
8.150	0.48	1.59	0.48	0.000
8.167	0.48	1.59	0.48	0.000
8.183	0.48	1.59	0.48	0.000
8.200	0.48	1.60	0.48	0.000
8.217	0.48	1.60	0.48	0.000
8.233	0.48	1.60	0.48	0.000
8.250	0.48	1.60	0.48	0.000
8.267	0.48	1.60	0.48	0.000
8.283	0.49	1.61	0.49	0.000
8.300	0.49	1.61	0.49	0.000
8.317	0.49	1.61	0.49	0.000
8.333	0.49	1.61	0.49	0.000
8.350	0.49	1.62	0.49	0.000
8.367	0.49	1.62	0.49	0.000
8.383	0.49	1.62	0.49	0.000
8.400	0.49	1.62	0.49	0.000
8.417	0.49	1.63	0.49	0.000
8.433	0.49	1.63	0.49	0.000
8.450	0.49	1.63	0.49	0.000
8.467	0.49	1.63	0.49	0.000

8.483	0.49	1.63	0.49	0.000
8.500	0.49	1.63	0.49	0.000
8.517	0.49	1.64	0.49	0.000
8.533	0.50	1.64	0.50	0.000
8.550	0.50	1.64	0.50	0.000
8.567	0.50	1.64	0.50	0.000
8.583	0.50	1.65	0.50	0.000
8.600	0.50	1.65	0.50	0.000
8.617	0.50	1.65	0.50	0.000
8.633	0.50	1.65	0.50	0.000
8.650	0.50	1.66	0.50	0.000
8.667	0.50	1.66	0.50	0.000
8.683	0.50	1.66	0.50	0.000
8.700	0.50	1.66	0.50	0.000
8.717	0.50	1.67	0.50	0.000
8.733	0.50	1.67	0.50	0.000
8.750	0.50	1.67	0.50	0.000
8.767	0.51	1.67	0.51	0.000
8.783	0.51	1.67	0.51	0.000
8.800	0.51	1.68	0.51	0.000
8.817	0.51	1.68	0.51	0.000
8.833	0.51	1.68	0.51	0.000
8.850	0.51	1.68	0.51	0.000
8.867	0.51	1.69	0.51	0.000
8.883	0.51	1.69	0.51	0.000
8.900	0.51	1.69	0.51	0.000
8.917	0.51	1.69	0.51	0.000
8.933	0.51	1.70	0.51	0.000
8.950	0.51	1.70	0.51	0.000
8.967	0.51	1.70	0.51	0.000
8.983	0.51	1.70	0.51	0.000
9.000	0.52	1.71	0.52	0.000
9.017	0.52	1.71	0.52	0.000
9.033	0.52	1.71	0.52	0.000
9.050	0.52	1.71	0.52	0.000
9.067	0.52	1.72	0.52	0.000
9.083	0.52	1.72	0.52	0.000
9.100	0.52	1.72	0.52	0.000
9.117	0.52	1.72	0.52	0.000
9.133	0.52	1.72	0.52	0.000
9.150	0.52	1.73	0.52	0.000
9.167	0.52	1.73	0.52	0.000
9.183	0.52	1.73	0.52	0.000
9.200	0.52	1.74	0.52	0.000
9.217	0.53	1.74	0.53	0.000
9.233	0.53	1.74	0.53	0.000
9.250	0.53	1.74	0.53	0.000
9.267	0.53	1.75	0.53	0.000
9.283	0.53	1.75	0.53	0.000
9.300	0.53	1.75	0.53	0.000

9.317	0.53	1.76	0.53	0.000
9.333	0.53	1.76	0.53	0.000
9.350	0.53	1.76	0.53	0.000
9.367	0.53	1.76	0.53	0.000
9.383	0.53	1.76	0.53	0.000
9.400	0.53	1.77	0.53	0.000
9.417	0.53	1.77	0.53	0.000
9.433	0.54	1.77	0.54	0.000
9.450	0.54	1.77	0.54	0.000
9.467	0.54	1.78	0.54	0.000
9.483	0.54	1.78	0.54	0.000
9.500	0.54	1.78	0.54	0.000
9.517	0.54	1.79	0.54	0.000
9.533	0.54	1.79	0.54	0.000
9.550	0.54	1.79	0.54	0.000
9.567	0.54	1.80	0.54	0.000
9.583	0.54	1.80	0.54	0.000
9.600	0.54	1.80	0.54	0.000
9.617	0.55	1.81	0.55	0.000
9.633	0.55	1.81	0.55	0.000
9.650	0.55	1.81	0.55	0.000
9.667	0.55	1.81	0.55	0.000
9.683	0.55	1.82	0.55	0.000
9.700	0.55	1.82	0.55	0.000
9.717	0.55	1.82	0.55	0.000
9.733	0.55	1.82	0.55	0.000
9.750	0.55	1.83	0.55	0.000
9.767	0.55	1.83	0.55	0.000
9.783	0.55	1.83	0.55	0.000
9.800	0.55	1.84	0.55	0.000
9.817	0.56	1.84	0.56	0.000
9.833	0.56	1.84	0.56	0.000
9.850	0.56	1.85	0.56	0.000
9.867	0.56	1.85	0.56	0.000
9.883	0.56	1.85	0.56	0.000
9.900	0.56	1.86	0.56	0.000
9.917	0.56	1.86	0.56	0.000
9.933	0.56	1.86	0.56	0.000
9.950	0.56	1.86	0.56	0.000
9.967	0.56	1.87	0.56	0.000
9.983	0.56	1.87	0.56	0.000
10.000	0.57	1.87	0.57	0.000
10.017	0.57	1.88	0.57	0.000
10.033	0.57	1.88	0.57	0.000
10.050	0.57	1.88	0.57	0.000
10.067	0.57	1.88	0.57	0.000
10.083	0.57	1.89	0.57	0.000
10.100	0.57	1.89	0.57	0.000
10.117	0.57	1.90	0.57	0.000
10.133	0.57	1.90	0.57	0.000

10.150	0.57	1.90	0.58	0.000
10.167	0.58	1.91	0.58	0.000
10.183	0.58	1.91	0.58	0.000
10.200	0.58	1.91	0.58	0.000
10.217	0.58	1.92	0.58	0.000
10.233	0.58	1.92	0.58	0.000
10.250	0.58	1.92	0.58	0.000
10.267	0.58	1.93	0.58	0.000
10.283	0.58	1.93	0.58	0.000
10.300	0.58	1.93	0.58	0.000
10.317	0.58	1.93	0.58	0.000
10.333	0.59	1.94	0.59	0.000
10.350	0.59	1.94	0.59	0.000
10.367	0.59	1.95	0.59	0.000
10.383	0.59	1.95	0.59	0.000
10.400	0.59	1.95	0.59	0.000
10.417	0.59	1.96	0.59	0.000
10.433	0.59	1.96	0.59	0.000
10.450	0.59	1.97	0.59	0.000
10.467	0.59	1.97	0.59	0.000
10.483	0.60	1.97	0.60	0.000
10.500	0.60	1.98	0.60	0.000
10.517	0.60	1.98	0.60	0.000
10.533	0.60	1.98	0.60	0.000
10.550	0.60	1.99	0.60	0.000
10.567	0.60	1.99	0.60	0.000
10.583	0.60	1.99	0.60	0.000
10.600	0.60	2.00	0.60	0.000
10.617	0.60	2.00	0.60	0.000
10.633	0.60	2.00	0.60	0.000
10.650	0.61	2.01	0.61	0.000
10.667	0.61	2.01	0.61	0.000
10.683	0.61	2.01	0.61	0.000
10.700	0.61	2.02	0.61	0.000
10.717	0.61	2.02	0.61	0.000
10.733	0.61	2.03	0.61	0.000
10.750	0.61	2.03	0.61	0.000
10.767	0.62	2.04	0.62	0.000
10.783	0.62	2.04	0.62	0.000
10.800	0.62	2.04	0.62	0.000
10.817	0.62	2.05	0.62	0.000
10.833	0.62	2.05	0.62	0.000
10.850	0.62	2.05	0.62	0.000
10.867	0.62	2.06	0.62	0.000
10.883	0.62	2.06	0.62	0.000
10.900	0.62	2.07	0.62	0.000
10.917	0.62	2.07	0.62	0.000
10.933	0.63	2.07	0.63	0.000
10.950	0.63	2.08	0.63	0.000
10.967	0.63	2.08	0.63	0.000

10.983	0.63	2.09	0.63	0.000
11.000	0.63	2.09	0.63	0.000
11.017	0.63	2.10	0.63	0.000
11.033	0.63	2.10	0.63	0.000
11.050	0.64	2.11	0.64	0.000
11.067	0.64	2.11	0.64	0.000
11.083	0.64	2.12	0.64	0.000
11.100	0.64	2.12	0.64	0.000
11.117	0.64	2.12	0.64	0.000
11.133	0.64	2.13	0.64	0.000
11.150	0.64	2.13	0.64	0.000
11.167	0.64	2.13	0.64	0.000
11.183	0.65	2.14	0.65	0.000
11.200	0.65	2.14	0.65	0.000
11.217	0.65	2.15	0.65	0.000
11.233	0.65	2.15	0.65	0.000
11.250	0.65	2.15	0.65	0.000
11.267	0.65	2.16	0.65	0.000
11.283	0.65	2.17	0.65	0.000
11.300	0.66	2.17	0.66	0.000
11.317	0.66	2.18	0.66	0.000
11.333	0.66	2.18	0.66	0.000
11.350	0.66	2.19	0.66	0.000
11.367	0.66	2.19	0.66	0.000
11.383	0.66	2.20	0.66	0.000
11.400	0.66	2.20	0.66	0.000
11.417	0.67	2.21	0.67	0.000
11.433	0.67	2.21	0.67	0.000
11.450	0.67	2.21	0.67	0.000
11.467	0.67	2.22	0.67	0.000
11.483	0.67	2.22	0.67	0.000
11.500	0.67	2.23	0.67	0.000
11.517	0.67	2.23	0.67	0.000
11.533	0.68	2.23	0.68	0.000
11.550	0.68	2.24	0.68	0.000
11.567	0.68	2.25	0.68	0.000
11.583	0.68	2.25	0.68	0.000
11.600	0.68	2.26	0.68	0.000
11.617	0.68	2.26	0.68	0.000
11.633	0.69	2.27	0.69	0.000
11.650	0.69	2.28	0.69	0.000
11.667	0.69	2.28	0.69	0.000
11.683	0.69	2.29	0.69	0.000
11.700	0.69	2.29	0.69	0.000
11.717	0.69	2.30	0.69	0.000
11.733	0.70	2.30	0.70	0.000
11.750	0.70	2.31	0.70	0.000
11.767	0.70	2.31	0.70	0.000
11.783	0.70	2.32	0.70	0.000
11.800	0.70	2.32	0.70	0.000

11.817	0.70	2.32	0.70	0.000
11.833	0.70	2.33	0.70	0.000
11.850	0.71	2.34	0.71	0.000
11.867	0.71	2.34	0.71	0.000
11.883	0.71	2.35	0.71	0.000
11.900	0.71	2.36	0.71	0.000
11.917	0.71	2.36	0.71	0.000
11.933	0.72	2.37	0.72	0.000
11.950	0.72	2.38	0.72	0.000
11.967	0.72	2.38	0.72	0.000
11.983	0.72	2.39	0.72	0.000
12.000	0.73	2.40	0.73	0.000
12.017	0.73	2.42	0.73	0.000
12.033	0.73	2.43	0.73	0.000
12.050	0.74	2.44	0.74	0.000
12.067	0.74	2.46	0.74	0.000
12.083	0.75	2.48	0.75	0.000
12.100	0.75	2.50	0.75	0.000
12.117	0.76	2.52	0.76	0.000
12.133	0.77	2.55	0.77	0.000
12.150	0.78	2.59	0.78	0.000
12.167	0.80	2.64	0.80	0.000
12.183	0.81	2.70	0.81	0.000
12.200	0.83	2.75	0.83	0.000
12.217	0.85	2.80	0.85	0.000
12.233	0.86	2.85	0.86	0.000
12.250	0.88	2.90	0.88	0.000
12.267	0.89	2.95	0.89	0.000
12.283	0.90	2.99	0.90	0.000
12.300	0.91	3.01	0.91	0.000
12.317	0.91	3.03	0.91	0.000
12.333	0.92	3.04	0.92	0.000
12.350	0.92	3.06	0.92	0.000
12.367	0.93	3.07	0.93	0.000
12.383	0.93	3.09	0.93	0.000
12.400	0.94	3.10	0.94	0.000
12.417	0.94	3.11	0.94	0.000
12.433	0.94	3.13	0.94	0.000
12.450	0.95	3.14	0.95	0.000
12.467	0.95	3.16	0.95	0.000
12.483	0.96	3.17	0.96	0.000
12.500	0.96	3.18	0.96	0.000
12.517	0.96	3.19	0.96	0.000
12.533	0.97	3.21	0.97	0.000
12.550	0.97	3.22	0.97	0.000
12.567	0.98	3.23	0.98	0.000
12.583	0.98	3.24	0.98	0.000
12.600	0.98	3.25	0.98	0.000
12.617	0.99	3.26	0.99	0.000
12.633	0.99	3.27	0.99	0.000

12.650	0.99	3.28	0.99	0.000
12.667	0.99	3.29	0.99	0.000
12.683	1.00	3.30	1.00	0.000
12.700	1.00	3.31	1.00	0.000
12.717	1.00	3.31	1.00	0.000
12.733	1.00	3.32	1.00	0.000
12.750	1.01	3.33	1.01	0.000
12.767	1.01	3.34	1.01	0.000
12.783	1.01	3.35	1.01	0.000
12.800	1.02	3.37	1.02	0.000
12.817	1.02	3.38	1.02	0.000
12.833	1.02	3.39	1.02	0.000
12.850	1.03	3.40	1.03	0.000
12.867	1.03	3.41	1.03	0.000
12.883	1.03	3.42	1.03	0.000
12.900	1.04	3.43	1.04	0.000
12.917	1.04	3.44	1.04	0.000
12.933	1.04	3.45	1.04	0.000
12.950	1.04	3.45	1.04	0.000
12.967	1.05	3.46	1.05	0.000
12.983	1.05	3.47	1.05	0.000
13.000	1.05	3.48	1.05	0.000
13.017	1.05	3.49	1.05	0.000
13.033	1.06	3.50	1.06	0.000
13.050	1.06	3.51	1.06	0.000
13.067	1.06	3.52	1.06	0.000
13.083	1.07	3.53	1.07	0.000
13.100	1.07	3.54	1.07	0.000
13.117	1.07	3.55	1.07	0.000
13.133	1.08	3.57	1.08	0.000
13.150	1.08	3.58	1.08	0.000
13.167	1.08	3.59	1.08	0.000
13.183	1.09	3.60	1.09	0.000
13.200	1.09	3.61	1.09	0.000
13.217	1.09	3.62	1.09	0.000
13.233	1.10	3.63	1.10	0.000
13.250	1.10	3.64	1.10	0.000
13.267	1.10	3.65	1.10	0.000
13.283	1.10	3.66	1.10	0.000
13.300	1.11	3.67	1.11	0.000
13.317	1.11	3.68	1.11	0.000
13.333	1.11	3.69	1.11	0.000
13.350	1.12	3.70	1.12	0.000
13.367	1.12	3.71	1.12	0.000
13.383	1.13	3.73	1.13	0.000
13.400	1.13	3.74	1.13	0.000
13.417	1.13	3.75	1.13	0.000
13.433	1.14	3.77	1.14	0.000
13.450	1.14	3.78	1.14	0.000
13.467	1.15	3.80	1.15	0.000

13.483	1.15	3.81	1.15	0.000
13.500	1.15	3.82	1.15	0.000
13.517	1.16	3.83	1.16	0.000
13.533	1.16	3.84	1.16	0.000
13.550	1.16	3.85	1.16	0.000
13.567	1.17	3.86	1.17	0.000
13.583	1.17	3.88	1.17	0.000
13.600	1.17	3.89	1.17	0.000
13.617	1.18	3.90	1.18	0.000
13.633	1.18	3.91	1.18	0.000
13.650	1.19	3.93	1.19	0.000
13.667	1.19	3.94	1.19	0.000
13.683	1.20	3.96	1.20	0.000
13.700	1.20	3.97	1.20	0.000
13.717	1.21	3.99	1.21	0.000
13.733	1.21	4.01	1.21	0.000
13.750	1.22	4.02	1.22	0.000
13.767	1.22	4.04	1.22	0.000
13.783	1.23	4.06	1.23	0.000
13.800	1.23	4.07	1.23	0.000
13.817	1.23	4.08	1.23	0.000
13.833	1.24	4.09	1.24	0.000
13.850	1.24	4.11	1.24	0.000
13.867	1.24	4.12	1.24	0.000
13.883	1.25	4.13	1.25	0.000
13.900	1.25	4.14	1.25	0.000
13.917	1.26	4.15	1.25	0.000
13.933	1.26	4.15	1.26	0.000
13.950	1.27	4.16	1.27	0.000
13.967	1.27	4.16	1.27	0.000
13.983	1.28	4.16	1.28	0.000
14.000	1.29	4.17	1.28	0.000
14.017	1.29	4.17	1.29	0.000
14.033	1.30	4.18	1.30	0.000
14.050	1.30	4.18	1.30	0.000
14.067	1.31	4.19	1.31	0.000
14.083	1.32	4.19	1.31	0.000
14.100	1.32	4.19	1.32	0.000
14.117	1.33	4.20	1.32	0.000
14.133	1.33	4.20	1.33	0.000
14.150	1.34	4.20	1.34	0.000
14.167	1.34	4.21	1.34	0.000
14.183	1.35	4.21	1.35	0.000
14.200	1.35	4.22	1.35	0.000
14.217	1.36	4.22	1.36	0.000
14.233	1.37	4.22	1.36	0.000
14.250	1.37	4.23	1.37	0.000
14.267	1.38	4.23	1.38	0.000
14.283	1.39	4.24	1.38	0.000
14.300	1.40	4.24	1.39	0.000

14.317	1.40	4.25	1.40	0.000
14.333	1.41	4.26	1.41	0.000
14.350	1.42	4.26	1.42	0.000
14.367	1.43	4.27	1.42	0.000
14.383	1.43	4.27	1.43	0.000
14.400	1.44	4.28	1.44	0.000
14.417	1.45	4.28	1.44	0.000
14.433	1.45	4.28	1.45	0.000
14.450	1.46	4.29	1.46	0.000
14.467	1.46	4.29	1.46	0.000
14.483	1.47	4.30	1.47	0.000
14.500	1.48	4.30	1.47	0.000
14.517	1.48	4.31	1.48	0.000
14.533	1.49	4.31	1.49	0.000
14.550	1.50	4.32	1.50	0.000
14.567	1.51	4.33	1.51	0.000
14.583	1.52	4.33	1.52	0.000
14.600	1.53	4.34	1.53	0.000
14.617	1.54	4.35	1.54	0.000
14.633	1.55	4.35	1.55	0.000
14.650	1.56	4.36	1.56	0.000
14.667	1.57	4.37	1.57	0.000
14.683	1.58	4.37	1.58	0.000
14.700	1.59	4.38	1.58	0.000
14.717	1.60	4.39	1.59	0.000
14.733	1.60	4.39	1.60	0.000
14.750	1.61	4.40	1.61	0.000
14.767	1.62	4.40	1.62	0.000
14.783	1.63	4.41	1.62	0.000
14.800	1.63	4.41	1.63	0.000
14.817	1.64	4.42	1.64	0.000
14.833	1.66	4.43	1.65	0.000
14.850	1.67	4.44	1.67	0.000
14.867	1.68	4.45	1.68	0.000
14.883	1.70	4.46	1.69	0.000
14.900	1.71	4.47	1.71	0.000
14.917	1.73	4.48	1.72	0.000
14.933	1.74	4.49	1.74	0.000
14.950	1.75	4.50	1.75	0.000
14.967	1.77	4.51	1.76	0.000
14.983	1.78	4.52	1.78	0.000
15.000	1.79	4.52	1.79	0.000
15.017	1.80	4.53	1.80	0.000
15.033	1.82	4.54	1.81	0.000
15.050	1.83	4.55	1.82	0.000
15.067	1.84	4.56	1.83	0.000
15.083	1.85	4.56	1.85	0.000
15.100	1.86	4.57	1.86	0.000
15.117	1.87	4.58	1.87	0.000
15.133	1.89	4.59	1.89	0.000

15.150	1.91	4.61	1.91	0.000
15.167	1.93	4.62	1.93	0.000
15.183	1.95	4.64	1.95	0.000
15.200	1.98	4.65	1.97	0.000
15.217	2.00	4.67	1.99	0.000
15.233	2.02	4.68	2.01	0.000
15.250	2.04	4.70	2.04	0.000
15.267	2.06	4.71	2.06	0.000
15.283	2.08	4.73	2.08	0.000
15.300	2.10	4.74	2.10	0.000
15.317	2.12	4.75	2.11	0.000
15.333	2.14	4.76	2.13	0.000
15.350	2.16	4.78	2.15	0.000
15.367	2.17	4.79	2.17	0.000
15.383	2.19	4.80	2.19	0.000
15.400	2.21	4.81	2.20	0.000
15.417	2.23	4.83	2.22	0.000
15.433	2.24	4.84	2.24	0.000
15.450	2.26	4.85	2.25	0.000
15.467	2.27	4.86	2.27	0.000
15.483	2.28	4.87	2.28	0.000
15.500	2.30	4.88	2.29	0.000
15.517	2.31	4.89	2.31	0.000
15.533	2.33	4.90	2.32	0.000
15.550	2.34	4.91	2.34	0.000
15.567	2.36	4.92	2.35	0.000
15.583	2.38	4.94	2.38	0.000
15.600	2.41	4.96	2.40	0.000
15.617	2.44	4.97	2.43	0.000
15.633	2.47	4.99	2.46	0.000
15.650	2.49	5.01	2.49	0.000
15.667	2.52	5.03	2.52	0.000
15.683	2.55	5.05	2.54	0.000
15.700	2.58	5.06	2.58	0.000
15.717	2.63	5.09	2.62	0.000
15.733	2.72	5.14	2.70	0.000
15.750	2.81	5.19	2.78	0.000
15.767	2.90	5.24	2.88	0.000
15.783	3.00	5.29	2.97	0.000
15.800	3.10	5.34	3.07	0.000
15.817	3.20	5.40	3.17	0.000
15.833	3.30	5.45	3.28	0.000
15.850	3.41	5.51	3.38	0.000
15.867	3.53	5.57	3.50	0.000
15.883	3.65	5.64	3.62	0.000
15.900	3.78	5.71	3.76	0.000
15.917	3.92	5.77	3.89	0.000
15.933	4.05	5.82	4.02	0.000
15.950	4.19	5.88	4.16	0.000
15.967	4.33	5.94	4.30	0.000

15.983	4.48	6.00	4.44	0.000
16.000	4.62	6.06	4.59	0.000
16.017	5.06	6.23	4.96	0.000
16.033	5.81	6.48	5.65	0.000
16.050	6.60	6.73	6.44	0.000
16.067	7.42	6.99	7.27	0.000
16.083	8.29	7.17	8.11	0.000
16.100	9.18	7.36	9.01	0.000
16.117	10.11	7.55	9.93	0.000
16.133	11.06	7.70	10.87	0.000
16.150	12.33	7.93	12.11	0.000
16.167	12.22	7.91	12.24	0.000
16.183	11.69	7.81	11.79	0.000
16.200	11.08	7.70	11.19	0.000
16.217	10.40	7.59	10.53	0.000
16.233	9.64	7.45	9.79	0.000
16.250	8.83	7.28	8.98	0.000
16.267	7.95	7.10	8.13	0.000
16.283	7.03	6.87	7.21	0.000
16.300	6.06	6.57	6.25	0.000
16.317	5.50	6.38	5.62	0.000
16.333	5.24	6.29	5.30	0.000
16.350	4.99	6.21	5.05	0.000
16.367	4.76	6.11	4.81	0.000
16.383	4.54	6.02	4.58	0.000
16.400	4.32	5.93	4.37	0.000
16.417	4.12	5.85	4.17	0.000
16.433	3.92	5.77	3.97	0.000
16.450	3.74	5.69	3.78	0.000
16.467	3.58	5.61	3.62	0.000
16.483	3.45	5.54	3.48	0.000
16.500	3.33	5.47	3.36	0.000
16.517	3.22	5.41	3.25	0.000
16.533	3.12	5.35	3.14	0.000
16.550	3.02	5.30	3.04	0.000
16.567	2.93	5.25	2.95	0.000
16.583	2.84	5.20	2.86	0.000
16.600	2.76	5.16	2.78	0.000
16.617	2.68	5.12	2.70	0.000
16.633	2.61	5.08	2.63	0.000
16.650	2.54	5.04	2.55	0.000
16.667	2.47	5.00	2.49	0.000
16.683	2.40	4.95	2.42	0.000
16.700	2.34	4.91	2.36	0.000
16.717	2.28	4.87	2.30	0.000
16.733	2.23	4.83	2.24	0.000
16.750	2.17	4.79	2.19	0.000
16.767	2.12	4.75	2.14	0.000
16.783	2.08	4.72	2.09	0.000
16.800	2.04	4.69	2.05	0.000

16.817	1.99	4.66	2.01	0.000
16.833	1.96	4.64	1.97	0.000
16.850	1.92	4.61	1.93	0.000
16.867	1.88	4.59	1.89	0.000
16.883	1.85	4.56	1.86	0.000
16.900	1.81	4.54	1.82	0.000
16.917	1.78	4.52	1.79	0.000
16.933	1.75	4.50	1.76	0.000
16.950	1.73	4.48	1.74	0.000
16.967	1.70	4.46	1.71	0.000
16.983	1.68	4.44	1.68	0.000
17.000	1.65	4.42	1.66	0.000
17.017	1.63	4.41	1.63	0.000
17.033	1.60	4.39	1.61	0.000
17.050	1.58	4.38	1.59	0.000
17.067	1.56	4.36	1.57	0.000
17.083	1.54	4.35	1.55	0.000
17.100	1.52	4.33	1.53	0.000
17.117	1.50	4.32	1.51	0.000
17.133	1.49	4.31	1.49	0.000
17.150	1.47	4.30	1.47	0.000
17.167	1.45	4.28	1.46	0.000
17.183	1.43	4.27	1.44	0.000
17.200	1.42	4.26	1.42	0.000
17.217	1.40	4.25	1.41	0.000
17.233	1.39	4.24	1.39	0.000
17.250	1.37	4.23	1.38	0.000
17.267	1.36	4.22	1.37	0.000
17.283	1.35	4.21	1.35	0.000
17.300	1.33	4.20	1.34	0.000
17.317	1.32	4.19	1.33	0.000
17.333	1.31	4.18	1.31	0.000
17.350	1.30	4.18	1.30	0.000
17.367	1.29	4.17	1.29	0.000
17.383	1.28	4.16	1.28	0.000
17.400	1.26	4.15	1.27	0.000
17.417	1.25	4.15	1.26	0.000
17.433	1.24	4.12	1.25	0.000
17.450	1.23	4.09	1.23	0.000
17.467	1.22	4.05	1.22	0.000
17.483	1.21	4.02	1.21	0.000
17.500	1.21	3.99	1.21	0.000
17.517	1.20	3.96	1.20	0.000
17.533	1.19	3.93	1.19	0.000
17.550	1.18	3.91	1.18	0.000
17.567	1.17	3.88	1.17	0.000
17.583	1.16	3.85	1.16	0.000
17.600	1.16	3.82	1.16	0.000
17.617	1.15	3.80	1.15	0.000
17.633	1.14	3.77	1.14	0.000

17.650	1.13	3.75	1.13	0.000
17.667	1.12	3.72	1.12	0.000
17.683	1.12	3.70	1.12	0.000
17.700	1.11	3.68	1.11	0.000
17.717	1.10	3.65	1.10	0.000
17.733	1.10	3.63	1.10	0.000
17.750	1.09	3.61	1.09	0.000
17.767	1.08	3.59	1.08	0.000
17.783	1.08	3.56	1.08	0.000
17.800	1.07	3.54	1.07	0.000
17.817	1.06	3.52	1.06	0.000
17.833	1.06	3.50	1.06	0.000
17.850	1.05	3.48	1.05	0.000
17.867	1.05	3.46	1.05	0.000
17.883	1.04	3.45	1.04	0.000
17.900	1.03	3.43	1.03	0.000
17.917	1.03	3.41	1.03	0.000
17.933	1.02	3.39	1.02	0.000
17.950	1.02	3.37	1.02	0.000
17.967	1.01	3.35	1.01	0.000
17.983	1.01	3.34	1.01	0.000
18.000	1.00	3.32	1.00	0.000
18.017	1.00	3.30	1.00	0.000
18.033	0.99	3.29	0.99	0.000
18.050	0.99	3.27	0.99	0.000
18.067	0.98	3.25	0.98	0.000
18.083	0.98	3.23	0.98	0.000
18.100	0.97	3.20	0.97	0.000
18.117	0.95	3.15	0.95	0.000
18.133	0.93	3.09	0.93	0.000
18.150	0.91	3.02	0.91	0.000
18.167	0.89	2.96	0.89	0.000
18.183	0.87	2.89	0.87	0.000
18.200	0.85	2.82	0.85	0.000
18.217	0.83	2.75	0.83	0.000
18.233	0.81	2.69	0.81	0.000
18.250	0.79	2.63	0.79	0.000
18.267	0.79	2.60	0.79	0.000
18.283	0.78	2.58	0.78	0.000
18.300	0.77	2.55	0.77	0.000
18.317	0.76	2.53	0.76	0.000
18.333	0.76	2.51	0.76	0.000
18.350	0.75	2.48	0.75	0.000
18.367	0.74	2.46	0.74	0.000
18.383	0.74	2.44	0.74	0.000
18.400	0.73	2.43	0.73	0.000
18.417	0.73	2.41	0.73	0.000
18.433	0.72	2.39	0.72	0.000
18.450	0.72	2.37	0.72	0.000
18.467	0.71	2.36	0.71	0.000

18.483	0.71	2.34	0.71	0.000
18.500	0.70	2.33	0.70	0.000
18.517	0.70	2.31	0.70	0.000
18.533	0.69	2.30	0.69	0.000
18.550	0.69	2.29	0.69	0.000
18.567	0.69	2.27	0.69	0.000
18.583	0.68	2.26	0.68	0.000
18.600	0.68	2.25	0.68	0.000
18.617	0.68	2.24	0.68	0.000
18.633	0.67	2.22	0.67	0.000
18.650	0.67	2.21	0.67	0.000
18.667	0.67	2.20	0.67	0.000
18.683	0.66	2.19	0.66	0.000
18.700	0.66	2.18	0.66	0.000
18.717	0.66	2.17	0.66	0.000
18.733	0.65	2.16	0.65	0.000
18.750	0.65	2.15	0.65	0.000
18.767	0.65	2.14	0.65	0.000
18.783	0.64	2.13	0.64	0.000
18.800	0.64	2.12	0.64	0.000
18.817	0.64	2.11	0.64	0.000
18.833	0.63	2.10	0.63	0.000
18.850	0.63	2.09	0.63	0.000
18.867	0.63	2.08	0.63	0.000
18.883	0.63	2.08	0.63	0.000
18.900	0.62	2.07	0.62	0.000
18.917	0.62	2.06	0.62	0.000
18.933	0.62	2.05	0.62	0.000
18.950	0.62	2.04	0.62	0.000
18.967	0.61	2.03	0.61	0.000
18.983	0.61	2.02	0.61	0.000
19.000	0.61	2.02	0.61	0.000
19.017	0.61	2.01	0.61	0.000
19.033	0.60	2.00	0.60	0.000
19.050	0.60	1.99	0.60	0.000
19.067	0.60	1.99	0.60	0.000
19.083	0.60	1.98	0.60	0.000
19.100	0.60	1.97	0.60	0.000
19.117	0.59	1.96	0.59	0.000
19.133	0.59	1.96	0.59	0.000
19.150	0.59	1.95	0.59	0.000
19.167	0.59	1.94	0.59	0.000
19.183	0.58	1.94	0.58	0.000
19.200	0.58	1.93	0.58	0.000
19.217	0.58	1.92	0.58	0.000
19.233	0.58	1.92	0.58	0.000
19.250	0.58	1.91	0.58	0.000
19.267	0.57	1.90	0.57	0.000
19.283	0.57	1.89	0.57	0.000
19.300	0.57	1.89	0.57	0.000

19.317	0.57	1.88	0.57	0.000
19.333	0.57	1.88	0.57	0.000
19.350	0.56	1.87	0.56	0.000
19.367	0.56	1.86	0.56	0.000
19.383	0.56	1.86	0.56	0.000
19.400	0.56	1.85	0.56	0.000
19.417	0.56	1.84	0.56	0.000
19.433	0.56	1.84	0.56	0.000
19.450	0.55	1.83	0.55	0.000
19.467	0.55	1.83	0.55	0.000
19.483	0.55	1.82	0.55	0.000
19.500	0.55	1.81	0.55	0.000
19.517	0.55	1.81	0.55	0.000
19.533	0.54	1.80	0.54	0.000
19.550	0.54	1.80	0.54	0.000
19.567	0.54	1.79	0.54	0.000
19.583	0.54	1.79	0.54	0.000
19.600	0.54	1.78	0.54	0.000
19.617	0.54	1.77	0.54	0.000
19.633	0.53	1.77	0.53	0.000
19.650	0.53	1.76	0.53	0.000
19.667	0.53	1.76	0.53	0.000
19.683	0.53	1.75	0.53	0.000
19.700	0.53	1.75	0.53	0.000
19.717	0.53	1.74	0.53	0.000
19.733	0.52	1.74	0.52	0.000
19.750	0.52	1.73	0.52	0.000
19.767	0.52	1.73	0.52	0.000
19.783	0.52	1.72	0.52	0.000
19.800	0.52	1.72	0.52	0.000
19.817	0.52	1.71	0.52	0.000
19.833	0.52	1.71	0.52	0.000
19.850	0.51	1.70	0.51	0.000
19.867	0.51	1.70	0.51	0.000
19.883	0.51	1.69	0.51	0.000
19.900	0.51	1.69	0.51	0.000
19.917	0.51	1.68	0.51	0.000
19.933	0.51	1.68	0.51	0.000
19.950	0.51	1.67	0.51	0.000
19.967	0.50	1.67	0.50	0.000
19.983	0.50	1.66	0.50	0.000
20.000	0.50	1.66	0.50	0.000
20.017	0.50	1.65	0.50	0.000
20.033	0.50	1.65	0.50	0.000
20.050	0.50	1.65	0.50	0.000
20.067	0.50	1.64	0.50	0.000
20.083	0.49	1.64	0.49	0.000
20.100	0.49	1.63	0.49	0.000
20.117	0.49	1.63	0.49	0.000
20.133	0.49	1.62	0.49	0.000

20.150	0.49	1.62	0.49	0.000
20.167	0.49	1.61	0.49	0.000
20.183	0.49	1.61	0.49	0.000
20.200	0.49	1.61	0.49	0.000
20.217	0.48	1.60	0.48	0.000
20.233	0.48	1.60	0.48	0.000
20.250	0.48	1.59	0.48	0.000
20.267	0.48	1.59	0.48	0.000
20.283	0.48	1.59	0.48	0.000
20.300	0.48	1.58	0.48	0.000
20.317	0.48	1.58	0.48	0.000
20.333	0.48	1.57	0.48	0.000
20.350	0.47	1.57	0.47	0.000
20.367	0.47	1.57	0.47	0.000
20.383	0.47	1.56	0.47	0.000
20.400	0.47	1.56	0.47	0.000
20.417	0.47	1.55	0.47	0.000
20.433	0.47	1.55	0.47	0.000
20.450	0.47	1.55	0.47	0.000
20.467	0.47	1.54	0.47	0.000
20.483	0.46	1.54	0.46	0.000
20.500	0.46	1.53	0.46	0.000
20.517	0.46	1.53	0.46	0.000
20.533	0.46	1.53	0.46	0.000
20.550	0.46	1.52	0.46	0.000
20.567	0.46	1.52	0.46	0.000
20.583	0.46	1.52	0.46	0.000
20.600	0.46	1.51	0.46	0.000
20.617	0.46	1.51	0.46	0.000
20.633	0.45	1.50	0.45	0.000
20.650	0.45	1.50	0.45	0.000
20.667	0.45	1.50	0.45	0.000
20.683	0.45	1.49	0.45	0.000
20.700	0.45	1.49	0.45	0.000
20.717	0.45	1.49	0.45	0.000
20.733	0.45	1.48	0.45	0.000
20.750	0.45	1.48	0.45	0.000
20.767	0.45	1.48	0.45	0.000
20.783	0.45	1.47	0.45	0.000
20.800	0.44	1.47	0.44	0.000
20.817	0.44	1.47	0.44	0.000
20.833	0.44	1.46	0.44	0.000
20.850	0.44	1.46	0.44	0.000
20.867	0.44	1.46	0.44	0.000
20.883	0.44	1.45	0.44	0.000
20.900	0.44	1.45	0.44	0.000
20.917	0.44	1.45	0.44	0.000
20.933	0.44	1.44	0.44	0.000
20.950	0.44	1.44	0.44	0.000
20.967	0.43	1.44	0.43	0.000

20.983	0.43	1.43	0.43	0.000
21.000	0.43	1.43	0.43	0.000
21.017	0.43	1.43	0.43	0.000
21.033	0.43	1.42	0.43	0.000
21.050	0.43	1.42	0.43	0.000
21.067	0.43	1.42	0.43	0.000
21.083	0.43	1.42	0.43	0.000
21.100	0.43	1.41	0.43	0.000
21.117	0.43	1.41	0.43	0.000
21.133	0.42	1.41	0.42	0.000
21.150	0.42	1.40	0.42	0.000
21.167	0.42	1.40	0.42	0.000
21.183	0.42	1.40	0.42	0.000
21.200	0.42	1.39	0.42	0.000
21.217	0.42	1.39	0.42	0.000
21.233	0.42	1.39	0.42	0.000
21.250	0.42	1.39	0.42	0.000
21.267	0.42	1.38	0.42	0.000
21.283	0.42	1.38	0.42	0.000
21.300	0.42	1.38	0.42	0.000
21.317	0.42	1.37	0.42	0.000
21.333	0.41	1.37	0.41	0.000
21.350	0.41	1.37	0.41	0.000
21.367	0.41	1.37	0.41	0.000
21.383	0.41	1.36	0.41	0.000
21.400	0.41	1.36	0.41	0.000
21.417	0.41	1.36	0.41	0.000
21.433	0.41	1.36	0.41	0.000
21.450	0.41	1.35	0.41	0.000
21.467	0.41	1.35	0.41	0.000
21.483	0.41	1.35	0.41	0.000
21.500	0.41	1.34	0.41	0.000
21.517	0.41	1.34	0.41	0.000
21.533	0.40	1.34	0.40	0.000
21.550	0.40	1.34	0.40	0.000
21.567	0.40	1.33	0.40	0.000
21.583	0.40	1.33	0.40	0.000
21.600	0.40	1.33	0.40	0.000
21.617	0.40	1.33	0.40	0.000
21.633	0.40	1.32	0.40	0.000
21.650	0.40	1.32	0.40	0.000
21.667	0.40	1.32	0.40	0.000
21.683	0.40	1.32	0.40	0.000
21.700	0.40	1.31	0.40	0.000
21.717	0.40	1.31	0.40	0.000
21.733	0.40	1.31	0.40	0.000
21.750	0.39	1.31	0.39	0.000
21.767	0.39	1.30	0.39	0.000
21.783	0.39	1.30	0.39	0.000
21.800	0.39	1.30	0.39	0.000

21.817	0.39	1.30	0.39	0.000
21.833	0.39	1.29	0.39	0.000
21.850	0.39	1.29	0.39	0.000
21.867	0.39	1.29	0.39	0.000
21.883	0.39	1.29	0.39	0.000
21.900	0.39	1.28	0.39	0.000
21.917	0.39	1.28	0.39	0.000
21.933	0.39	1.28	0.39	0.000
21.950	0.39	1.28	0.39	0.000
21.967	0.39	1.27	0.39	0.000
21.983	0.38	1.27	0.38	0.000
22.000	0.38	1.27	0.38	0.000
22.017	0.38	1.27	0.38	0.000
22.033	0.38	1.27	0.38	0.000
22.050	0.38	1.26	0.38	0.000
22.067	0.38	1.26	0.38	0.000
22.083	0.38	1.26	0.38	0.000
22.100	0.38	1.26	0.38	0.000
22.117	0.38	1.25	0.38	0.000
22.133	0.38	1.25	0.38	0.000
22.150	0.38	1.25	0.38	0.000
22.167	0.38	1.25	0.38	0.000
22.183	0.38	1.25	0.38	0.000
22.200	0.38	1.24	0.38	0.000
22.217	0.37	1.24	0.37	0.000
22.233	0.37	1.24	0.37	0.000
22.250	0.37	1.24	0.37	0.000
22.267	0.37	1.23	0.37	0.000
22.283	0.37	1.23	0.37	0.000
22.300	0.37	1.23	0.37	0.000
22.317	0.37	1.23	0.37	0.000
22.333	0.37	1.23	0.37	0.000
22.350	0.37	1.22	0.37	0.000
22.367	0.37	1.22	0.37	0.000
22.383	0.37	1.22	0.37	0.000
22.400	0.37	1.22	0.37	0.000
22.417	0.37	1.22	0.37	0.000
22.433	0.37	1.21	0.37	0.000
22.450	0.37	1.21	0.37	0.000
22.467	0.37	1.21	0.37	0.000
22.483	0.36	1.21	0.36	0.000
22.500	0.36	1.21	0.36	0.000
22.517	0.36	1.20	0.36	0.000
22.533	0.36	1.20	0.36	0.000
22.550	0.36	1.20	0.36	0.000
22.567	0.36	1.20	0.36	0.000
22.583	0.36	1.20	0.36	0.000
22.600	0.36	1.19	0.36	0.000
22.617	0.36	1.19	0.36	0.000
22.633	0.36	1.19	0.36	0.000

22.650	0.36	1.19	0.36	0.000
22.667	0.36	1.19	0.36	0.000
22.683	0.36	1.18	0.36	0.000
22.700	0.36	1.18	0.36	0.000
22.717	0.36	1.18	0.36	0.000
22.733	0.36	1.18	0.36	0.000
22.750	0.36	1.18	0.36	0.000
22.767	0.35	1.17	0.35	0.000
22.783	0.35	1.17	0.35	0.000
22.800	0.35	1.17	0.35	0.000
22.817	0.35	1.17	0.35	0.000
22.833	0.35	1.17	0.35	0.000
22.850	0.35	1.17	0.35	0.000
22.867	0.35	1.16	0.35	0.000
22.883	0.35	1.16	0.35	0.000
22.900	0.35	1.16	0.35	0.000
22.917	0.35	1.16	0.35	0.000
22.933	0.35	1.16	0.35	0.000
22.950	0.35	1.15	0.35	0.000
22.967	0.35	1.15	0.35	0.000
22.983	0.35	1.15	0.35	0.000
23.000	0.35	1.15	0.35	0.000
23.017	0.35	1.15	0.35	0.000
23.033	0.35	1.15	0.35	0.000
23.050	0.35	1.14	0.35	0.000
23.067	0.34	1.14	0.34	0.000
23.083	0.34	1.14	0.34	0.000
23.100	0.34	1.14	0.34	0.000
23.117	0.34	1.14	0.34	0.000
23.133	0.34	1.13	0.34	0.000
23.150	0.34	1.13	0.34	0.000
23.167	0.34	1.13	0.34	0.000
23.183	0.34	1.13	0.34	0.000
23.200	0.34	1.13	0.34	0.000
23.217	0.34	1.13	0.34	0.000
23.233	0.34	1.12	0.34	0.000
23.250	0.34	1.12	0.34	0.000
23.267	0.34	1.12	0.34	0.000
23.283	0.34	1.12	0.34	0.000
23.300	0.34	1.12	0.34	0.000
23.317	0.34	1.12	0.34	0.000
23.333	0.34	1.11	0.34	0.000
23.350	0.34	1.11	0.34	0.000
23.367	0.34	1.11	0.34	0.000
23.383	0.34	1.11	0.34	0.000
23.400	0.33	1.11	0.33	0.000
23.417	0.33	1.11	0.33	0.000
23.433	0.33	1.10	0.33	0.000
23.450	0.33	1.10	0.33	0.000
23.467	0.33	1.10	0.33	0.000

23.483	0.33	1.10	0.33	0.000
23.500	0.33	1.10	0.33	0.000
23.517	0.33	1.10	0.33	0.000
23.533	0.33	1.10	0.33	0.000
23.550	0.33	1.09	0.33	0.000
23.567	0.33	1.09	0.33	0.000
23.583	0.33	1.09	0.33	0.000
23.600	0.33	1.09	0.33	0.000
23.617	0.33	1.09	0.33	0.000
23.633	0.33	1.09	0.33	0.000
23.650	0.33	1.08	0.33	0.000
23.667	0.33	1.08	0.33	0.000
23.683	0.33	1.08	0.33	0.000
23.700	0.33	1.08	0.33	0.000
23.717	0.33	1.08	0.33	0.000
23.733	0.33	1.08	0.33	0.000
23.750	0.32	1.08	0.32	0.000
23.767	0.32	1.07	0.32	0.000
23.783	0.32	1.07	0.32	0.000
23.800	0.32	1.07	0.32	0.000
23.817	0.32	1.07	0.32	0.000
23.833	0.32	1.07	0.32	0.000
23.850	0.32	1.07	0.32	0.000
23.867	0.32	1.07	0.32	0.000
23.883	0.32	1.06	0.32	0.000
23.900	0.32	1.06	0.32	0.000
23.917	0.32	1.06	0.32	0.000
23.933	0.32	1.06	0.32	0.000
23.950	0.32	1.06	0.32	0.000
23.967	0.32	1.06	0.32	0.000
23.983	0.32	1.06	0.32	0.000
24.000	0.32	1.05	0.32	0.000
24.017	0.32	1.05	0.32	0.000
24.033	0.32	1.05	0.32	0.000
24.050	0.32	1.05	0.32	0.000
24.067	0.31	1.03	0.32	0.000
24.083	0.29	0.97	0.31	0.000
24.100	0.27	0.91	0.28	0.000
24.117	0.25	0.84	0.28	0.000
24.133	0.23	0.76	0.25	0.000
24.150	0.21	0.69	0.21	0.000
24.167	0.18	0.60	0.19	0.000
24.183	0.16	0.52	0.16	0.000
24.200	0.13	0.50	0.16	0.000
24.217	0.11	0.50	0.16	0.000
24.233	0.10	0.50	0.08	0.000
24.250	0.09	0.50	0.13	0.000
24.267	0.08	0.50	0.13	0.000
24.283	0.08	0.50	0.11	0.000
24.300	0.07	0.50	0.10	0.000

24.317	0.06	0.50	0.09	0.000
24.333	0.06	0.50	0.08	0.000
24.350	0.05	0.50	0.07	0.000
24.367	0.05	0.50	0.07	0.000
24.383	0.04	0.50	0.06	0.000
24.400	0.04	0.50	0.06	0.000
24.417	0.04	0.50	0.05	0.000
24.433	0.03	0.50	0.05	0.000
24.450	0.03	0.50	0.04	0.000
24.467	0.03	0.50	0.04	0.000
24.483	0.03	0.50	0.04	0.000
24.500	0.02	0.50	0.03	0.000
24.517	0.02	0.50	0.03	0.000
24.533	0.02	0.50	0.03	0.000
24.550	0.02	0.50	0.03	0.000
24.567	0.02	0.50	0.02	0.000
24.583	0.01	0.50	0.02	0.000
24.600	0.01	0.50	0.02	0.000
24.617	0.01	0.50	0.02	0.000
24.633	0.01	0.50	0.02	0.000
24.650	0.01	0.50	0.01	0.000
24.667	0.01	0.50	0.01	0.000
24.683	0.01	0.50	0.01	0.000
24.700	0.01	0.50	0.01	0.000
24.717	0.01	0.50	0.01	0.000
24.733	0.01	0.50	0.01	0.000
24.750	0.01	0.50	0.01	0.000
24.767	0.01	0.50	0.01	0.000
24.783	0.01	0.50	0.01	0.000
24.800	0.00	0.50	0.01	0.000
24.817	0.00	0.50	0.01	0.000
24.833	0.00	0.50	0.01	0.000
24.850	0.00	0.50	0.00	0.000
24.867	0.00	0.50	0.00	0.000
24.883	0.00	0.50	0.00	0.000
24.900	0.00	0.50	0.00	0.000
24.917	0.00	0.50	0.00	0.000
24.933	0.00	0.50	0.00	0.000
24.950	0.00	0.50	0.00	0.000
24.967	0.00	0.50	0.00	0.000
24.983	0.00	0.50	0.00	0.000
25.000	0.00	0.50	0.00	0.000
25.017	0.00	0.50	0.00	0.000
25.033	0.00	0.50	0.00	0.000
25.050	0.00	0.50	0.00	0.000
25.067	0.00	0.50	0.00	0.000
25.083	0.00	0.50	0.00	0.000
25.100	0.00	0.00	0.00	0.000
25.117	0.00	0.00	0.00	0.000
25.133	0.00	0.00	0.00	0.000

25.150	0.00	0.00	0.00	0.000
25.167	0.00	0.00	0.00	0.000
25.183	0.00	0.00	0.00	0.000
25.200	0.00	0.00	0.00	0.000
25.217	0.00	0.00	0.00	0.000
25.233	0.00	0.00	0.00	0.000
25.250	0.00	0.00	0.00	0.000
25.267	0.00	0.00	0.00	0.000
25.283	0.00	0.00	0.00	0.000
25.300	0.00	0.00	0.00	0.000
25.317	0.00	0.00	0.00	0.000
25.333	0.00	0.00	0.00	0.000
25.350	0.00	0.00	0.00	0.000
25.367	0.00	0.00	0.00	0.000
25.383	0.00	0.00	0.00	0.000
25.400	0.00	0.00	0.00	0.000
25.417	0.00	0.00	0.00	0.000
25.433	0.00	0.00	0.00	0.000
25.450	0.00	0.00	0.00	0.000
25.467	0.00	0.00	0.00	0.000
25.483	0.00	0.00	0.00	0.000
25.500	0.00	0.00	0.00	0.000
25.517	0.00	0.00	0.00	0.000
25.533	0.00	0.00	0.00	0.000
25.550	0.00	0.00	0.00	0.000
25.567	0.00	0.00	0.00	0.000
25.583	0.00	0.00	0.00	0.000
25.600	0.00	0.00	0.00	0.000
25.617	0.00	0.00	0.00	0.000
25.633	0.00	0.00	0.00	0.000
25.650	0.00	0.00	0.00	0.000
25.667	0.00	0.00	0.00	0.000
25.683	0.00	0.00	0.00	0.000
25.700	0.00	0.00	0.00	0.000
25.717	0.00	0.00	0.00	0.000
25.733	0.00	0.00	0.00	0.000
25.750	0.00	0.00	0.00	0.000
25.767	0.00	0.00	0.00	0.000
25.783	0.00	0.00	0.00	0.000
25.800	0.00	0.00	0.00	0.000
25.817	0.00	0.00	0.00	0.000
25.833	0.00	0.00	0.00	0.000
25.850	0.00	0.00	0.00	0.000
25.867	0.00	0.00	0.00	0.000
25.883	0.00	0.00	0.00	0.000
25.900	0.00	0.00	0.00	0.000
25.917	0.00	0.00	0.00	0.000
25.933	0.00	0.00	0.00	0.000
25.950	0.00	0.00	0.00	0.000
25.967	0.00	0.00	0.00	0.000

25.983	0.00	0.00	0.00	0.000
26.000	0.00	0.00	0.00	0.000
26.017	0.00	0.00	0.00	0.000
26.033	0.00	0.00	0.00	0.000
26.050	0.00	0.00	0.00	0.000
26.067	0.00	0.00	0.00	0.000
26.083	0.00	0.00	0.00	0.000
26.100	0.00	0.00	0.00	0.000
26.117	0.00	0.00	0.00	0.000
26.133	0.00	0.00	0.00	0.000
26.150	0.00	0.00	0.00	0.000
26.167	0.00	0.00	0.00	0.000
26.183	0.00	0.00	0.00	0.000
26.200	0.00	0.00	0.00	0.000
26.217	0.00	0.00	0.00	0.000
26.233	0.00	0.00	0.00	0.000
26.250	0.00	0.00	0.00	0.000
26.267	0.00	0.00	0.00	0.000
26.283	0.00	0.00	0.00	0.000
26.300	0.00	0.00	0.00	0.000
26.317	0.00	0.00	0.00	0.000
26.333	0.00	0.00	0.00	0.000
26.350	0.00	0.00	0.00	0.000
26.367	0.00	0.00	0.00	0.000
26.383	0.00	0.00	0.00	0.000
26.400	0.00	0.00	0.00	0.000
26.417	0.00	0.00	0.00	0.000
26.433	0.00	0.00	0.00	0.000
26.450	0.00	0.00	0.00	0.000
26.467	0.00	0.00	0.00	0.000
26.483	0.00	0.00	0.00	0.000
26.500	0.00	0.00	0.00	0.000
26.517	0.00	0.00	0.00	0.000
26.533	0.00	0.00	0.00	0.000
26.550	0.00	0.00	0.00	0.000
26.567	0.00	0.00	0.00	0.000
26.583	0.00	0.00	0.00	0.000
26.600	0.00	0.00	0.00	0.000
26.617	0.00	0.00	0.00	0.000
26.633	0.00	0.00	0.00	0.000
26.650	0.00	0.00	0.00	0.000
26.667	0.00	0.00	0.00	0.000
26.683	0.00	0.00	0.00	0.000
26.700	0.00	0.00	0.00	0.000
26.717	0.00	0.00	0.00	0.000
26.733	0.00	0.00	0.00	0.000
26.750	0.00	0.00	0.00	0.000
26.767	0.00	0.00	0.00	0.000
26.783	0.00	0.00	0.00	0.000
26.800	0.00	0.00	0.00	0.000

26.817	0.00	0.00	0.00	0.000
26.833	0.00	0.00	0.00	0.000
26.850	0.00	0.00	0.00	0.000
26.867	0.00	0.00	0.00	0.000
26.883	0.00	0.00	0.00	0.000
26.900	0.00	0.00	0.00	0.000
26.917	0.00	0.00	0.00	0.000
26.933	0.00	0.00	0.00	0.000
26.950	0.00	0.00	0.00	0.000
26.967	0.00	0.00	0.00	0.000
26.983	0.00	0.00	0.00	0.000
27.000	0.00	0.00	0.00	0.000
27.017	0.00	0.00	0.00	0.000
27.033	0.00	0.00	0.00	0.000
27.050	0.00	0.00	0.00	0.000
27.067	0.00	0.00	0.00	0.000
27.083	0.00	0.00	0.00	0.000
27.100	0.00	0.00	0.00	0.000
27.117	0.00	0.00	0.00	0.000
27.133	0.00	0.00	0.00	0.000
27.150	0.00	0.00	0.00	0.000
27.167	0.00	0.00	0.00	0.000
27.183	0.00	0.00	0.00	0.000
27.200	0.00	0.00	0.00	0.000
27.217	0.00	0.00	0.00	0.000
27.233	0.00	0.00	0.00	0.000
27.250	0.00	0.00	0.00	0.000
27.267	0.00	0.00	0.00	0.000
27.283	0.00	0.00	0.00	0.000
27.300	0.00	0.00	0.00	0.000
27.317	0.00	0.00	0.00	0.000
27.333	0.00	0.00	0.00	0.000
27.350	0.00	0.00	0.00	0.000
27.367	0.00	0.00	0.00	0.000
27.383	0.00	0.00	0.00	0.000
27.400	0.00	0.00	0.00	0.000
27.417	0.00	0.00	0.00	0.000
27.433	0.00	0.00	0.00	0.000
27.450	0.00	0.00	0.00	0.000
27.467	0.00	0.00	0.00	0.000
27.483	0.00	0.00	0.00	0.000
27.500	0.00	0.00	0.00	0.000
27.517	0.00	0.00	0.00	0.000
27.533	0.00	0.00	0.00	0.000
27.550	0.00	0.00	0.00	0.000
27.567	0.00	0.00	0.00	0.000
27.583	0.00	0.00	0.00	0.000
27.600	0.00	0.00	0.00	0.000
27.617	0.00	0.00	0.00	0.000
27.633	0.00	0.00	0.00	0.000

27.650	0.00	0.00	0.00	0.000
27.667	0.00	0.00	0.00	0.000
27.683	0.00	0.00	0.00	0.000
27.700	0.00	0.00	0.00	0.000
27.717	0.00	0.00	0.00	0.000
27.733	0.00	0.00	0.00	0.000
27.750	0.00	0.00	0.00	0.000
27.767	0.00	0.00	0.00	0.000
27.783	0.00	0.00	0.00	0.000
27.800	0.00	0.00	0.00	0.000
27.817	0.00	0.00	0.00	0.000
27.833	0.00	0.00	0.00	0.000
27.850	0.00	0.00	0.00	0.000
27.867	0.00	0.00	0.00	0.000
27.883	0.00	0.00	0.00	0.000
27.900	0.00	0.00	0.00	0.000
27.917	0.00	0.00	0.00	0.000
27.933	0.00	0.00	0.00	0.000
27.950	0.00	0.00	0.00	0.000
27.967	0.00	0.00	0.00	0.000
27.983	0.00	0.00	0.00	0.000
28.000	0.00	0.00	0.00	0.000
28.017	0.00	0.00	0.00	0.000
28.033	0.00	0.00	0.00	0.000
28.050	0.00	0.00	0.00	0.000
28.067	0.00	0.00	0.00	0.000
28.083	0.00	0.00	0.00	0.000
28.100	0.00	0.00	0.00	0.000
28.117	0.00	0.00	0.00	0.000
28.133	0.00	0.00	0.00	0.000
28.150	0.00	0.00	0.00	0.000
28.167	0.00	0.00	0.00	0.000
28.183	0.00	0.00	0.00	0.000
28.200	0.00	0.00	0.00	0.000
28.217	0.00	0.00	0.00	0.000
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28.267	0.00	0.00	0.00	0.000
28.283	0.00	0.00	0.00	0.000
28.300	0.00	0.00	0.00	0.000
28.317	0.00	0.00	0.00	0.000
28.333	0.00	0.00	0.00	0.000
28.350	0.00	0.00	0.00	0.000
28.367	0.00	0.00	0.00	0.000
28.383	0.00	0.00	0.00	0.000
28.400	0.00	0.00	0.00	0.000
28.417	0.00	0.00	0.00	0.000
28.433	0.00	0.00	0.00	0.000
28.450	0.00	0.00	0.00	0.000
28.467	0.00	0.00	0.00	0.000

28.483	0.00	0.00	0.00	0.000
28.500	0.00	0.00	0.00	0.000
28.517	0.00	0.00	0.00	0.000
28.533	0.00	0.00	0.00	0.000
28.550	0.00	0.00	0.00	0.000
28.567	0.00	0.00	0.00	0.000
28.583	0.00	0.00	0.00	0.000
28.600	0.00	0.00	0.00	0.000
28.617	0.00	0.00	0.00	0.000
28.633	0.00	0.00	0.00	0.000
28.650	0.00	0.00	0.00	0.000
28.667	0.00	0.00	0.00	0.000
28.683	0.00	0.00	0.00	0.000
28.700	0.00	0.00	0.00	0.000
28.717	0.00	0.00	0.00	0.000
28.733	0.00	0.00	0.00	0.000
28.750	0.00	0.00	0.00	0.000
28.767	0.00	0.00	0.00	0.000
28.783	0.00	0.00	0.00	0.000
28.800	0.00	0.00	0.00	0.000
28.817	0.00	0.00	0.00	0.000
28.833	0.00	0.00	0.00	0.000
28.850	0.00	0.00	0.00	0.000
28.867	0.00	0.00	0.00	0.000
28.883	0.00	0.00	0.00	0.000
28.900	0.00	0.00	0.00	0.000
28.917	0.00	0.00	0.00	0.000
28.933	0.00	0.00	0.00	0.000
28.950	0.00	0.00	0.00	0.000
28.967	0.00	0.00	0.00	0.000
28.983	0.00	0.00	0.00	0.000
29.000	0.00	0.00	0.00	0.000
29.017	0.00	0.00	0.00	0.000
29.033	0.00	0.00	0.00	0.000
29.050	0.00	0.00	0.00	0.000
29.067	0.00	0.00	0.00	0.000
29.083	0.00	0.00	0.00	0.000
29.100	0.00	0.00	0.00	0.000
29.117	0.00	0.00	0.00	0.000
29.133	0.00	0.00	0.00	0.000
29.150	0.00	0.00	0.00	0.000
29.167	0.00	0.00	0.00	0.000
29.183	0.00	0.00	0.00	0.000
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29.417	0.00	0.00	0.00	0.000
29.433	0.00	0.00	0.00	0.000
29.450	0.00	0.00	0.00	0.000
29.467	0.00	0.00	0.00	0.000
29.483	0.00	0.00	0.00	0.000
29.500	0.00	0.00	0.00	0.000
29.517	0.00	0.00	0.00	0.000
29.533	0.00	0.00	0.00	0.000
29.550	0.00	0.00	0.00	0.000
29.567	0.00	0.00	0.00	0.000
29.583	0.00	0.00	0.00	0.000
29.600	0.00	0.00	0.00	0.000
29.617	0.00	0.00	0.00	0.000
29.633	0.00	0.00	0.00	0.000
29.650	0.00	0.00	0.00	0.000
29.667	0.00	0.00	0.00	0.000
29.683	0.00	0.00	0.00	0.000
29.700	0.00	0.00	0.00	0.000
29.717	0.00	0.00	0.00	0.000
29.733	0.00	0.00	0.00	0.000
29.750	0.00	0.00	0.00	0.000
29.767	0.00	0.00	0.00	0.000
29.783	0.00	0.00	0.00	0.000
29.800	0.00	0.00	0.00	0.000
29.817	0.00	0.00	0.00	0.000
29.833	0.00	0.00	0.00	0.000
29.850	0.00	0.00	0.00	0.000
29.867	0.00	0.00	0.00	0.000
29.883	0.00	0.00	0.00	0.000
29.900	0.00	0.00	0.00	0.000
29.917	0.00	0.00	0.00	0.000
29.933	0.00	0.00	0.00	0.000
29.950	0.00	0.00	0.00	0.000
29.967	0.00	0.00	0.00	0.000
29.983	0.00	0.00	0.00	0.000
30.000	0.00	0.00	0.00	0.000
30.017	0.00	0.00	0.00	0.000
30.033	0.00	0.00	0.00	0.000
30.050	0.00	0.00	0.00	0.000
30.067	0.00	0.00	0.00	0.000
30.083	0.00	0.00	0.00	0.000
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30.117	0.00	0.00	0.00	0.000
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30.217	0.00	0.00	0.00	0.000
30.233	0.00	0.00	0.00	0.000
30.250	0.00	0.00	0.00	0.000
30.267	0.00	0.00	0.00	0.000
30.283	0.00	0.00	0.00	0.000
30.300	0.00	0.00	0.00	0.000
30.317	0.00	0.00	0.00	0.000
30.333	0.00	0.00	0.00	0.000
30.350	0.00	0.00	0.00	0.000
30.367	0.00	0.00	0.00	0.000
30.383	0.00	0.00	0.00	0.000
30.400	0.00	0.00	0.00	0.000
30.417	0.00	0.00	0.00	0.000
30.433	0.00	0.00	0.00	0.000
30.450	0.00	0.00	0.00	0.000
30.467	0.00	0.00	0.00	0.000
30.483	0.00	0.00	0.00	0.000
30.500	0.00	0.00	0.00	0.000
30.517	0.00	0.00	0.00	0.000
30.533	0.00	0.00	0.00	0.000
30.550	0.00	0.00	0.00	0.000
30.567	0.00	0.00	0.00	0.000
30.583	0.00	0.00	0.00	0.000
30.600	0.00	0.00	0.00	0.000
30.617	0.00	0.00	0.00	0.000
30.633	0.00	0.00	0.00	0.000
30.650	0.00	0.00	0.00	0.000
30.667	0.00	0.00	0.00	0.000
30.683	0.00	0.00	0.00	0.000
30.700	0.00	0.00	0.00	0.000
30.717	0.00	0.00	0.00	0.000
30.733	0.00	0.00	0.00	0.000
30.750	0.00	0.00	0.00	0.000
30.767	0.00	0.00	0.00	0.000
30.783	0.00	0.00	0.00	0.000
30.800	0.00	0.00	0.00	0.000
30.817	0.00	0.00	0.00	0.000
30.833	0.00	0.00	0.00	0.000
30.850	0.00	0.00	0.00	0.000
30.867	0.00	0.00	0.00	0.000
30.883	0.00	0.00	0.00	0.000
30.900	0.00	0.00	0.00	0.000
30.917	0.00	0.00	0.00	0.000
30.933	0.00	0.00	0.00	0.000
30.950	0.00	0.00	0.00	0.000
30.967	0.00	0.00	0.00	0.000

30.983	0.00	0.00	0.00	0.000
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31.017	0.00	0.00	0.00	0.000
31.033	0.00	0.00	0.00	0.000
31.050	0.00	0.00	0.00	0.000
31.067	0.00	0.00	0.00	0.000
31.083	0.00	0.00	0.00	0.000
31.100	0.00	0.00	0.00	0.000
31.117	0.00	0.00	0.00	0.000
31.133	0.00	0.00	0.00	0.000
31.150	0.00	0.00	0.00	0.000
31.167	0.00	0.00	0.00	0.000
31.183	0.00	0.00	0.00	0.000
31.200	0.00	0.00	0.00	0.000
31.217	0.00	0.00	0.00	0.000
31.233	0.00	0.00	0.00	0.000
31.250	0.00	0.00	0.00	0.000
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31.317	0.00	0.00	0.00	0.000
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31.350	0.00	0.00	0.00	0.000
31.367	0.00	0.00	0.00	0.000
31.383	0.00	0.00	0.00	0.000
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31.417	0.00	0.00	0.00	0.000
31.433	0.00	0.00	0.00	0.000
31.450	0.00	0.00	0.00	0.000
31.467	0.00	0.00	0.00	0.000
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31.533	0.00	0.00	0.00	0.000
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32.833	0.00	0.00	0.00	0.000
32.850	0.00	0.00	0.00	0.000
32.867	0.00	0.00	0.00	0.000
32.883	0.00	0.00	0.00	0.000
32.900	0.00	0.00	0.00	0.000
32.917	0.00	0.00	0.00	0.000
32.933	0.00	0.00	0.00	0.000
32.950	0.00	0.00	0.00	0.000
32.967	0.00	0.00	0.00	0.000
32.983	0.00	0.00	0.00	0.000
33.000	0.00	0.00	0.00	0.000
33.017	0.00	0.00	0.00	0.000
33.033	0.00	0.00	0.00	0.000
33.050	0.00	0.00	0.00	0.000
33.067	0.00	0.00	0.00	0.000
33.083	0.00	0.00	0.00	0.000
33.100	0.00	0.00	0.00	0.000
33.117	0.00	0.00	0.00	0.000
33.133	0.00	0.00	0.00	0.000
33.150	0.00	0.00	0.00	0.000
33.167	0.00	0.00	0.00	0.000
33.183	0.00	0.00	0.00	0.000
33.200	0.00	0.00	0.00	0.000
33.217	0.00	0.00	0.00	0.000
33.233	0.00	0.00	0.00	0.000
33.250	0.00	0.00	0.00	0.000
33.267	0.00	0.00	0.00	0.000
33.283	0.00	0.00	0.00	0.000
33.300	0.00	0.00	0.00	0.000
33.317	0.00	0.00	0.00	0.000
33.333	0.00	0.00	0.00	0.000
33.350	0.00	0.00	0.00	0.000
33.367	0.00	0.00	0.00	0.000
33.383	0.00	0.00	0.00	0.000
33.400	0.00	0.00	0.00	0.000
33.417	0.00	0.00	0.00	0.000
33.433	0.00	0.00	0.00	0.000
33.450	0.00	0.00	0.00	0.000
33.467	0.00	0.00	0.00	0.000

33.483	0.00	0.00	0.00	0.000
33.500	0.00	0.00	0.00	0.000
33.517	0.00	0.00	0.00	0.000
33.533	0.00	0.00	0.00	0.000
33.550	0.00	0.00	0.00	0.000
33.567	0.00	0.00	0.00	0.000
33.583	0.00	0.00	0.00	0.000
33.600	0.00	0.00	0.00	0.000
33.617	0.00	0.00	0.00	0.000
33.633	0.00	0.00	0.00	0.000
33.650	0.00	0.00	0.00	0.000
33.667	0.00	0.00	0.00	0.000
33.683	0.00	0.00	0.00	0.000
33.700	0.00	0.00	0.00	0.000
33.717	0.00	0.00	0.00	0.000
33.733	0.00	0.00	0.00	0.000
33.750	0.00	0.00	0.00	0.000
33.767	0.00	0.00	0.00	0.000
33.783	0.00	0.00	0.00	0.000
33.800	0.00	0.00	0.00	0.000
33.817	0.00	0.00	0.00	0.000
33.833	0.00	0.00	0.00	0.000
33.850	0.00	0.00	0.00	0.000
33.867	0.00	0.00	0.00	0.000
33.883	0.00	0.00	0.00	0.000
33.900	0.00	0.00	0.00	0.000
33.917	0.00	0.00	0.00	0.000
33.933	0.00	0.00	0.00	0.000
33.950	0.00	0.00	0.00	0.000
33.967	0.00	0.00	0.00	0.000
33.983	0.00	0.00	0.00	0.000
34.000	0.00	0.00	0.00	0.000
34.017	0.00	0.00	0.00	0.000
34.033	0.00	0.00	0.00	0.000
34.050	0.00	0.00	0.00	0.000
34.067	0.00	0.00	0.00	0.000
34.083	0.00	0.00	0.00	0.000
34.100	0.00	0.00	0.00	0.000
34.117	0.00	0.00	0.00	0.000
34.133	0.00	0.00	0.00	0.000
34.150	0.00	0.00	0.00	0.000
34.167	0.00	0.00	0.00	0.000
34.183	0.00	0.00	0.00	0.000
34.200	0.00	0.00	0.00	0.000
34.217	0.00	0.00	0.00	0.000
34.233	0.00	0.00	0.00	0.000
34.250	0.00	0.00	0.00	0.000
34.267	0.00	0.00	0.00	0.000
34.283	0.00	0.00	0.00	0.000
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34.317	0.00	0.00	0.00	0.000
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34.400	0.00	0.00	0.00	0.000
34.417	0.00	0.00	0.00	0.000
34.433	0.00	0.00	0.00	0.000
34.450	0.00	0.00	0.00	0.000
34.467	0.00	0.00	0.00	0.000
34.483	0.00	0.00	0.00	0.000
34.500	0.00	0.00	0.00	0.000
34.517	0.00	0.00	0.00	0.000
34.533	0.00	0.00	0.00	0.000
34.550	0.00	0.00	0.00	0.000
34.567	0.00	0.00	0.00	0.000
34.583	0.00	0.00	0.00	0.000
34.600	0.00	0.00	0.00	0.000
34.617	0.00	0.00	0.00	0.000
34.633	0.00	0.00	0.00	0.000
34.650	0.00	0.00	0.00	0.000
34.667	0.00	0.00	0.00	0.000
34.683	0.00	0.00	0.00	0.000
34.700	0.00	0.00	0.00	0.000
34.717	0.00	0.00	0.00	0.000
34.733	0.00	0.00	0.00	0.000
34.750	0.00	0.00	0.00	0.000
34.767	0.00	0.00	0.00	0.000
34.783	0.00	0.00	0.00	0.000
34.800	0.00	0.00	0.00	0.000
34.817	0.00	0.00	0.00	0.000
34.833	0.00	0.00	0.00	0.000
34.850	0.00	0.00	0.00	0.000
34.867	0.00	0.00	0.00	0.000
34.883	0.00	0.00	0.00	0.000
34.900	0.00	0.00	0.00	0.000
34.917	0.00	0.00	0.00	0.000
34.933	0.00	0.00	0.00	0.000
34.950	0.00	0.00	0.00	0.000
34.967	0.00	0.00	0.00	0.000
34.983	0.00	0.00	0.00	0.000
35.000	0.00	0.00	0.00	0.000
35.017	0.00	0.00	0.00	0.000
35.033	0.00	0.00	0.00	0.000
35.050	0.00	0.00	0.00	0.000
35.067	0.00	0.00	0.00	0.000
35.083	0.00	0.00	0.00	0.000
35.100	0.00	0.00	0.00	0.000
35.117	0.00	0.00	0.00	0.000
35.133	0.00	0.00	0.00	0.000

35.150	0.00	0.00	0.00	0.000
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35.250	0.00	0.00	0.00	0.000
35.267	0.00	0.00	0.00	0.000
35.283	0.00	0.00	0.00	0.000
35.300	0.00	0.00	0.00	0.000
35.317	0.00	0.00	0.00	0.000
35.333	0.00	0.00	0.00	0.000
35.350	0.00	0.00	0.00	0.000
35.367	0.00	0.00	0.00	0.000
35.383	0.00	0.00	0.00	0.000
35.400	0.00	0.00	0.00	0.000
35.417	0.00	0.00	0.00	0.000
35.433	0.00	0.00	0.00	0.000
35.450	0.00	0.00	0.00	0.000
35.467	0.00	0.00	0.00	0.000
35.483	0.00	0.00	0.00	0.000
35.500	0.00	0.00	0.00	0.000
35.517	0.00	0.00	0.00	0.000
35.533	0.00	0.00	0.00	0.000
35.550	0.00	0.00	0.00	0.000
35.567	0.00	0.00	0.00	0.000
35.583	0.00	0.00	0.00	0.000
35.600	0.00	0.00	0.00	0.000
35.617	0.00	0.00	0.00	0.000
35.633	0.00	0.00	0.00	0.000
35.650	0.00	0.00	0.00	0.000
35.667	0.00	0.00	0.00	0.000
35.683	0.00	0.00	0.00	0.000
35.700	0.00	0.00	0.00	0.000
35.717	0.00	0.00	0.00	0.000
35.733	0.00	0.00	0.00	0.000
35.750	0.00	0.00	0.00	0.000
35.767	0.00	0.00	0.00	0.000
35.783	0.00	0.00	0.00	0.000
35.800	0.00	0.00	0.00	0.000
35.817	0.00	0.00	0.00	0.000
35.833	0.00	0.00	0.00	0.000
35.850	0.00	0.00	0.00	0.000
35.867	0.00	0.00	0.00	0.000
35.883	0.00	0.00	0.00	0.000
35.900	0.00	0.00	0.00	0.000
35.917	0.00	0.00	0.00	0.000
35.933	0.00	0.00	0.00	0.000
35.950	0.00	0.00	0.00	0.000
35.967	0.00	0.00	0.00	0.000

35.983	0.00	0.00	0.00	0.000
36.000	0.00	0.00	0.00	0.000
36.017	0.00	0.00	0.00	0.000
36.033	0.00	0.00	0.00	0.000
36.050	0.00	0.00	0.00	0.000
36.067	0.00	0.00	0.00	0.000
36.083	0.00	0.00	0.00	0.000
36.100	0.00	0.00	0.00	0.000
36.117	0.00	0.00	0.00	0.000
36.133	0.00	0.00	0.00	0.000
36.150	0.00	0.00	0.00	0.000
36.167	0.00	0.00	0.00	0.000
36.183	0.00	0.00	0.00	0.000
36.200	0.00	0.00	0.00	0.000
36.217	0.00	0.00	0.00	0.000
36.233	0.00	0.00	0.00	0.000
36.250	0.00	0.00	0.00	0.000
36.267	0.00	0.00	0.00	0.000
36.283	0.00	0.00	0.00	0.000
36.300	0.00	0.00	0.00	0.000
36.317	0.00	0.00	0.00	0.000
36.333	0.00	0.00	0.00	0.000
36.350	0.00	0.00	0.00	0.000
36.367	0.00	0.00	0.00	0.000
36.383	0.00	0.00	0.00	0.000
36.400	0.00	0.00	0.00	0.000
36.417	0.00	0.00	0.00	0.000
36.433	0.00	0.00	0.00	0.000
36.450	0.00	0.00	0.00	0.000
36.467	0.00	0.00	0.00	0.000
36.483	0.00	0.00	0.00	0.000
36.500	0.00	0.00	0.00	0.000
36.517	0.00	0.00	0.00	0.000
36.533	0.00	0.00	0.00	0.000
36.550	0.00	0.00	0.00	0.000
36.567	0.00	0.00	0.00	0.000
36.583	0.00	0.00	0.00	0.000
36.600	0.00	0.00	0.00	0.000
36.617	0.00	0.00	0.00	0.000
36.633	0.00	0.00	0.00	0.000
36.650	0.00	0.00	0.00	0.000
36.667	0.00	0.00	0.00	0.000
36.683	0.00	0.00	0.00	0.000
36.700	0.00	0.00	0.00	0.000
36.717	0.00	0.00	0.00	0.000
36.733	0.00	0.00	0.00	0.000
36.750	0.00	0.00	0.00	0.000
36.767	0.00	0.00	0.00	0.000
36.783	0.00	0.00	0.00	0.000
36.800	0.00	0.00	0.00	0.000

36.817	0.00	0.00	0.00	0.000
36.833	0.00	0.00	0.00	0.000
36.850	0.00	0.00	0.00	0.000
36.867	0.00	0.00	0.00	0.000
36.883	0.00	0.00	0.00	0.000
36.900	0.00	0.00	0.00	0.000
36.917	0.00	0.00	0.00	0.000
36.933	0.00	0.00	0.00	0.000
36.950	0.00	0.00	0.00	0.000
36.967	0.00	0.00	0.00	0.000
36.983	0.00	0.00	0.00	0.000
37.000	0.00	0.00	0.00	0.000
37.017	0.00	0.00	0.00	0.000
37.033	0.00	0.00	0.00	0.000
37.050	0.00	0.00	0.00	0.000
37.067	0.00	0.00	0.00	0.000
37.083	0.00	0.00	0.00	0.000
37.100	0.00	0.00	0.00	0.000
37.117	0.00	0.00	0.00	0.000
37.133	0.00	0.00	0.00	0.000
37.150	0.00	0.00	0.00	0.000
37.167	0.00	0.00	0.00	0.000
37.183	0.00	0.00	0.00	0.000
37.200	0.00	0.00	0.00	0.000
37.217	0.00	0.00	0.00	0.000
37.233	0.00	0.00	0.00	0.000
37.250	0.00	0.00	0.00	0.000
37.267	0.00	0.00	0.00	0.000
37.283	0.00	0.00	0.00	0.000
37.300	0.00	0.00	0.00	0.000
37.317	0.00	0.00	0.00	0.000
37.333	0.00	0.00	0.00	0.000
37.350	0.00	0.00	0.00	0.000
37.367	0.00	0.00	0.00	0.000
37.383	0.00	0.00	0.00	0.000
37.400	0.00	0.00	0.00	0.000
37.417	0.00	0.00	0.00	0.000
37.433	0.00	0.00	0.00	0.000
37.450	0.00	0.00	0.00	0.000
37.467	0.00	0.00	0.00	0.000
37.483	0.00	0.00	0.00	0.000
37.500	0.00	0.00	0.00	0.000
37.517	0.00	0.00	0.00	0.000
37.533	0.00	0.00	0.00	0.000
37.550	0.00	0.00	0.00	0.000
37.567	0.00	0.00	0.00	0.000
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37.717	0.00	0.00	0.00	0.000
37.733	0.00	0.00	0.00	0.000
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37.767	0.00	0.00	0.00	0.000
37.783	0.00	0.00	0.00	0.000
37.800	0.00	0.00	0.00	0.000
37.817	0.00	0.00	0.00	0.000
37.833	0.00	0.00	0.00	0.000
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37.867	0.00	0.00	0.00	0.000
37.883	0.00	0.00	0.00	0.000
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38.017	0.00	0.00	0.00	0.000
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39.267	0.00	0.00	0.00	0.000
39.283	0.00	0.00	0.00	0.000
39.300	0.00	0.00	0.00	0.000

39.317	0.00	0.00	0.00	0.000
39.333	0.00	0.00	0.00	0.000
39.350	0.00	0.00	0.00	0.000
39.367	0.00	0.00	0.00	0.000
39.383	0.00	0.00	0.00	0.000
39.400	0.00	0.00	0.00	0.000
39.417	0.00	0.00	0.00	0.000
39.433	0.00	0.00	0.00	0.000
39.450	0.00	0.00	0.00	0.000
39.467	0.00	0.00	0.00	0.000
39.483	0.00	0.00	0.00	0.000
39.500	0.00	0.00	0.00	0.000
39.517	0.00	0.00	0.00	0.000
39.533	0.00	0.00	0.00	0.000
39.550	0.00	0.00	0.00	0.000
39.567	0.00	0.00	0.00	0.000
39.583	0.00	0.00	0.00	0.000
39.600	0.00	0.00	0.00	0.000
39.617	0.00	0.00	0.00	0.000
39.633	0.00	0.00	0.00	0.000
39.650	0.00	0.00	0.00	0.000
39.667	0.00	0.00	0.00	0.000
39.683	0.00	0.00	0.00	0.000
39.700	0.00	0.00	0.00	0.000
39.717	0.00	0.00	0.00	0.000
39.733	0.00	0.00	0.00	0.000
39.750	0.00	0.00	0.00	0.000
39.767	0.00	0.00	0.00	0.000
39.783	0.00	0.00	0.00	0.000
39.800	0.00	0.00	0.00	0.000
39.817	0.00	0.00	0.00	0.000
39.833	0.00	0.00	0.00	0.000
39.850	0.00	0.00	0.00	0.000
39.867	0.00	0.00	0.00	0.000
39.883	0.00	0.00	0.00	0.000
39.900	0.00	0.00	0.00	0.000
39.917	0.00	0.00	0.00	0.000
39.933	0.00	0.00	0.00	0.000
39.950	0.00	0.00	0.00	0.000
39.967	0.00	0.00	0.00	0.000
39.983	0.00	0.00	0.00	0.000
40.000	0.00	0.00	0.00	0.000
40.017	0.00	0.00	0.00	0.000
40.033	0.00	0.00	0.00	0.000
40.050	0.00	0.00	0.00	0.000
40.067	0.00	0.00	0.00	0.000
40.083	0.00	0.00	0.00	0.000
40.100	0.00	0.00	0.00	0.000
40.117	0.00	0.00	0.00	0.000
40.133	0.00	0.00	0.00	0.000

40.150	0.00	0.00	0.00	0.000
40.167	0.00	0.00	0.00	0.000
40.183	0.00	0.00	0.00	0.000
40.200	0.00	0.00	0.00	0.000
40.217	0.00	0.00	0.00	0.000
40.233	0.00	0.00	0.00	0.000
40.250	0.00	0.00	0.00	0.000
40.267	0.00	0.00	0.00	0.000
40.283	0.00	0.00	0.00	0.000
40.300	0.00	0.00	0.00	0.000
40.317	0.00	0.00	0.00	0.000
40.333	0.00	0.00	0.00	0.000
40.350	0.00	0.00	0.00	0.000
40.367	0.00	0.00	0.00	0.000
40.383	0.00	0.00	0.00	0.000
40.400	0.00	0.00	0.00	0.000
40.417	0.00	0.00	0.00	0.000
40.433	0.00	0.00	0.00	0.000
40.450	0.00	0.00	0.00	0.000
40.467	0.00	0.00	0.00	0.000
40.483	0.00	0.00	0.00	0.000
40.500	0.00	0.00	0.00	0.000
40.517	0.00	0.00	0.00	0.000
40.533	0.00	0.00	0.00	0.000
40.550	0.00	0.00	0.00	0.000
40.567	0.00	0.00	0.00	0.000
40.583	0.00	0.00	0.00	0.000
40.600	0.00	0.00	0.00	0.000
40.617	0.00	0.00	0.00	0.000
40.633	0.00	0.00	0.00	0.000
40.650	0.00	0.00	0.00	0.000
40.667	0.00	0.00	0.00	0.000
40.683	0.00	0.00	0.00	0.000
40.700	0.00	0.00	0.00	0.000
40.717	0.00	0.00	0.00	0.000
40.733	0.00	0.00	0.00	0.000
40.750	0.00	0.00	0.00	0.000
40.767	0.00	0.00	0.00	0.000
40.783	0.00	0.00	0.00	0.000
40.800	0.00	0.00	0.00	0.000
40.817	0.00	0.00	0.00	0.000
40.833	0.00	0.00	0.00	0.000
40.850	0.00	0.00	0.00	0.000
40.867	0.00	0.00	0.00	0.000
40.883	0.00	0.00	0.00	0.000
40.900	0.00	0.00	0.00	0.000
40.917	0.00	0.00	0.00	0.000
40.933	0.00	0.00	0.00	0.000
40.950	0.00	0.00	0.00	0.000
40.967	0.00	0.00	0.00	0.000

40.983	0.00	0.00	0.00	0.000
41.000	0.00	0.00	0.00	0.000
41.017	0.00	0.00	0.00	0.000
41.033	0.00	0.00	0.00	0.000
41.050	0.00	0.00	0.00	0.000
41.067	0.00	0.00	0.00	0.000
41.083	0.00	0.00	0.00	0.000
41.100	0.00	0.00	0.00	0.000
41.117	0.00	0.00	0.00	0.000
41.133	0.00	0.00	0.00	0.000
41.150	0.00	0.00	0.00	0.000
41.167	0.00	0.00	0.00	0.000
41.183	0.00	0.00	0.00	0.000
41.200	0.00	0.00	0.00	0.000
41.217	0.00	0.00	0.00	0.000
41.233	0.00	0.00	0.00	0.000
41.250	0.00	0.00	0.00	0.000
41.267	0.00	0.00	0.00	0.000
41.283	0.00	0.00	0.00	0.000
41.300	0.00	0.00	0.00	0.000
41.317	0.00	0.00	0.00	0.000
41.333	0.00	0.00	0.00	0.000
41.350	0.00	0.00	0.00	0.000
41.367	0.00	0.00	0.00	0.000
41.383	0.00	0.00	0.00	0.000
41.400	0.00	0.00	0.00	0.000
41.417	0.00	0.00	0.00	0.000
41.433	0.00	0.00	0.00	0.000
41.450	0.00	0.00	0.00	0.000
41.467	0.00	0.00	0.00	0.000
41.483	0.00	0.00	0.00	0.000
41.500	0.00	0.00	0.00	0.000
41.517	0.00	0.00	0.00	0.000
41.533	0.00	0.00	0.00	0.000
41.550	0.00	0.00	0.00	0.000
41.567	0.00	0.00	0.00	0.000
41.583	0.00	0.00	0.00	0.000
41.600	0.00	0.00	0.00	0.000
41.617	0.00	0.00	0.00	0.000
41.633	0.00	0.00	0.00	0.000
41.650	0.00	0.00	0.00	0.000
41.667	0.00	0.00	0.00	0.000
41.683	0.00	0.00	0.00	0.000
41.700	0.00	0.00	0.00	0.000
41.717	0.00	0.00	0.00	0.000
41.733	0.00	0.00	0.00	0.000
41.750	0.00	0.00	0.00	0.000
41.767	0.00	0.00	0.00	0.000
41.783	0.00	0.00	0.00	0.000
41.800	0.00	0.00	0.00	0.000

41.817	0.00	0.00	0.00	0.000
41.833	0.00	0.00	0.00	0.000
41.850	0.00	0.00	0.00	0.000
41.867	0.00	0.00	0.00	0.000
41.883	0.00	0.00	0.00	0.000
41.900	0.00	0.00	0.00	0.000
41.917	0.00	0.00	0.00	0.000
41.933	0.00	0.00	0.00	0.000
41.950	0.00	0.00	0.00	0.000
41.967	0.00	0.00	0.00	0.000
41.983	0.00	0.00	0.00	0.000
42.000	0.00	0.00	0.00	0.000
42.017	0.00	0.00	0.00	0.000
42.033	0.00	0.00	0.00	0.000
42.050	0.00	0.00	0.00	0.000
42.067	0.00	0.00	0.00	0.000
42.083	0.00	0.00	0.00	0.000
42.100	0.00	0.00	0.00	0.000
42.117	0.00	0.00	0.00	0.000
42.133	0.00	0.00	0.00	0.000
42.150	0.00	0.00	0.00	0.000
42.167	0.00	0.00	0.00	0.000
42.183	0.00	0.00	0.00	0.000
42.200	0.00	0.00	0.00	0.000
42.217	0.00	0.00	0.00	0.000
42.233	0.00	0.00	0.00	0.000
42.250	0.00	0.00	0.00	0.000
42.267	0.00	0.00	0.00	0.000
42.283	0.00	0.00	0.00	0.000
42.300	0.00	0.00	0.00	0.000
42.317	0.00	0.00	0.00	0.000
42.333	0.00	0.00	0.00	0.000
42.350	0.00	0.00	0.00	0.000
42.367	0.00	0.00	0.00	0.000
42.383	0.00	0.00	0.00	0.000
42.400	0.00	0.00	0.00	0.000
42.417	0.00	0.00	0.00	0.000
42.433	0.00	0.00	0.00	0.000
42.450	0.00	0.00	0.00	0.000
42.467	0.00	0.00	0.00	0.000
42.483	0.00	0.00	0.00	0.000
42.500	0.00	0.00	0.00	0.000
42.517	0.00	0.00	0.00	0.000
42.533	0.00	0.00	0.00	0.000
42.550	0.00	0.00	0.00	0.000
42.567	0.00	0.00	0.00	0.000
42.583	0.00	0.00	0.00	0.000
42.600	0.00	0.00	0.00	0.000
42.617	0.00	0.00	0.00	0.000
42.633	0.00	0.00	0.00	0.000

42.650	0.00	0.00	0.00	0.000
42.667	0.00	0.00	0.00	0.000
42.683	0.00	0.00	0.00	0.000
42.700	0.00	0.00	0.00	0.000
42.717	0.00	0.00	0.00	0.000
42.733	0.00	0.00	0.00	0.000
42.750	0.00	0.00	0.00	0.000
42.767	0.00	0.00	0.00	0.000
42.783	0.00	0.00	0.00	0.000
42.800	0.00	0.00	0.00	0.000
42.817	0.00	0.00	0.00	0.000
42.833	0.00	0.00	0.00	0.000
42.850	0.00	0.00	0.00	0.000
42.867	0.00	0.00	0.00	0.000
42.883	0.00	0.00	0.00	0.000
42.900	0.00	0.00	0.00	0.000
42.917	0.00	0.00	0.00	0.000
42.933	0.00	0.00	0.00	0.000
42.950	0.00	0.00	0.00	0.000
42.967	0.00	0.00	0.00	0.000
42.983	0.00	0.00	0.00	0.000
43.000	0.00	0.00	0.00	0.000
43.017	0.00	0.00	0.00	0.000
43.033	0.00	0.00	0.00	0.000
43.050	0.00	0.00	0.00	0.000
43.067	0.00	0.00	0.00	0.000
43.083	0.00	0.00	0.00	0.000
43.100	0.00	0.00	0.00	0.000
43.117	0.00	0.00	0.00	0.000
43.133	0.00	0.00	0.00	0.000
43.150	0.00	0.00	0.00	0.000
43.167	0.00	0.00	0.00	0.000
43.183	0.00	0.00	0.00	0.000
43.200	0.00	0.00	0.00	0.000
43.217	0.00	0.00	0.00	0.000
43.233	0.00	0.00	0.00	0.000
43.250	0.00	0.00	0.00	0.000
43.267	0.00	0.00	0.00	0.000
43.283	0.00	0.00	0.00	0.000
43.300	0.00	0.00	0.00	0.000
43.317	0.00	0.00	0.00	0.000
43.333	0.00	0.00	0.00	0.000
43.350	0.00	0.00	0.00	0.000
43.367	0.00	0.00	0.00	0.000
43.383	0.00	0.00	0.00	0.000
43.400	0.00	0.00	0.00	0.000
43.417	0.00	0.00	0.00	0.000
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43.517	0.00	0.00	0.00	0.000
43.533	0.00	0.00	0.00	0.000
43.550	0.00	0.00	0.00	0.000
43.567	0.00	0.00	0.00	0.000
43.583	0.00	0.00	0.00	0.000
43.600	0.00	0.00	0.00	0.000
43.617	0.00	0.00	0.00	0.000
43.633	0.00	0.00	0.00	0.000
43.650	0.00	0.00	0.00	0.000
43.667	0.00	0.00	0.00	0.000
43.683	0.00	0.00	0.00	0.000
43.700	0.00	0.00	0.00	0.000
43.717	0.00	0.00	0.00	0.000
43.733	0.00	0.00	0.00	0.000
43.750	0.00	0.00	0.00	0.000
43.767	0.00	0.00	0.00	0.000
43.783	0.00	0.00	0.00	0.000
43.800	0.00	0.00	0.00	0.000
43.817	0.00	0.00	0.00	0.000
43.833	0.00	0.00	0.00	0.000
43.850	0.00	0.00	0.00	0.000
43.867	0.00	0.00	0.00	0.000
43.883	0.00	0.00	0.00	0.000
43.900	0.00	0.00	0.00	0.000
43.917	0.00	0.00	0.00	0.000
43.933	0.00	0.00	0.00	0.000
43.950	0.00	0.00	0.00	0.000
43.967	0.00	0.00	0.00	0.000
43.983	0.00	0.00	0.00	0.000
44.000	0.00	0.00	0.00	0.000
44.017	0.00	0.00	0.00	0.000
44.033	0.00	0.00	0.00	0.000
44.050	0.00	0.00	0.00	0.000
44.067	0.00	0.00	0.00	0.000
44.083	0.00	0.00	0.00	0.000
44.100	0.00	0.00	0.00	0.000
44.117	0.00	0.00	0.00	0.000
44.133	0.00	0.00	0.00	0.000
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44.183	0.00	0.00	0.00	0.000
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44.417	0.00	0.00	0.00	0.000
44.433	0.00	0.00	0.00	0.000
44.450	0.00	0.00	0.00	0.000
44.467	0.00	0.00	0.00	0.000
44.483	0.00	0.00	0.00	0.000
44.500	0.00	0.00	0.00	0.000
44.517	0.00	0.00	0.00	0.000
44.533	0.00	0.00	0.00	0.000
44.550	0.00	0.00	0.00	0.000
44.567	0.00	0.00	0.00	0.000
44.583	0.00	0.00	0.00	0.000
44.600	0.00	0.00	0.00	0.000
44.617	0.00	0.00	0.00	0.000
44.633	0.00	0.00	0.00	0.000
44.650	0.00	0.00	0.00	0.000
44.667	0.00	0.00	0.00	0.000
44.683	0.00	0.00	0.00	0.000
44.700	0.00	0.00	0.00	0.000
44.717	0.00	0.00	0.00	0.000
44.733	0.00	0.00	0.00	0.000
44.750	0.00	0.00	0.00	0.000
44.767	0.00	0.00	0.00	0.000
44.783	0.00	0.00	0.00	0.000
44.800	0.00	0.00	0.00	0.000
44.817	0.00	0.00	0.00	0.000
44.833	0.00	0.00	0.00	0.000
44.850	0.00	0.00	0.00	0.000
44.867	0.00	0.00	0.00	0.000
44.883	0.00	0.00	0.00	0.000
44.900	0.00	0.00	0.00	0.000
44.917	0.00	0.00	0.00	0.000
44.933	0.00	0.00	0.00	0.000
44.950	0.00	0.00	0.00	0.000
44.967	0.00	0.00	0.00	0.000
44.983	0.00	0.00	0.00	0.000
45.000	0.00	0.00	0.00	0.000
45.017	0.00	0.00	0.00	0.000
45.033	0.00	0.00	0.00	0.000
45.050	0.00	0.00	0.00	0.000
45.067	0.00	0.00	0.00	0.000
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45.383	0.00	0.00	0.00	0.000
45.400	0.00	0.00	0.00	0.000
45.417	0.00	0.00	0.00	0.000
45.433	0.00	0.00	0.00	0.000
45.450	0.00	0.00	0.00	0.000
45.467	0.00	0.00	0.00	0.000
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45.700	0.00	0.00	0.00	0.000
45.717	0.00	0.00	0.00	0.000
45.733	0.00	0.00	0.00	0.000
45.750	0.00	0.00	0.00	0.000
45.767	0.00	0.00	0.00	0.000
45.783	0.00	0.00	0.00	0.000
45.800	0.00	0.00	0.00	0.000
45.817	0.00	0.00	0.00	0.000
45.833	0.00	0.00	0.00	0.000
45.850	0.00	0.00	0.00	0.000
45.867	0.00	0.00	0.00	0.000
45.883	0.00	0.00	0.00	0.000
45.900	0.00	0.00	0.00	0.000
45.917	0.00	0.00	0.00	0.000
45.933	0.00	0.00	0.00	0.000
45.950	0.00	0.00	0.00	0.000
45.967	0.00	0.00	0.00	0.000

45.983	0.00	0.00	0.00	0.000
46.000	0.00	0.00	0.00	0.000
46.017	0.00	0.00	0.00	0.000
46.033	0.00	0.00	0.00	0.000
46.050	0.00	0.00	0.00	0.000
46.067	0.00	0.00	0.00	0.000
46.083	0.00	0.00	0.00	0.000
46.100	0.00	0.00	0.00	0.000
46.117	0.00	0.00	0.00	0.000
46.133	0.00	0.00	0.00	0.000
46.150	0.00	0.00	0.00	0.000
46.167	0.00	0.00	0.00	0.000
46.183	0.00	0.00	0.00	0.000
46.200	0.00	0.00	0.00	0.000
46.217	0.00	0.00	0.00	0.000
46.233	0.00	0.00	0.00	0.000
46.250	0.00	0.00	0.00	0.000
46.267	0.00	0.00	0.00	0.000
46.283	0.00	0.00	0.00	0.000
46.300	0.00	0.00	0.00	0.000
46.317	0.00	0.00	0.00	0.000
46.333	0.00	0.00	0.00	0.000
46.350	0.00	0.00	0.00	0.000
46.367	0.00	0.00	0.00	0.000
46.383	0.00	0.00	0.00	0.000
46.400	0.00	0.00	0.00	0.000
46.417	0.00	0.00	0.00	0.000
46.433	0.00	0.00	0.00	0.000
46.450	0.00	0.00	0.00	0.000
46.467	0.00	0.00	0.00	0.000
46.483	0.00	0.00	0.00	0.000
46.500	0.00	0.00	0.00	0.000
46.517	0.00	0.00	0.00	0.000
46.533	0.00	0.00	0.00	0.000
46.550	0.00	0.00	0.00	0.000
46.567	0.00	0.00	0.00	0.000
46.583	0.00	0.00	0.00	0.000
46.600	0.00	0.00	0.00	0.000
46.617	0.00	0.00	0.00	0.000
46.633	0.00	0.00	0.00	0.000
46.650	0.00	0.00	0.00	0.000
46.667	0.00	0.00	0.00	0.000
46.683	0.00	0.00	0.00	0.000
46.700	0.00	0.00	0.00	0.000
46.717	0.00	0.00	0.00	0.000
46.733	0.00	0.00	0.00	0.000
46.750	0.00	0.00	0.00	0.000
46.767	0.00	0.00	0.00	0.000
46.783	0.00	0.00	0.00	0.000
46.800	0.00	0.00	0.00	0.000

46.817	0.00	0.00	0.00	0.000
46.833	0.00	0.00	0.00	0.000
46.850	0.00	0.00	0.00	0.000
46.867	0.00	0.00	0.00	0.000
46.883	0.00	0.00	0.00	0.000
46.900	0.00	0.00	0.00	0.000
46.917	0.00	0.00	0.00	0.000
46.933	0.00	0.00	0.00	0.000
46.950	0.00	0.00	0.00	0.000
46.967	0.00	0.00	0.00	0.000
46.983	0.00	0.00	0.00	0.000
47.000	0.00	0.00	0.00	0.000
47.017	0.00	0.00	0.00	0.000
47.033	0.00	0.00	0.00	0.000
47.050	0.00	0.00	0.00	0.000
47.067	0.00	0.00	0.00	0.000
47.083	0.00	0.00	0.00	0.000
47.100	0.00	0.00	0.00	0.000
47.117	0.00	0.00	0.00	0.000
47.133	0.00	0.00	0.00	0.000
47.150	0.00	0.00	0.00	0.000
47.167	0.00	0.00	0.00	0.000
47.183	0.00	0.00	0.00	0.000
47.200	0.00	0.00	0.00	0.000
47.217	0.00	0.00	0.00	0.000
47.233	0.00	0.00	0.00	0.000
47.250	0.00	0.00	0.00	0.000
47.267	0.00	0.00	0.00	0.000
47.283	0.00	0.00	0.00	0.000
47.300	0.00	0.00	0.00	0.000
47.317	0.00	0.00	0.00	0.000
47.333	0.00	0.00	0.00	0.000
47.350	0.00	0.00	0.00	0.000
47.367	0.00	0.00	0.00	0.000
47.383	0.00	0.00	0.00	0.000
47.400	0.00	0.00	0.00	0.000
47.417	0.00	0.00	0.00	0.000
47.433	0.00	0.00	0.00	0.000
47.450	0.00	0.00	0.00	0.000
47.467	0.00	0.00	0.00	0.000
47.483	0.00	0.00	0.00	0.000
47.500	0.00	0.00	0.00	0.000
47.517	0.00	0.00	0.00	0.000
47.533	0.00	0.00	0.00	0.000
47.550	0.00	0.00	0.00	0.000
47.567	0.00	0.00	0.00	0.000
47.583	0.00	0.00	0.00	0.000
47.600	0.00	0.00	0.00	0.000
47.617	0.00	0.00	0.00	0.000
47.633	0.00	0.00	0.00	0.000

47.650	0.00	0.00	0.00	0.000
47.667	0.00	0.00	0.00	0.000
47.683	0.00	0.00	0.00	0.000
47.700	0.00	0.00	0.00	0.000
47.717	0.00	0.00	0.00	0.000
47.733	0.00	0.00	0.00	0.000
47.750	0.00	0.00	0.00	0.000
47.767	0.00	0.00	0.00	0.000
47.783	0.00	0.00	0.00	0.000
47.800	0.00	0.00	0.00	0.000
47.817	0.00	0.00	0.00	0.000
47.833	0.00	0.00	0.00	0.000
47.850	0.00	0.00	0.00	0.000
47.867	0.00	0.00	0.00	0.000
47.883	0.00	0.00	0.00	0.000
47.900	0.00	0.00	0.00	0.000
47.917	0.00	0.00	0.00	0.000
47.933	0.00	0.00	0.00	0.000
47.950	0.00	0.00	0.00	0.000
47.967	0.00	0.00	0.00	0.000
47.983	0.00	0.00	0.00	0.000
48.000	0.00	0.00	0.00	0.000

==========

END OF FLOODSCx ROUTING ANALYSIS

```
**************************************************************************

             F L O O D    R O U T I N G    A N A L Y S I S
             USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
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                           Analysis prepared by:

                             Huitt-Zollars, Inc.
                          2603 Main Street, Suite 400
                               Irvine, CA. 92614
                                  949-988-5815

 ************************* DESCRIPTION OF STUDY *************************
* GREAT SCOTT                                                           *
* 2 YR STORM EX.                                                        *
* CGULLIXSON REV HHTUN                                                  *
 ************************************************************************

  FILE NAME: GSFR2E.DAT
  TIME/DATE OF STUDY: 10:21 08/23/2023

   The Small Area Unit Hydrograph Procedures in Section J
   of the Hydrology Manual provides estimates of runoff
   hydrograph and runoff volume for watersheds whose time of
   concentration is less than 25 minutes. The PROGRAM User
   should check the applicability of using the small area unit
   hydrograph procedures, and follow the guidelines in
   Sections J and K.5 in complex watershed modeling.


**************************************************************************
  FLOW PROCESS FROM NODE    400.00 TO NODE    603.00 IS CODE = 1.2
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (SMALL AREA UNIT-HYDROGRAPH ANALYSIS) <<<<<
==========================================================================

  (SMALL AREA UNIT-HYDROGRAPH ADDED TO STREAM #1)

    RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
    TOTAL CATCHMENT AREA(ACRES) =    2.00
    SOIL-LOSS RATE, Fm,(INCH/HR) =  0.118
    LOW LOSS FRACTION = 0.522
    TIME OF CONCENTRATION(MIN.) = 10.79
    SMALL AREA PEAK Q COMPUTED USING PEAK FLOW RATE FORMULA
    ORANGE COUNTY "VALLEY" RAINFALL VALUES ARE USED:
    RETURN FREQUENCY(YEARS) =   2
       5-MINUTE POINT RAINFALL VALUE(INCHES) =  0.19
```

```
      30-MINUTE POINT RAINFALL VALUE(INCHES) =  0.40
       1-HOUR   POINT RAINFALL VALUE(INCHES) =  0.53
       3-HOUR   POINT RAINFALL VALUE(INCHES) =  0.89
       6-HOUR   POINT RAINFALL VALUE(INCHES) =  1.22
      24-HOUR   POINT RAINFALL VALUE(INCHES) =  2.05

--------------------------------------------------------------------------------
    TOTAL CATCHMENT   RUNOFF  VOLUME(ACRE-FEET) =     0.17
    TOTAL CATCHMENT SOIL-LOSS VOLUME(ACRE-FEET) =     0.17

--------------------------------------------------------------------------------
♠
================================================================================

                      2 4 - H O U R    S T O R M
                   R U N O F F    H Y D R O G R A P H

================================================================================
               HYDROGRAPH IN  ONE-MINUTE UNIT INTERVALS(CFS)
        (Notes: Time indicated is at END of Each Unit Intervals.
                Peak 5-minute rainfall intensity is modeled as
                a constant value for entire 5-minute period.)
--------------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.        0.6       1.2       1.8       2.4
--------------------------------------------------------------------------------
   0.017      0.0000      0.00  Q        .         .         .         .
   0.033      0.0000      0.00  Q        .         .         .         .
   0.050      0.0000      0.01  Q        .         .         .         .
   0.067      0.0000      0.01  Q        .         .         .         .
   0.083      0.0000      0.01  Q        .         .         .         .
   0.100      0.0001      0.01  Q        .         .         .         .
   0.117      0.0001      0.02  Q        .         .         .         .
   0.133      0.0001      0.02  Q        .         .         .         .
   0.150      0.0001      0.02  Q        .         .         .         .
   0.167      0.0002      0.02  Q        .         .         .         .
   0.183      0.0002      0.03  Q        .         .         .         .
   0.200      0.0003      0.03  Q        .         .         .         .
   0.217      0.0003      0.03  Q        .         .         .         .
   0.233      0.0003      0.03  Q        .         .         .         .
   0.250      0.0004      0.03  Q        .         .         .         .
   0.267      0.0004      0.03  Q        .         .         .         .
   0.283      0.0004      0.03  Q        .         .         .         .
   0.300      0.0005      0.03  Q        .         .         .         .
   0.317      0.0005      0.03  Q        .         .         .         .
   0.333      0.0006      0.03  Q        .         .         .         .
   0.350      0.0006      0.03  Q        .         .         .         .
   0.367      0.0006      0.03  Q        .         .         .         .
   0.383      0.0007      0.03  Q        .         .         .         .
   0.400      0.0007      0.03  Q        .         .         .         .
   0.417      0.0008      0.03  Q        .         .         .         .
```

0.433	0.0008	0.03	Q	.	.	.	.
0.450	0.0008	0.03	Q	.	.	.	.
0.467	0.0009	0.03	Q	.	.	.	.
0.483	0.0009	0.03	Q	.	.	.	.
0.500	0.0009	0.03	Q	.	.	.	.
0.517	0.0010	0.03	Q	.	.	.	.
0.533	0.0010	0.03	Q	.	.	.	.
0.550	0.0011	0.03	Q	.	.	.	.
0.567	0.0011	0.03	Q	.	.	.	.
0.583	0.0011	0.03	Q	.	.	.	.
0.600	0.0012	0.03	Q	.	.	.	.
0.617	0.0012	0.03	Q	.	.	.	.
0.633	0.0013	0.03	Q	.	.	.	.
0.650	0.0013	0.03	Q	.	.	.	.
0.667	0.0013	0.03	Q	.	.	.	.
0.683	0.0014	0.03	Q	.	.	.	.
0.700	0.0014	0.03	Q	.	.	.	.
0.717	0.0014	0.03	Q	.	.	.	.
0.733	0.0015	0.03	Q	.	.	.	.
0.750	0.0015	0.03	Q	.	.	.	.
0.767	0.0016	0.03	Q	.	.	.	.
0.783	0.0016	0.03	Q	.	.	.	.
0.800	0.0016	0.03	Q	.	.	.	.
0.817	0.0017	0.03	Q	.	.	.	.
0.833	0.0017	0.03	Q	.	.	.	.
0.850	0.0018	0.03	Q	.	.	.	.
0.867	0.0018	0.03	Q	.	.	.	.
0.883	0.0018	0.03	Q	.	.	.	.
0.900	0.0019	0.03	Q	.	.	.	.
0.917	0.0019	0.03	Q	.	.	.	.
0.933	0.0020	0.03	Q	.	.	.	.
0.950	0.0020	0.03	Q	.	.	.	.
0.967	0.0020	0.03	Q	.	.	.	.
0.983	0.0021	0.03	Q	.	.	.	.
1.000	0.0021	0.03	Q	.	.	.	.
1.017	0.0021	0.03	Q	.	.	.	.
1.033	0.0022	0.03	Q	.	.	.	.
1.050	0.0022	0.03	Q	.	.	.	.
1.067	0.0023	0.03	Q	.	.	.	.
1.083	0.0023	0.03	Q	.	.	.	.
1.100	0.0023	0.03	Q	.	.	.	.
1.117	0.0024	0.03	Q	.	.	.	.
1.133	0.0024	0.03	Q	.	.	.	.
1.150	0.0025	0.03	Q	.	.	.	.
1.167	0.0025	0.03	Q	.	.	.	.
1.183	0.0025	0.03	Q	.	.	.	.
1.200	0.0026	0.03	Q	.	.	.	.
1.217	0.0026	0.03	Q	.	.	.	.
1.233	0.0027	0.03	Q	.	.	.	.
1.250	0.0027	0.03	Q	.	.	.	.

1.267	0.0027	0.03	Q	.	.	.	.
1.283	0.0028	0.03	Q	.	.	.	.
1.300	0.0028	0.03	Q	.	.	.	.
1.317	0.0029	0.03	Q	.	.	.	.
1.333	0.0029	0.03	Q	.	.	.	.
1.350	0.0029	0.03	Q	.	.	.	.
1.367	0.0030	0.03	Q	.	.	.	.
1.383	0.0030	0.03	Q	.	.	.	.
1.400	0.0031	0.03	Q	.	.	.	.
1.417	0.0031	0.03	Q	.	.	.	.
1.433	0.0031	0.03	Q	.	.	.	.
1.450	0.0032	0.03	Q	.	.	.	.
1.467	0.0032	0.03	Q	.	.	.	.
1.483	0.0033	0.03	Q	.	.	.	.
1.500	0.0033	0.03	Q	.	.	.	.
1.517	0.0033	0.03	Q	.	.	.	.
1.533	0.0034	0.03	Q	.	.	.	.
1.550	0.0034	0.03	Q	.	.	.	.
1.567	0.0035	0.03	Q	.	.	.	.
1.583	0.0035	0.03	Q	.	.	.	.
1.600	0.0035	0.03	Q	.	.	.	.
1.617	0.0036	0.03	Q	.	.	.	.
1.633	0.0036	0.03	Q	.	.	.	.
1.650	0.0037	0.03	Q	.	.	.	.
1.667	0.0037	0.03	Q	.	.	.	.
1.683	0.0037	0.03	Q	.	.	.	.
1.700	0.0038	0.03	Q	.	.	.	.
1.717	0.0038	0.03	Q	.	.	.	.
1.733	0.0039	0.03	Q	.	.	.	.
1.750	0.0039	0.03	Q	.	.	.	.
1.767	0.0039	0.03	Q	.	.	.	.
1.783	0.0040	0.03	Q	.	.	.	.
1.800	0.0040	0.03	Q	.	.	.	.
1.817	0.0041	0.03	Q	.	.	.	.
1.833	0.0041	0.03	Q	.	.	.	.
1.850	0.0041	0.03	Q	.	.	.	.
1.867	0.0042	0.03	Q	.	.	.	.
1.883	0.0042	0.03	Q	.	.	.	.
1.900	0.0043	0.03	QV	.	.	.	.
1.917	0.0043	0.03	QV	.	.	.	.
1.933	0.0043	0.03	QV	.	.	.	.
1.950	0.0044	0.03	QV	.	.	.	.
1.967	0.0044	0.03	QV	.	.	.	.
1.983	0.0045	0.03	QV	.	.	.	.
2.000	0.0045	0.03	QV	.	.	.	.
2.017	0.0046	0.03	QV	.	.	.	.
2.033	0.0046	0.03	QV	.	.	.	.
2.050	0.0046	0.03	QV	.	.	.	.
2.067	0.0047	0.03	QV	.	.	.	.
2.083	0.0047	0.03	QV	.	.	.	.

2.100	0.0048	0.03	QV	.	.	.	.
2.117	0.0048	0.03	QV	.	.	.	.
2.133	0.0048	0.03	QV	.	.	.	.
2.150	0.0049	0.03	QV	.	.	.	.
2.167	0.0049	0.03	QV	.	.	.	.
2.183	0.0050	0.03	QV	.	.	.	.
2.200	0.0050	0.03	QV	.	.	.	.
2.217	0.0050	0.03	QV	.	.	.	.
2.233	0.0051	0.03	QV	.	.	.	.
2.250	0.0051	0.03	QV	.	.	.	.
2.267	0.0052	0.03	QV	.	.	.	.
2.283	0.0052	0.03	QV	.	.	.	.
2.300	0.0053	0.03	QV	.	.	.	.
2.317	0.0053	0.03	QV	.	.	.	.
2.333	0.0053	0.03	QV	.	.	.	.
2.350	0.0054	0.03	QV	.	.	.	.
2.367	0.0054	0.03	QV	.	.	.	.
2.383	0.0055	0.03	QV	.	.	.	.
2.400	0.0055	0.03	QV	.	.	.	.
2.417	0.0055	0.03	QV	.	.	.	.
2.433	0.0056	0.03	QV	.	.	.	.
2.450	0.0056	0.03	QV	.	.	.	.
2.467	0.0057	0.03	QV	.	.	.	.
2.483	0.0057	0.03	QV	.	.	.	.
2.500	0.0058	0.03	QV	.	.	.	.
2.517	0.0058	0.03	QV	.	.	.	.
2.533	0.0058	0.03	QV	.	.	.	.
2.550	0.0059	0.03	QV	.	.	.	.
2.567	0.0059	0.03	QV	.	.	.	.
2.583	0.0060	0.03	QV	.	.	.	.
2.600	0.0060	0.03	QV	.	.	.	.
2.617	0.0060	0.03	QV	.	.	.	.
2.633	0.0061	0.03	QV	.	.	.	.
2.650	0.0061	0.03	QV	.	.	.	.
2.667	0.0062	0.03	QV	.	.	.	.
2.683	0.0062	0.03	QV	.	.	.	.
2.700	0.0063	0.03	QV	.	.	.	.
2.717	0.0063	0.03	QV	.	.	.	.
2.733	0.0063	0.03	QV	.	.	.	.
2.750	0.0064	0.03	QV	.	.	.	.
2.767	0.0064	0.03	QV	.	.	.	.
2.783	0.0065	0.03	QV	.	.	.	.
2.800	0.0065	0.03	QV	.	.	.	.
2.817	0.0066	0.03	QV	.	.	.	.
2.833	0.0066	0.03	QV	.	.	.	.
2.850	0.0066	0.03	QV	.	.	.	.
2.867	0.0067	0.03	QV	.	.	.	.
2.883	0.0067	0.03	QV	.	.	.	.
2.900	0.0068	0.03	QV	.	.	.	.
2.917	0.0068	0.03	QV	.	.	.	.

2.933	0.0069	0.03	QV	.	.	.	.
2.950	0.0069	0.03	QV	.	.	.	.
2.967	0.0069	0.03	QV	.	.	.	.
2.983	0.0070	0.03	QV	.	.	.	.
3.000	0.0070	0.03	QV	.	.	.	.
3.017	0.0071	0.03	QV	.	.	.	.
3.033	0.0071	0.03	QV	.	.	.	.
3.050	0.0072	0.03	QV	.	.	.	.
3.067	0.0072	0.03	QV	.	.	.	.
3.083	0.0072	0.03	QV	.	.	.	.
3.100	0.0073	0.03	QV	.	.	.	.
3.117	0.0073	0.03	QV	.	.	.	.
3.133	0.0074	0.03	QV	.	.	.	.
3.150	0.0074	0.03	QV	.	.	.	.
3.167	0.0075	0.03	QV	.	.	.	.
3.183	0.0075	0.03	QV	.	.	.	.
3.200	0.0075	0.03	QV	.	.	.	.
3.217	0.0076	0.03	QV	.	.	.	.
3.233	0.0076	0.03	QV	.	.	.	.
3.250	0.0077	0.03	QV	.	.	.	.
3.267	0.0077	0.03	QV	.	.	.	.
3.283	0.0078	0.03	QV	.	.	.	.
3.300	0.0078	0.03	QV	.	.	.	.
3.317	0.0078	0.03	QV	.	.	.	.
3.333	0.0079	0.03	QV	.	.	.	.
3.350	0.0079	0.03	QV	.	.	.	.
3.367	0.0080	0.03	QV	.	.	.	.
3.383	0.0080	0.03	QV	.	.	.	.
3.400	0.0081	0.03	QV	.	.	.	.
3.417	0.0081	0.03	QV	.	.	.	.
3.433	0.0081	0.03	QV	.	.	.	.
3.450	0.0082	0.03	QV	.	.	.	.
3.467	0.0082	0.03	QV	.	.	.	.
3.483	0.0083	0.03	QV	.	.	.	.
3.500	0.0083	0.03	QV	.	.	.	.
3.517	0.0084	0.03	QV	.	.	.	.
3.533	0.0084	0.03	QV	.	.	.	.
3.550	0.0085	0.03	QV	.	.	.	.
3.567	0.0085	0.03	Q V	.	.	.	.
3.583	0.0085	0.03	Q V	.	.	.	.
3.600	0.0086	0.03	Q V	.	.	.	.
3.617	0.0086	0.03	Q V	.	.	.	.
3.633	0.0087	0.03	Q V	.	.	.	.
3.650	0.0087	0.03	Q V	.	.	.	.
3.667	0.0088	0.03	Q V	.	.	.	.
3.683	0.0088	0.03	Q V	.	.	.	.
3.700	0.0089	0.03	Q V	.	.	.	.
3.717	0.0089	0.03	Q V	.	.	.	.
3.733	0.0089	0.03	Q V	.	.	.	.
3.750	0.0090	0.03	Q V	.	.	.	.

3.767	0.0090	0.03	Q V	.	.	.	.
3.783	0.0091	0.03	Q V	.	.	.	.
3.800	0.0091	0.03	Q V	.	.	.	.
3.817	0.0092	0.03	Q V	.	.	.	.
3.833	0.0092	0.03	Q V	.	.	.	.
3.850	0.0093	0.03	Q V	.	.	.	.
3.867	0.0093	0.03	Q V	.	.	.	.
3.883	0.0093	0.03	Q V	.	.	.	.
3.900	0.0094	0.03	Q V	.	.	.	.
3.917	0.0094	0.03	Q V	.	.	.	.
3.933	0.0095	0.03	Q V	.	.	.	.
3.950	0.0095	0.03	Q V	.	.	.	.
3.967	0.0096	0.03	Q V	.	.	.	.
3.983	0.0096	0.03	Q V	.	.	.	.
4.000	0.0097	0.03	Q V	.	.	.	.
4.017	0.0097	0.03	Q V	.	.	.	.
4.033	0.0097	0.03	Q V	.	.	.	.
4.050	0.0098	0.03	Q V	.	.	.	.
4.067	0.0098	0.03	Q V	.	.	.	.
4.083	0.0099	0.03	Q V	.	.	.	.
4.100	0.0099	0.03	Q V	.	.	.	.
4.117	0.0100	0.03	Q V	.	.	.	.
4.133	0.0100	0.03	Q V	.	.	.	.
4.150	0.0101	0.03	Q V	.	.	.	.
4.167	0.0101	0.03	Q V	.	.	.	.
4.183	0.0102	0.03	Q V	.	.	.	.
4.200	0.0102	0.03	Q V	.	.	.	.
4.217	0.0102	0.03	Q V	.	.	.	.
4.233	0.0103	0.03	Q V	.	.	.	.
4.250	0.0103	0.03	Q V	.	.	.	.
4.267	0.0104	0.03	Q V	.	.	.	.
4.283	0.0104	0.03	Q V	.	.	.	.
4.300	0.0105	0.03	Q V	.	.	.	.
4.317	0.0105	0.03	Q V	.	.	.	.
4.333	0.0106	0.03	Q V	.	.	.	.
4.350	0.0106	0.03	Q V	.	.	.	.
4.367	0.0107	0.03	Q V	.	.	.	.
4.383	0.0107	0.03	Q V	.	.	.	.
4.400	0.0108	0.03	Q V	.	.	.	.
4.417	0.0108	0.03	Q V	.	.	.	.
4.433	0.0108	0.03	Q V	.	.	.	.
4.450	0.0109	0.03	Q V	.	.	.	.
4.467	0.0109	0.03	Q V	.	.	.	.
4.483	0.0110	0.03	Q V	.	.	.	.
4.500	0.0110	0.03	Q V	.	.	.	.
4.517	0.0111	0.03	Q V	.	.	.	.
4.533	0.0111	0.03	Q V	.	.	.	.
4.550	0.0112	0.03	Q V	.	.	.	.
4.567	0.0112	0.03	Q V	.	.	.	.
4.583	0.0113	0.03	Q V	.	.	.	.

4.600	0.0113	0.03	Q	V	.	.	.	.
4.617	0.0114	0.03	Q	V	.	.	.	.
4.633	0.0114	0.03	Q	V	.	.	.	.
4.650	0.0114	0.03	Q	V	.	.	.	.
4.667	0.0115	0.03	Q	V	.	.	.	.
4.683	0.0115	0.03	Q	V	.	.	.	.
4.700	0.0116	0.03	Q	V	.	.	.	.
4.717	0.0116	0.03	Q	V	.	.	.	.
4.733	0.0117	0.03	Q	V	.	.	.	.
4.750	0.0117	0.03	Q	V	.	.	.	.
4.767	0.0118	0.03	Q	V	.	.	.	.
4.783	0.0118	0.03	Q	V	.	.	.	.
4.800	0.0119	0.03	Q	V	.	.	.	.
4.817	0.0119	0.03	Q	V	.	.	.	.
4.833	0.0120	0.03	Q	V	.	.	.	.
4.850	0.0120	0.03	Q	V	.	.	.	.
4.867	0.0121	0.03	Q	V	.	.	.	.
4.883	0.0121	0.03	Q	V	.	.	.	.
4.900	0.0121	0.03	Q	V	.	.	.	.
4.917	0.0122	0.03	Q	V	.	.	.	.
4.933	0.0122	0.03	Q	V	.	.	.	.
4.950	0.0123	0.03	Q	V	.	.	.	.
4.967	0.0123	0.03	Q	V	.	.	.	.
4.983	0.0124	0.03	Q	V	.	.	.	.
5.000	0.0124	0.03	Q	V	.	.	.	.
5.017	0.0125	0.03	Q	V	.	.	.	.
5.033	0.0125	0.03	Q	V	.	.	.	.
5.050	0.0126	0.03	Q	V	.	.	.	.
5.067	0.0126	0.03	Q	V	.	.	.	.
5.083	0.0127	0.03	Q	V	.	.	.	.
5.100	0.0127	0.03	Q	V	.	.	.	.
5.117	0.0128	0.03	Q	V	.	.	.	.
5.133	0.0128	0.03	Q	V	.	.	.	.
5.150	0.0129	0.03	Q	V	.	.	.	.
5.167	0.0129	0.03	Q	V	.	.	.	.
5.183	0.0130	0.03	Q	V	.	.	.	.
5.200	0.0130	0.03	Q	V	.	.	.	.
5.217	0.0131	0.03	Q	V	.	.	.	.
5.233	0.0131	0.03	Q	V	.	.	.	.
5.250	0.0132	0.03	Q	V	.	.	.	.
5.267	0.0132	0.03	Q	V	.	.	.	.
5.283	0.0132	0.04	Q	V	.	.	.	.
5.300	0.0133	0.04	Q	V	.	.	.	.
5.317	0.0133	0.04	Q	V	.	.	.	.
5.333	0.0134	0.04	Q	V	.	.	.	.
5.350	0.0134	0.04	Q	V	.	.	.	.
5.367	0.0135	0.04	Q	V	.	.	.	.
5.383	0.0135	0.04	Q	V	.	.	.	.
5.400	0.0136	0.04	Q	V	.	.	.	.
5.417	0.0136	0.04	Q	V	.	.	.	.

5.433	0.0137	0.04	Q	V	.	.	.	.
5.450	0.0137	0.04	Q	V	.	.	.	.
5.467	0.0138	0.04	Q	V	.	.	.	.
5.483	0.0138	0.04	Q	V	.	.	.	.
5.500	0.0139	0.04	Q	V	.	.	.	.
5.517	0.0139	0.04	Q	V	.	.	.	.
5.533	0.0140	0.04	Q	V	.	.	.	.
5.550	0.0140	0.04	Q	V	.	.	.	.
5.567	0.0141	0.04	Q	V	.	.	.	.
5.583	0.0141	0.04	Q	V	.	.	.	.
5.600	0.0142	0.04	Q	V	.	.	.	.
5.617	0.0142	0.04	Q	V	.	.	.	.
5.633	0.0143	0.04	Q	V	.	.	.	.
5.650	0.0143	0.04	Q	V	.	.	.	.
5.667	0.0144	0.04	Q	V	.	.	.	.
5.683	0.0144	0.04	Q	V	.	.	.	.
5.700	0.0145	0.04	Q	V	.	.	.	.
5.717	0.0145	0.04	Q	V	.	.	.	.
5.733	0.0146	0.04	Q	V	.	.	.	.
5.750	0.0146	0.04	Q	V	.	.	.	.
5.767	0.0147	0.04	Q	V	.	.	.	.
5.783	0.0147	0.04	Q	V	.	.	.	.
5.800	0.0148	0.04	Q	V	.	.	.	.
5.817	0.0148	0.04	Q	V	.	.	.	.
5.833	0.0149	0.04	Q	V	.	.	.	.
5.850	0.0149	0.04	Q	V	.	.	.	.
5.867	0.0150	0.04	Q	V	.	.	.	.
5.883	0.0150	0.04	Q	V	.	.	.	.
5.900	0.0151	0.04	Q	V	.	.	.	.
5.917	0.0151	0.04	Q	V	.	.	.	.
5.933	0.0152	0.04	Q	V	.	.	.	.
5.950	0.0152	0.04	Q	V	.	.	.	.
5.967	0.0153	0.04	Q	V	.	.	.	.
5.983	0.0153	0.04	Q	V	.	.	.	.
6.000	0.0154	0.04	Q	V	.	.	.	.
6.017	0.0154	0.04	Q	V	.	.	.	.
6.033	0.0155	0.04	Q	V	.	.	.	.
6.050	0.0155	0.04	Q	V	.	.	.	.
6.067	0.0156	0.04	Q	V	.	.	.	.
6.083	0.0156	0.04	Q	V	.	.	.	.
6.100	0.0157	0.04	Q	V	.	.	.	.
6.117	0.0157	0.04	Q	V	.	.	.	.
6.133	0.0158	0.04	Q	V	.	.	.	.
6.150	0.0158	0.04	Q	V	.	.	.	.
6.167	0.0159	0.04	Q	V	.	.	.	.
6.183	0.0159	0.04	Q	V	.	.	.	.
6.200	0.0160	0.04	Q	V	.	.	.	.
6.217	0.0160	0.04	Q	V	.	.	.	.
6.233	0.0161	0.04	Q	V	.	.	.	.
6.250	0.0161	0.04	Q	V	.	.	.	.

6.267	0.0162	0.04	Q	V	.	.	.	.
6.283	0.0162	0.04	Q	V	.	.	.	.
6.300	0.0163	0.04	Q	V	.	.	.	.
6.317	0.0163	0.04	Q	V	.	.	.	.
6.333	0.0164	0.04	Q	V	.	.	.	.
6.350	0.0164	0.04	Q	V	.	.	.	.
6.367	0.0165	0.04	Q	V	.	.	.	.
6.383	0.0165	0.04	Q	V	.	.	.	.
6.400	0.0166	0.04	Q	V	.	.	.	.
6.417	0.0166	0.04	Q	V	.	.	.	.
6.433	0.0167	0.04	Q	V	.	.	.	.
6.450	0.0167	0.04	Q	V	.	.	.	.
6.467	0.0168	0.04	Q	V	.	.	.	.
6.483	0.0169	0.04	Q	V	.	.	.	.
6.500	0.0169	0.04	Q	V	.	.	.	.
6.517	0.0170	0.04	Q	V	.	.	.	.
6.533	0.0170	0.04	Q	V	.	.	.	.
6.550	0.0171	0.04	Q	V	.	.	.	.
6.567	0.0171	0.04	Q	V	.	.	.	.
6.583	0.0172	0.04	Q	V	.	.	.	.
6.600	0.0172	0.04	Q	V	.	.	.	.
6.617	0.0173	0.04	Q	V	.	.	.	.
6.633	0.0173	0.04	Q	V	.	.	.	.
6.650	0.0174	0.04	Q	V	.	.	.	.
6.667	0.0174	0.04	Q	V	.	.	.	.
6.683	0.0175	0.04	Q	V	.	.	.	.
6.700	0.0175	0.04	Q	V	.	.	.	.
6.717	0.0176	0.04	Q	V	.	.	.	.
6.733	0.0176	0.04	Q	V	.	.	.	.
6.750	0.0177	0.04	Q	V	.	.	.	.
6.767	0.0177	0.04	Q	V	.	.	.	.
6.783	0.0178	0.04	Q	V	.	.	.	.
6.800	0.0178	0.04	Q	V	.	.	.	.
6.817	0.0179	0.04	Q	V	.	.	.	.
6.833	0.0180	0.04	Q	V	.	.	.	.
6.850	0.0180	0.04	Q	V	.	.	.	.
6.867	0.0181	0.04	Q	V	.	.	.	.
6.883	0.0181	0.04	Q	V	.	.	.	.
6.900	0.0182	0.04	Q	V	.	.	.	.
6.917	0.0182	0.04	Q	V	.	.	.	.
6.933	0.0183	0.04	Q	V	.	.	.	.
6.950	0.0183	0.04	Q	V	.	.	.	.
6.967	0.0184	0.04	Q	V	.	.	.	.
6.983	0.0184	0.04	Q	V	.	.	.	.
7.000	0.0185	0.04	Q	V	.	.	.	.
7.017	0.0185	0.04	Q	V	.	.	.	.
7.033	0.0186	0.04	Q	V	.	.	.	.
7.050	0.0187	0.04	Q	V	.	.	.	.
7.067	0.0187	0.04	Q	V	.	.	.	.
7.083	0.0188	0.04	Q	V	.	.	.	.

7.100	0.0188	0.04	Q	V	.	.	.	.
7.117	0.0189	0.04	Q	V	.	.	.	.
7.133	0.0189	0.04	Q	V	.	.	.	.
7.150	0.0190	0.04	Q	V	.	.	.	.
7.167	0.0190	0.04	Q	V	.	.	.	.
7.183	0.0191	0.04	Q	V	.	.	.	.
7.200	0.0191	0.04	Q	V	.	.	.	.
7.217	0.0192	0.04	Q	V	.	.	.	.
7.233	0.0192	0.04	Q	V	.	.	.	.
7.250	0.0193	0.04	Q	V	.	.	.	.
7.267	0.0194	0.04	Q	V	.	.	.	.
7.283	0.0194	0.04	Q	V	.	.	.	.
7.300	0.0195	0.04	Q	V	.	.	.	.
7.317	0.0195	0.04	Q	V	.	.	.	.
7.333	0.0196	0.04	Q	V	.	.	.	.
7.350	0.0196	0.04	Q	V	.	.	.	.
7.367	0.0197	0.04	Q	V	.	.	.	.
7.383	0.0197	0.04	Q	V	.	.	.	.
7.400	0.0198	0.04	Q	V	.	.	.	.
7.417	0.0199	0.04	Q	V	.	.	.	.
7.433	0.0199	0.04	Q	V	.	.	.	.
7.450	0.0200	0.04	Q	V	.	.	.	.
7.467	0.0200	0.04	Q	V	.	.	.	.
7.483	0.0201	0.04	Q	V	.	.	.	.
7.500	0.0201	0.04	Q	V	.	.	.	.
7.517	0.0202	0.04	Q	V	.	.	.	.
7.533	0.0202	0.04	Q	V	.	.	.	.
7.550	0.0203	0.04	Q	V	.	.	.	.
7.567	0.0204	0.04	Q	V	.	.	.	.
7.583	0.0204	0.04	Q	V	.	.	.	.
7.600	0.0205	0.04	Q	V	.	.	.	.
7.617	0.0205	0.04	Q	V	.	.	.	.
7.633	0.0206	0.04	Q	V	.	.	.	.
7.650	0.0206	0.04	Q	V	.	.	.	.
7.667	0.0207	0.04	Q	V	.	.	.	.
7.683	0.0207	0.04	Q	V	.	.	.	.
7.700	0.0208	0.04	Q	V	.	.	.	.
7.717	0.0209	0.04	Q	V	.	.	.	.
7.733	0.0209	0.04	Q	V	.	.	.	.
7.750	0.0210	0.04	Q	V	.	.	.	.
7.767	0.0210	0.04	Q	V	.	.	.	.
7.783	0.0211	0.04	Q	V	.	.	.	.
7.800	0.0211	0.04	Q	V	.	.	.	.
7.817	0.0212	0.04	Q	V	.	.	.	.
7.833	0.0213	0.04	Q	V	.	.	.	.
7.850	0.0213	0.04	Q	V	.	.	.	.
7.867	0.0214	0.04	Q	V	.	.	.	.
7.883	0.0214	0.04	Q	V	.	.	.	.
7.900	0.0215	0.04	Q	V	.	.	.	.
7.917	0.0215	0.04	Q	V	.	.	.	.

7.933	0.0216	0.04	Q	V	.	.	.	.
7.950	0.0217	0.04	Q	V	.	.	.	.
7.967	0.0217	0.04	Q	V	.	.	.	.
7.983	0.0218	0.04	Q	V	.	.	.	.
8.000	0.0218	0.04	Q	V	.	.	.	.
8.017	0.0219	0.04	Q	V	.	.	.	.
8.033	0.0219	0.04	Q	V	.	.	.	.
8.050	0.0220	0.04	Q	V	.	.	.	.
8.067	0.0221	0.04	Q	V	.	.	.	.
8.083	0.0221	0.04	Q	V	.	.	.	.
8.100	0.0222	0.04	Q	V	.	.	.	.
8.117	0.0222	0.04	Q	V	.	.	.	.
8.133	0.0223	0.04	Q	V	.	.	.	.
8.150	0.0224	0.04	Q	V	.	.	.	.
8.167	0.0224	0.04	Q	V	.	.	.	.
8.183	0.0225	0.04	Q	V	.	.	.	.
8.200	0.0225	0.04	Q	V	.	.	.	.
8.217	0.0226	0.04	Q	V	.	.	.	.
8.233	0.0226	0.04	Q	V	.	.	.	.
8.250	0.0227	0.04	Q	V	.	.	.	.
8.267	0.0228	0.04	Q	V	.	.	.	.
8.283	0.0228	0.04	Q	V	.	.	.	.
8.300	0.0229	0.04	Q	V	.	.	.	.
8.317	0.0229	0.04	Q	V	.	.	.	.
8.333	0.0230	0.04	Q	V	.	.	.	.
8.350	0.0231	0.04	Q	V	.	.	.	.
8.367	0.0231	0.04	Q	V	.	.	.	.
8.383	0.0232	0.04	Q	V	.	.	.	.
8.400	0.0232	0.04	Q	V	.	.	.	.
8.417	0.0233	0.04	Q	V	.	.	.	.
8.433	0.0234	0.04	Q	V	.	.	.	.
8.450	0.0234	0.04	Q	V	.	.	.	.
8.467	0.0235	0.04	Q	V	.	.	.	.
8.483	0.0235	0.04	Q	V	.	.	.	.
8.500	0.0236	0.04	Q	V	.	.	.	.
8.517	0.0237	0.04	Q	V	.	.	.	.
8.533	0.0237	0.04	Q	V	.	.	.	.
8.550	0.0238	0.04	Q	V	.	.	.	.
8.567	0.0238	0.04	Q	V	.	.	.	.
8.583	0.0239	0.04	Q	V	.	.	.	.
8.600	0.0240	0.04	Q	V	.	.	.	.
8.617	0.0240	0.04	Q	V	.	.	.	.
8.633	0.0241	0.04	Q	V	.	.	.	.
8.650	0.0241	0.04	Q	V	.	.	.	.
8.667	0.0242	0.04	Q	V	.	.	.	.
8.683	0.0243	0.04	Q	V	.	.	.	.
8.700	0.0243	0.04	Q	V	.	.	.	.
8.717	0.0244	0.04	Q	V	.	.	.	.
8.733	0.0245	0.04	Q	V	.	.	.	.
8.750	0.0245	0.04	Q	V	.	.	.	.

8.767	0.0246	0.04	Q	V	.	.	.	.
8.783	0.0246	0.04	Q	V	.	.	.	.
8.800	0.0247	0.04	Q	V	.	.	.	.
8.817	0.0248	0.04	Q	V	.	.	.	.
8.833	0.0248	0.04	Q	V	.	.	.	.
8.850	0.0249	0.04	Q	V	.	.	.	.
8.867	0.0249	0.04	Q	V	.	.	.	.
8.883	0.0250	0.05	Q	V	.	.	.	.
8.900	0.0251	0.05	Q	V	.	.	.	.
8.917	0.0251	0.05	Q	V	.	.	.	.
8.933	0.0252	0.05	Q	V	.	.	.	.
8.950	0.0253	0.05	Q	V	.	.	.	.
8.967	0.0253	0.05	Q	V	.	.	.	.
8.983	0.0254	0.05	Q	V	.	.	.	.
9.000	0.0254	0.05	Q	V	.	.	.	.
9.017	0.0255	0.05	Q	V	.	.	.	.
9.033	0.0256	0.05	Q	V	.	.	.	.
9.050	0.0256	0.05	Q	V	.	.	.	.
9.067	0.0257	0.05	Q	V	.	.	.	.
9.083	0.0258	0.05	Q	V	.	.	.	.
9.100	0.0258	0.05	Q	V	.	.	.	.
9.117	0.0259	0.05	Q	V	.	.	.	.
9.133	0.0259	0.05	Q	V	.	.	.	.
9.150	0.0260	0.05	Q	V	.	.	.	.
9.167	0.0261	0.05	Q	V	.	.	.	.
9.183	0.0261	0.05	Q	V	.	.	.	.
9.200	0.0262	0.05	Q	V	.	.	.	.
9.217	0.0263	0.05	Q	V	.	.	.	.
9.233	0.0263	0.05	Q	V	.	.	.	.
9.250	0.0264	0.05	Q	V	.	.	.	.
9.267	0.0265	0.05	Q	V	.	.	.	.
9.283	0.0265	0.05	Q	V	.	.	.	.
9.300	0.0266	0.05	Q	V	.	.	.	.
9.317	0.0267	0.05	Q	V	.	.	.	.
9.333	0.0267	0.05	Q	V	.	.	.	.
9.350	0.0268	0.05	Q	V	.	.	.	.
9.367	0.0268	0.05	Q	V	.	.	.	.
9.383	0.0269	0.05	Q	V	.	.	.	.
9.400	0.0270	0.05	Q	V	.	.	.	.
9.417	0.0270	0.05	Q	V	.	.	.	.
9.433	0.0271	0.05	Q	V	.	.	.	.
9.450	0.0272	0.05	Q	V	.	.	.	.
9.467	0.0272	0.05	Q	V	.	.	.	.
9.483	0.0273	0.05	Q	V	.	.	.	.
9.500	0.0274	0.05	Q	V	.	.	.	.
9.517	0.0274	0.05	Q	V	.	.	.	.
9.533	0.0275	0.05	Q	V	.	.	.	.
9.550	0.0276	0.05	Q	V	.	.	.	.
9.567	0.0276	0.05	Q	V	.	.	.	.
9.583	0.0277	0.05	Q	V	.	.	.	.

9.600	0.0278	0.05	Q	V	.	.	.	.
9.617	0.0278	0.05	Q	V	.	.	.	.
9.633	0.0279	0.05	Q	V	.	.	.	.
9.650	0.0280	0.05	Q	V	.	.	.	.
9.667	0.0280	0.05	Q	V	.	.	.	.
9.683	0.0281	0.05	Q	V	.	.	.	.
9.700	0.0282	0.05	Q	V	.	.	.	.
9.717	0.0282	0.05	Q	V	.	.	.	.
9.733	0.0283	0.05	Q	V	.	.	.	.
9.750	0.0284	0.05	Q	V	.	.	.	.
9.767	0.0284	0.05	Q	V	.	.	.	.
9.783	0.0285	0.05	Q	V	.	.	.	.
9.800	0.0286	0.05	Q	V	.	.	.	.
9.817	0.0286	0.05	Q	V	.	.	.	.
9.833	0.0287	0.05	Q	V	.	.	.	.
9.850	0.0288	0.05	Q	V	.	.	.	.
9.867	0.0288	0.05	Q	V	.	.	.	.
9.883	0.0289	0.05	Q	V	.	.	.	.
9.900	0.0290	0.05	Q	V	.	.	.	.
9.917	0.0290	0.05	Q	V	.	.	.	.
9.933	0.0291	0.05	Q	V	.	.	.	.
9.950	0.0292	0.05	Q	V	.	.	.	.
9.967	0.0292	0.05	Q	V	.	.	.	.
9.983	0.0293	0.05	Q	V	.	.	.	.
10.000	0.0294	0.05	Q	V	.	.	.	.
10.017	0.0295	0.05	Q	V	.	.	.	.
10.033	0.0295	0.05	Q	V	.	.	.	.
10.050	0.0296	0.05	Q	V	.	.	.	.
10.067	0.0297	0.05	Q	V	.	.	.	.
10.083	0.0297	0.05	Q	V	.	.	.	.
10.100	0.0298	0.05	Q	V	.	.	.	.
10.117	0.0299	0.05	Q	V	.	.	.	.
10.133	0.0299	0.05	Q	V	.	.	.	.
10.150	0.0300	0.05	Q	V	.	.	.	.
10.167	0.0301	0.05	Q	V	.	.	.	.
10.183	0.0302	0.05	Q	V	.	.	.	.
10.200	0.0302	0.05	Q	V	.	.	.	.
10.217	0.0303	0.05	Q	V	.	.	.	.
10.233	0.0304	0.05	Q	V	.	.	.	.
10.250	0.0304	0.05	Q	V	.	.	.	.
10.267	0.0305	0.05	Q	V	.	.	.	.
10.283	0.0306	0.05	Q	V	.	.	.	.
10.300	0.0306	0.05	Q	V	.	.	.	.
10.317	0.0307	0.05	Q	V	.	.	.	.
10.333	0.0308	0.05	Q	V	.	.	.	.
10.350	0.0309	0.05	Q	V	.	.	.	.
10.367	0.0309	0.05	Q	V	.	.	.	.
10.383	0.0310	0.05	Q	V	.	.	.	.
10.400	0.0311	0.05	Q	V	.	.	.	.
10.417	0.0311	0.05	Q	V	.	.	.	.

10.433	0.0312	0.05	Q	V	.	.	.	.
10.450	0.0313	0.05	Q	V	.	.	.	.
10.467	0.0314	0.05	Q	V	.	.	.	.
10.483	0.0314	0.05	Q	V	.	.	.	.
10.500	0.0315	0.05	Q	V	.	.	.	.
10.517	0.0316	0.05	Q	V	.	.	.	.
10.533	0.0317	0.05	Q	V	.	.	.	.
10.550	0.0317	0.05	Q	V	.	.	.	.
10.567	0.0318	0.05	Q	V	.	.	.	.
10.583	0.0319	0.05	Q	V	.	.	.	.
10.600	0.0319	0.05	Q	V	.	.	.	.
10.617	0.0320	0.05	Q	V	.	.	.	.
10.633	0.0321	0.05	Q	V	.	.	.	.
10.650	0.0322	0.05	Q	V	.	.	.	.
10.667	0.0322	0.05	Q	V	.	.	.	.
10.683	0.0323	0.05	Q	V	.	.	.	.
10.700	0.0324	0.05	Q	V	.	.	.	.
10.717	0.0325	0.05	Q	V	.	.	.	.
10.733	0.0325	0.05	Q	V	.	.	.	.
10.750	0.0326	0.05	Q	V	.	.	.	.
10.767	0.0327	0.05	Q	V	.	.	.	.
10.783	0.0328	0.05	Q	V	.	.	.	.
10.800	0.0328	0.05	Q	V	.	.	.	.
10.817	0.0329	0.05	Q	V	.	.	.	.
10.833	0.0330	0.05	Q	V	.	.	.	.
10.850	0.0331	0.05	Q	V	.	.	.	.
10.867	0.0331	0.06	Q	V	.	.	.	.
10.883	0.0332	0.06	Q	V	.	.	.	.
10.900	0.0333	0.06	Q	V	.	.	.	.
10.917	0.0334	0.06	Q	V	.	.	.	.
10.933	0.0334	0.06	Q	V	.	.	.	.
10.950	0.0335	0.06	Q	V	.	.	.	.
10.967	0.0336	0.06	Q	V	.	.	.	.
10.983	0.0337	0.06	Q	V	.	.	.	.
11.000	0.0338	0.06	Q	V	.	.	.	.
11.017	0.0338	0.06	Q	V	.	.	.	.
11.033	0.0339	0.06	Q	V	.	.	.	.
11.050	0.0340	0.06	Q	V	.	.	.	.
11.067	0.0341	0.06	Q	V	.	.	.	.
11.083	0.0341	0.06	Q	V	.	.	.	.
11.100	0.0342	0.06	Q	V	.	.	.	.
11.117	0.0343	0.06	Q	V	.	.	.	.
11.133	0.0344	0.06	Q	V	.	.	.	.
11.150	0.0345	0.06	Q	V	.	.	.	.
11.167	0.0345	0.06	Q	V	.	.	.	.
11.183	0.0346	0.06	Q	V	.	.	.	.
11.200	0.0347	0.06	Q	V	.	.	.	.
11.217	0.0348	0.06	Q	V	.	.	.	.
11.233	0.0348	0.06	Q	V	.	.	.	.
11.250	0.0349	0.06	Q	V	.	.	.	.

11.267	0.0350	0.06	Q	V	.	.	.
11.283	0.0351	0.06	Q	V	.	.	.
11.300	0.0352	0.06	Q	V	.	.	.
11.317	0.0352	0.06	Q	V	.	.	.
11.333	0.0353	0.06	Q	V	.	.	.
11.350	0.0354	0.06	Q	V	.	.	.
11.367	0.0355	0.06	Q	V	.	.	.
11.383	0.0356	0.06	Q	V	.	.	.
11.400	0.0356	0.06	Q	V	.	.	.
11.417	0.0357	0.06	Q	V	.	.	.
11.433	0.0358	0.06	Q	V	.	.	.
11.450	0.0359	0.06	Q	V	.	.	.
11.467	0.0360	0.06	Q	V	.	.	.
11.483	0.0361	0.06	Q	V	.	.	.
11.500	0.0361	0.06	Q	V	.	.	.
11.517	0.0362	0.06	Q	V	.	.	.
11.533	0.0363	0.06	Q	V	.	.	.
11.550	0.0364	0.06	Q	V	.	.	.
11.567	0.0365	0.06	.Q	V	.	.	.
11.583	0.0366	0.06	.Q	V	.	.	.
11.600	0.0366	0.06	.Q	V	.	.	.
11.617	0.0367	0.06	.Q	V	.	.	.
11.633	0.0368	0.06	.Q	V	.	.	.
11.650	0.0369	0.06	.Q	V	.	.	.
11.667	0.0370	0.06	.Q	V	.	.	.
11.683	0.0371	0.06	.Q	V	.	.	.
11.700	0.0371	0.06	.Q	V	.	.	.
11.717	0.0372	0.06	.Q	V	.	.	.
11.733	0.0373	0.06	.Q	V	.	.	.
11.750	0.0374	0.06	.Q	V	.	.	.
11.767	0.0375	0.06	.Q	V	.	.	.
11.783	0.0376	0.06	.Q	V	.	.	.
11.800	0.0376	0.06	.Q	V	.	.	.
11.817	0.0377	0.06	.Q	V	.	.	.
11.833	0.0378	0.06	.Q	V	.	.	.
11.850	0.0379	0.06	.Q	V	.	.	.
11.867	0.0380	0.06	.Q	V	.	.	.
11.883	0.0381	0.06	.Q	V	.	.	.
11.900	0.0382	0.06	.Q	V	.	.	.
11.917	0.0383	0.06	.Q	V.	.	.	.
11.933	0.0383	0.06	.Q	V.	.	.	.
11.950	0.0384	0.06	.Q	V.	.	.	.
11.967	0.0385	0.06	.Q	V.	.	.	.
11.983	0.0386	0.06	.Q	V.	.	.	.
12.000	0.0387	0.06	.Q	V.	.	.	.
12.017	0.0388	0.06	.Q	V.	.	.	.
12.033	0.0389	0.06	.Q	V.	.	.	.
12.050	0.0390	0.06	.Q	V.	.	.	.
12.067	0.0390	0.07	.Q	V.	.	.	.
12.083	0.0391	0.07	.Q	V.	.	.	.

12.100	0.0392	0.07	.Q	V.	.	.	.
12.117	0.0393	0.07	.Q	V.	.	.	.
12.133	0.0394	0.07	.Q	V.	.	.	.
12.150	0.0395	0.07	.Q	V.	.	.	.
12.167	0.0396	0.07	.Q	V.	.	.	.
12.183	0.0397	0.08	.Q	V.	.	.	.
12.200	0.0398	0.08	.Q	V.	.	.	.
12.217	0.0400	0.08	.Q	V.	.	.	.
12.233	0.0401	0.08	.Q	V.	.	.	.
12.250	0.0402	0.08	.Q	V.	.	.	.
12.267	0.0403	0.08	.Q	V.	.	.	.
12.283	0.0404	0.08	.Q	V.	.	.	.
12.300	0.0405	0.08	.Q	V.	.	.	.
12.317	0.0406	0.08	.Q	V.	.	.	.
12.333	0.0407	0.08	.Q	V.	.	.	.
12.350	0.0408	0.08	.Q	V.	.	.	.
12.367	0.0410	0.08	.Q	V.	.	.	.
12.383	0.0411	0.08	.Q	V.	.	.	.
12.400	0.0412	0.08	.Q	V.	.	.	.
12.417	0.0413	0.08	.Q	V.	.	.	.
12.433	0.0414	0.08	.Q	V.	.	.	.
12.450	0.0415	0.08	.Q	V.	.	.	.
12.467	0.0416	0.08	.Q	V.	.	.	.
12.483	0.0418	0.08	.Q	V.	.	.	.
12.500	0.0419	0.08	.Q	V.	.	.	.
12.517	0.0420	0.08	.Q	V.	.	.	.
12.533	0.0421	0.08	.Q	V.	.	.	.
12.550	0.0422	0.08	.Q	V.	.	.	.
12.567	0.0423	0.08	.Q	V.	.	.	.
12.583	0.0425	0.08	.Q	V.	.	.	.
12.600	0.0426	0.09	.Q	V	.	.	.
12.617	0.0427	0.09	.Q	V	.	.	.
12.633	0.0428	0.09	.Q	V	.	.	.
12.650	0.0429	0.09	.Q	V	.	.	.
12.667	0.0430	0.09	.Q	V	.	.	.
12.683	0.0432	0.09	.Q	V	.	.	.
12.700	0.0433	0.09	.Q	V	.	.	.
12.717	0.0434	0.09	.Q	V	.	.	.
12.733	0.0435	0.09	.Q	V	.	.	.
12.750	0.0436	0.09	.Q	V	.	.	.
12.767	0.0438	0.09	.Q	V	.	.	.
12.783	0.0439	0.09	.Q	V	.	.	.
12.800	0.0440	0.09	.Q	V	.	.	.
12.817	0.0441	0.09	.Q	V	.	.	.
12.833	0.0442	0.09	.Q	V	.	.	.
12.850	0.0444	0.09	.Q	V	.	.	.
12.867	0.0445	0.09	.Q	V	.	.	.
12.883	0.0446	0.09	.Q	V	.	.	.
12.900	0.0447	0.09	.Q	V	.	.	.
12.917	0.0448	0.09	.Q	V	.	.	.

12.933	0.0450	0.09	.Q	V	.	.	.
12.950	0.0451	0.09	.Q	V	.	.	.
12.967	0.0452	0.09	.Q	V	.	.	.
12.983	0.0453	0.09	.Q	V	.	.	.
13.000	0.0455	0.09	.Q	V	.	.	.
13.017	0.0456	0.09	.Q	V	.	.	.
13.033	0.0457	0.09	.Q	V	.	.	.
13.050	0.0458	0.09	.Q	V	.	.	.
13.067	0.0460	0.09	.Q	V	.	.	.
13.083	0.0461	0.09	.Q	V	.	.	.
13.100	0.0462	0.09	.Q	V	.	.	.
13.117	0.0464	0.09	.Q	V	.	.	.
13.133	0.0465	0.09	.Q	V	.	.	.
13.150	0.0466	0.09	.Q	V	.	.	.
13.167	0.0467	0.09	.Q	.V	.	.	.
13.183	0.0469	0.09	.Q	.V	.	.	.
13.200	0.0470	0.09	.Q	.V	.	.	.
13.217	0.0471	0.09	.Q	.V	.	.	.
13.233	0.0473	0.09	.Q	.V	.	.	.
13.250	0.0474	0.09	.Q	.V	.	.	.
13.267	0.0475	0.10	.Q	.V	.	.	.
13.283	0.0476	0.10	.Q	.V	.	.	.
13.300	0.0478	0.10	.Q	.V	.	.	.
13.317	0.0479	0.10	.Q	.V	.	.	.
13.333	0.0480	0.10	.Q	.V	.	.	.
13.350	0.0482	0.10	.Q	.V	.	.	.
13.367	0.0483	0.10	.Q	.V	.	.	.
13.383	0.0484	0.10	.Q	.V	.	.	.
13.400	0.0486	0.10	.Q	.V	.	.	.
13.417	0.0487	0.10	.Q	.V	.	.	.
13.433	0.0489	0.10	.Q	.V	.	.	.
13.450	0.0490	0.10	.Q	.V	.	.	.
13.467	0.0491	0.10	.Q	.V	.	.	.
13.483	0.0493	0.10	.Q	.V	.	.	.
13.500	0.0494	0.10	.Q	.V	.	.	.
13.517	0.0495	0.10	.Q	.V	.	.	.
13.533	0.0497	0.10	.Q	.V	.	.	.
13.550	0.0498	0.10	.Q	.V	.	.	.
13.567	0.0499	0.10	.Q	.V	.	.	.
13.583	0.0501	0.10	.Q	.V	.	.	.
13.600	0.0502	0.10	.Q	.V	.	.	.
13.617	0.0504	0.10	.Q	.V	.	.	.
13.633	0.0505	0.10	.Q	.V	.	.	.
13.650	0.0507	0.10	.Q	.V	.	.	.
13.667	0.0508	0.10	.Q	.V	.	.	.
13.683	0.0509	0.10	.Q	.V	.	.	.
13.700	0.0511	0.10	.Q	. V	.	.	.
13.717	0.0512	0.10	.Q	. V	.	.	.
13.733	0.0514	0.10	.Q	. V	.	.	.
13.750	0.0515	0.11	.Q	. V	.	.	.

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13.767      0.0517      0.11  .Q        . V       .         .         .
13.783      0.0518      0.11  .Q        . V       .         .         .
13.800      0.0519      0.11  .Q        . V       .         .         .
13.817      0.0521      0.11  .Q        . V       .         .         .
13.833      0.0522      0.11  .Q        . V       .         .         .
13.850      0.0524      0.11  .Q        . V       .         .         .
13.867      0.0525      0.11  .Q        . V       .         .         .
13.883      0.0527      0.11  .Q        . V       .         .         .
13.900      0.0528      0.11  .Q        . V       .         .         .
13.917      0.0530      0.11  .Q        . V       .         .         .
13.933      0.0531      0.11  .Q        . V       .         .         .
13.950      0.0533      0.11  .Q        . V       .         .         .
13.967      0.0534      0.11  .Q        . V       .         .         .
13.983      0.0536      0.11  .Q        . V       .         .         .
14.000      0.0537      0.11  .Q        . V       .         .         .
14.017      0.0539      0.11  .Q        . V       .         .         .
14.033      0.0541      0.11  .Q        . V       .         .         .
14.050      0.0542      0.11  .Q        . V       .         .         .
14.067      0.0544      0.11  .Q        . V       .         .         .
14.083      0.0545      0.12  .Q        . V       .         .         .
14.100      0.0547      0.12  .Q        . V       .         .         .
14.117      0.0549      0.12  .Q        . V       .         .         .
14.133      0.0550      0.12  .Q        . V       .         .         .
14.150      0.0552      0.12  .Q        . V       .         .         .
14.167      0.0553      0.12  .Q        .  V      .         .         .
14.183      0.0555      0.12  .Q        .  V      .         .         .
14.200      0.0557      0.12  .Q        .  V      .         .         .
14.217      0.0558      0.12  .Q        .  V      .         .         .
14.233      0.0560      0.12  . Q       .  V      .         .         .
14.250      0.0562      0.12  . Q       .  V      .         .         .
14.267      0.0563      0.12  . Q       .  V      .         .         .
14.283      0.0565      0.12  . Q       .  V      .         .         .
14.300      0.0567      0.12  . Q       .  V      .         .         .
14.317      0.0569      0.13  . Q       .  V      .         .         .
14.333      0.0570      0.13  . Q       .  V      .         .         .
14.350      0.0572      0.13  . Q       .  V      .         .         .
14.367      0.0574      0.13  . Q       .  V      .         .         .
14.383      0.0576      0.13  . Q       .  V      .         .         .
14.400      0.0577      0.13  . Q       .  V      .         .         .
14.417      0.0579      0.13  . Q       .  V      .         .         .
14.433      0.0581      0.13  . Q       .  V      .         .         .
14.450      0.0583      0.13  . Q       .  V      .         .         .
14.467      0.0585      0.13  . Q       .  V      .         .         .
14.483      0.0586      0.13  . Q       .  V      .         .         .
14.500      0.0588      0.13  . Q       .  V      .         .         .
14.517      0.0590      0.13  . Q       .  V      .         .         .
14.533      0.0592      0.13  . Q       .  V      .         .         .
14.550      0.0594      0.13  . Q       .  V      .         .         .
14.567      0.0596      0.13  . Q       .   V     .         .         .
14.583      0.0597      0.14  . Q       .   V     .         .         .
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14.600      0.0599      0.14  . Q       .   V     .         .         .
14.617      0.0601      0.14  . Q       .   V     .         .         .
14.633      0.0603      0.14  . Q       .   V     .         .         .
14.650      0.0605      0.14  . Q       .   V     .         .         .
14.667      0.0607      0.14  . Q       .   V     .         .         .
14.683      0.0609      0.14  . Q       .   V     .         .         .
14.700      0.0611      0.14  . Q       .   V     .         .         .
14.717      0.0613      0.14  . Q       .   V     .         .         .
14.733      0.0615      0.15  . Q       .   V     .         .         .
14.750      0.0617      0.15  . Q       .   V     .         .         .
14.767      0.0619      0.15  . Q       .   V     .         .         .
14.783      0.0621      0.15  . Q       .   V     .         .         .
14.800      0.0623      0.15  . Q       .   V     .         .         .
14.817      0.0625      0.15  . Q       .   V     .         .         .
14.833      0.0627      0.15  . Q       .   V     .         .         .
14.850      0.0629      0.15  . Q       .   V     .         .         .
14.867      0.0631      0.15  . Q       .   V     .         .         .
14.883      0.0633      0.15  . Q       .   V     .         .         .
14.900      0.0636      0.15  . Q       .   V     .         .         .
14.917      0.0638      0.15  . Q       .    V    .         .         .
14.933      0.0640      0.15  . Q       .    V    .         .         .
14.950      0.0642      0.16  . Q       .    V    .         .         .
14.967      0.0644      0.16  . Q       .    V    .         .         .
14.983      0.0646      0.16  . Q       .    V    .         .         .
15.000      0.0649      0.16  . Q       .    V    .         .         .
15.017      0.0651      0.16  . Q       .    V    .         .         .
15.033      0.0653      0.16  . Q       .    V    .         .         .
15.050      0.0655      0.17  . Q       .    V    .         .         .
15.067      0.0658      0.17  . Q       .    V    .         .         .
15.083      0.0660      0.17  . Q       .    V    .         .         .
15.100      0.0662      0.17  . Q       .    V    .         .         .
15.117      0.0665      0.17  . Q       .    V    .         .         .
15.133      0.0667      0.17  . Q       .    V    .         .         .
15.150      0.0670      0.17  . Q       .    V    .         .         .
15.167      0.0672      0.18  . Q       .    V    .         .         .
15.183      0.0674      0.18  . Q       .    V    .         .         .
15.200      0.0677      0.18  . Q       .    V    .         .         .
15.217      0.0679      0.18  . Q       .    V    .         .         .
15.233      0.0682      0.18  . Q       .     V   .         .         .
15.250      0.0684      0.18  .  Q      .     V   .         .         .
15.267      0.0687      0.18  .  Q      .     V   .         .         .
15.283      0.0689      0.18  .  Q      .     V   .         .         .
15.300      0.0692      0.19  .  Q      .     V   .         .         .
15.317      0.0694      0.19  .  Q      .     V   .         .         .
15.333      0.0697      0.19  .  Q      .     V   .         .         .
15.350      0.0700      0.19  .  Q      .     V   .         .         .
15.367      0.0702      0.19  .  Q      .     V   .         .         .
15.383      0.0705      0.20  .  Q      .     V   .         .         .
15.400      0.0708      0.20  .  Q      .     V   .         .         .
15.417      0.0710      0.20  .  Q      .     V   .         .         .
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15.433      0.0713      0.20  .  Q      .     V   .         .         .
15.450      0.0716      0.20  .  Q      .     V   .         .         .
15.467      0.0719      0.21  .  Q      .     V   .         .         .
15.483      0.0722      0.21  .  Q      .     V   .         .         .
15.500      0.0725      0.21  .  Q      .      V  .         .         .
15.517      0.0728      0.21  .  Q      .      V  .         .         .
15.533      0.0730      0.21  .  Q      .      V  .         .         .
15.550      0.0733      0.22  .  Q      .      V  .         .         .
15.567      0.0736      0.22  .  Q      .      V  .         .         .
15.583      0.0739      0.22  .  Q      .      V  .         .         .
15.600      0.0743      0.22  .  Q      .      V  .         .         .
15.617      0.0746      0.22  .  Q      .      V  .         .         .
15.633      0.0749      0.23  .  Q      .      V  .         .         .
15.650      0.0752      0.23  .  Q      .      V  .         .         .
15.667      0.0755      0.25  .   Q     .      V  .         .         .
15.683      0.0759      0.27  .   Q     .      V  .         .         .
15.700      0.0763      0.28  .   Q     .      V  .         .         .
15.717      0.0767      0.30  .    Q    .       V .         .         .
15.733      0.0771      0.32  .    Q    .       V .         .         .
15.750      0.0776      0.34  .    Q    .       V .         .         .
15.767      0.0781      0.36  .    Q    .       V .         .         .
15.783      0.0786      0.38  .     Q   .       V .         .         .
15.800      0.0792      0.39  .     Q   .       V .         .         .
15.817      0.0797      0.41  .     Q   .       V .         .         .
15.833      0.0803      0.43  .      Q  .       V .         .         .
15.850      0.0810      0.45  .      Q  .        V.         .         .
15.867      0.0816      0.48  .      Q  .        V.         .         .
15.883      0.0823      0.50  .       Q .        V.         .         .
15.900      0.0830      0.52  .       Q .        V.         .         .
15.917      0.0838      0.54  .       Q .        V.         .         .
15.933      0.0845      0.56  .        Q.        V.         .         .
15.950      0.0853      0.58  .        Q.         V         .         .
15.967      0.0862      0.61  .         Q         V         .         .
15.983      0.0870      0.63  .         Q         V         .         .
16.000      0.0879      0.65  .         Q         V         .         .
16.017      0.0890      0.74  .         . Q       V         .         .
16.033      0.0902      0.90  .         .    Q    .V        .         .
16.050      0.0917      1.07  .         .      Q  .V        .         .
16.067      0.0934      1.23  .         .         QV        .         .
16.083      0.0953      1.39  .         .         . VQ      .         .
16.100      0.0974      1.55  .         .         . V  Q    .         .
16.117      0.0998      1.71  .         .         .  V    Q .         .
16.133      0.1023      1.87  .         .         .   V     .Q        .
16.150      0.1051      2.04  .         .         .   V     .  Q      .
16.167      0.1082      2.20  .         .         .    V    .     Q   .
16.183      0.1115      2.41  .         .         .     V   .         Q
16.200      0.1146      2.27  .         .         .     V   .      Q  .
16.217      0.1175      2.07  .         .         .      V  .   Q     .
16.233      0.1200      1.88  .         .         .       V .Q        .
16.250      0.1224      1.68  .         .         .      QV .         .
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16.267      0.1244      1.49  .         .         .   Q    V.         .
16.283      0.1262      1.29  .         .         .Q       V.         .
16.300      0.1277      1.10  .         .       Q .         V         .
16.317      0.1289      0.90  .         .   Q     .         V         .
16.333      0.1299      0.71  .         .Q        .         V         .
16.350      0.1306      0.51  .       Q .         .         V         .
16.367      0.1311      0.33  .    Q    .         .         V         .
16.383      0.1315      0.29  .   Q     .         .         V         .
16.400      0.1319      0.28  .   Q     .         .         .V        .
16.417      0.1322      0.27  .   Q     .         .         .V        .
16.433      0.1326      0.26  .   Q     .         .         .V        .
16.450      0.1329      0.26  .   Q     .         .         .V        .
16.467      0.1333      0.25  .   Q     .         .         .V        .
16.483      0.1336      0.24  .  Q      .         .         .V        .
16.500      0.1339      0.23  .  Q      .         .         .V        .
16.517      0.1342      0.22  .  Q      .         .         .V        .
16.533      0.1345      0.21  .  Q      .         .         .V        .
16.550      0.1348      0.20  .  Q      .         .         .V        .
16.567      0.1351      0.20  .  Q      .         .         .V        .
16.583      0.1353      0.19  .  Q      .         .         .V        .
16.600      0.1356      0.19  .  Q      .         .         .V        .
16.617      0.1359      0.19  .  Q      .         .         .V        .
16.633      0.1361      0.18  .  Q      .         .         . V       .
16.650      0.1364      0.18  . Q       .         .         . V       .
16.667      0.1366      0.18  . Q       .         .         . V       .
16.683      0.1368      0.17  . Q       .         .         . V       .
16.700      0.1371      0.17  . Q       .         .         . V       .
16.717      0.1373      0.16  . Q       .         .         . V       .
16.733      0.1375      0.16  . Q       .         .         . V       .
16.750      0.1377      0.16  . Q       .         .         . V       .
16.767      0.1380      0.16  . Q       .         .         . V       .
16.783      0.1382      0.16  . Q       .         .         . V       .
16.800      0.1384      0.15  . Q       .         .         . V       .
16.817      0.1386      0.15  . Q       .         .         . V       .
16.833      0.1388      0.15  . Q       .         .         . V       .
16.850      0.1390      0.15  . Q       .         .         . V       .
16.867      0.1392      0.15  . Q       .         .         . V       .
16.883      0.1394      0.14  . Q       .         .         . V       .
16.900      0.1396      0.14  . Q       .         .         . V       .
16.917      0.1398      0.14  . Q       .         .         . V       .
16.933      0.1400      0.14  . Q       .         .         . V       .
16.950      0.1402      0.14  . Q       .         .         .  V      .
16.967      0.1403      0.14  . Q       .         .         .  V      .
16.983      0.1405      0.13  . Q       .         .         .  V      .
17.000      0.1407      0.13  . Q       .         .         .  V      .
17.017      0.1409      0.13  . Q       .         .         .  V      .
17.033      0.1411      0.13  . Q       .         .         .  V      .
17.050      0.1412      0.13  . Q       .         .         .  V      .
17.067      0.1414      0.13  . Q       .         .         .  V      .
17.083      0.1416      0.13  . Q       .         .         .  V      .
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17.100	0.1418	0.12	. Q	.	.	.	V	.
17.117	0.1419	0.12	. Q	.	.	.	V	.
17.133	0.1421	0.12	. Q	.	.	.	V	.
17.150	0.1423	0.12	.Q	.	.	.	V	.
17.167	0.1424	0.12	.Q	.	.	.	V	.
17.183	0.1426	0.12	.Q	.	.	.	V	.
17.200	0.1428	0.12	.Q	.	.	.	V	.
17.217	0.1429	0.11	.Q	.	.	.	V	.
17.233	0.1431	0.11	.Q	.	.	.	V	.
17.250	0.1432	0.11	.Q	.	.	.	V	.
17.267	0.1434	0.11	.Q	.	.	.	V	.
17.283	0.1435	0.11	.Q	.	.	.	V	.
17.300	0.1437	0.11	.Q	.	.	.	V	.
17.317	0.1438	0.11	.Q	.	.	.	V	.
17.333	0.1440	0.11	.Q	.	.	.	V	.
17.350	0.1441	0.11	.Q	.	.	.	V	.
17.367	0.1443	0.11	.Q	.	.	.	V	.
17.383	0.1444	0.10	.Q	.	.	.	V	.
17.400	0.1445	0.10	.Q	.	.	.	V	.
17.417	0.1447	0.10	.Q	.	.	.	V	.
17.433	0.1448	0.10	.Q	.	.	.	V	.
17.450	0.1450	0.10	.Q	.	.	.	V	.
17.467	0.1451	0.10	.Q	.	.	.	V	.
17.483	0.1452	0.10	.Q	.	.	.	V	.
17.500	0.1454	0.10	.Q	.	.	.	V	.
17.517	0.1455	0.10	.Q	.	.	.	V	.
17.533	0.1456	0.10	.Q	.	.	.	V	.
17.550	0.1458	0.10	.Q	.	.	.	V	.
17.567	0.1459	0.10	.Q	.	.	.	V	.
17.583	0.1460	0.10	.Q	.	.	.	V	.
17.600	0.1462	0.10	.Q	.	.	.	V	.
17.617	0.1463	0.09	.Q	.	.	.	V	.
17.633	0.1464	0.09	.Q	.	.	.	V	.
17.650	0.1466	0.09	.Q	.	.	.	V	.
17.667	0.1467	0.09	.Q	.	.	.	V	.
17.683	0.1468	0.09	.Q	.	.	.	V	.
17.700	0.1469	0.09	.Q	.	.	.	V	.
17.717	0.1471	0.09	.Q	.	.	.	V	.
17.733	0.1472	0.09	.Q	.	.	.	V	.
17.750	0.1473	0.09	.Q	.	.	.	V	.
17.767	0.1474	0.09	.Q	.	.	.	V	.
17.783	0.1476	0.09	.Q	.	.	.	V	.
17.800	0.1477	0.09	.Q	.	.	.	V	.
17.817	0.1478	0.09	.Q	.	.	.	V	.
17.833	0.1479	0.09	.Q	.	.	.	V	.
17.850	0.1480	0.09	.Q	.	.	.	V	.
17.867	0.1482	0.09	.Q	.	.	.	V	.
17.883	0.1483	0.09	.Q	.	.	.	V	.
17.900	0.1484	0.09	.Q	.	.	.	V	.
17.917	0.1485	0.09	.Q	.	.	.	V	.

17.933	0.1486	0.09	.Q	.	.	.	V	.
17.950	0.1488	0.08	.Q	.	.	.	V	.
17.967	0.1489	0.08	.Q	.	.	.	V	.
17.983	0.1490	0.08	.Q	.	.	.	V	.
18.000	0.1491	0.08	.Q	.	.	.	V	.
18.017	0.1492	0.08	.Q	.	.	.	V	.
18.033	0.1493	0.08	.Q	.	.	.	V	.
18.050	0.1494	0.08	.Q	.	.	.	V	.
18.067	0.1495	0.08	.Q	.	.	.	V	.
18.083	0.1496	0.08	.Q	.	.	.	V	.
18.100	0.1497	0.08	.Q	.	.	.	V	.
18.117	0.1499	0.07	.Q	.	.	.	V	.
18.133	0.1500	0.07	.Q	.	.	.	V	.
18.150	0.1500	0.07	.Q	.	.	.	V	.
18.167	0.1501	0.07	.Q	.	.	.	V	.
18.183	0.1502	0.07	.Q	.	.	.	V	.
18.200	0.1503	0.07	.Q	.	.	.	V	.
18.217	0.1504	0.07	.Q	.	.	.	V	.
18.233	0.1505	0.07	.Q	.	.	.	V	.
18.250	0.1506	0.07	.Q	.	.	.	V	.
18.267	0.1507	0.07	.Q	.	.	.	V	.
18.283	0.1508	0.06	.Q	.	.	.	V	.
18.300	0.1509	0.06	.Q	.	.	.	V	.
18.317	0.1510	0.06	.Q	.	.	.	V	.
18.333	0.1511	0.06	.Q	.	.	.	V	.
18.350	0.1511	0.06	.Q	.	.	.	V	.
18.367	0.1512	0.06	.Q	.	.	.	V	.
18.383	0.1513	0.06	.Q	.	.	.	V	.
18.400	0.1514	0.06	.Q	.	.	.	V	.
18.417	0.1515	0.06	.Q	.	.	.	V	.
18.433	0.1516	0.06	.Q	.	.	.	V	.
18.450	0.1516	0.06	.Q	.	.	.	V	.
18.467	0.1517	0.06	Q	.	.	.	V	.
18.483	0.1518	0.06	Q	.	.	.	V	.
18.500	0.1519	0.06	Q	.	.	.	V	.
18.517	0.1520	0.06	Q	.	.	.	V	.
18.533	0.1521	0.06	Q	.	.	.	V	.
18.550	0.1521	0.06	Q	.	.	.	V	.
18.567	0.1522	0.06	Q	.	.	.	V	.
18.583	0.1523	0.06	Q	.	.	.	V	.
18.600	0.1524	0.06	Q	.	.	.	V	.
18.617	0.1525	0.06	Q	.	.	.	V	.
18.633	0.1525	0.06	Q	.	.	.	V	.
18.650	0.1526	0.06	Q	.	.	.	V	.
18.667	0.1527	0.06	Q	.	.	.	V	.
18.683	0.1528	0.06	Q	.	.	.	V	.
18.700	0.1528	0.06	Q	.	.	.	V	.
18.717	0.1529	0.06	Q	.	.	.	V	.
18.733	0.1530	0.06	Q	.	.	.	V	.
18.750	0.1531	0.06	Q	.	.	.	V	.

18.767	0.1532	0.06	Q	.	.	.	V	.
18.783	0.1532	0.06	Q	.	.	.	V	.
18.800	0.1533	0.06	Q	.	.	.	V	.
18.817	0.1534	0.05	Q	.	.	.	V	.
18.833	0.1535	0.05	Q	.	.	.	V	.
18.850	0.1535	0.05	Q	.	.	.	V	.
18.867	0.1536	0.05	Q	.	.	.	V	.
18.883	0.1537	0.05	Q	.	.	.	V	.
18.900	0.1538	0.05	Q	.	.	.	V	.
18.917	0.1538	0.05	Q	.	.	.	V	.
18.933	0.1539	0.05	Q	.	.	.	V	.
18.950	0.1540	0.05	Q	.	.	.	V	.
18.967	0.1540	0.05	Q	.	.	.	V	.
18.983	0.1541	0.05	Q	.	.	.	V	.
19.000	0.1542	0.05	Q	.	.	.	V	.
19.017	0.1543	0.05	Q	.	.	.	V	.
19.033	0.1543	0.05	Q	.	.	.	V	.
19.050	0.1544	0.05	Q	.	.	.	V	.
19.067	0.1545	0.05	Q	.	.	.	V	.
19.083	0.1546	0.05	Q	.	.	.	V	.
19.100	0.1546	0.05	Q	.	.	.	V	.
19.117	0.1547	0.05	Q	.	.	.	V	.
19.133	0.1548	0.05	Q	.	.	.	V	.
19.150	0.1548	0.05	Q	.	.	.	V	.
19.167	0.1549	0.05	Q	.	.	.	V	.
19.183	0.1550	0.05	Q	.	.	.	V	.
19.200	0.1550	0.05	Q	.	.	.	V	.
19.217	0.1551	0.05	Q	.	.	.	V	.
19.233	0.1552	0.05	Q	.	.	.	V	.
19.250	0.1552	0.05	Q	.	.	.	V	.
19.267	0.1553	0.05	Q	.	.	.	V	.
19.283	0.1554	0.05	Q	.	.	.	V	.
19.300	0.1555	0.05	Q	.	.	.	V	.
19.317	0.1555	0.05	Q	.	.	.	V	.
19.333	0.1556	0.05	Q	.	.	.	V	.
19.350	0.1557	0.05	Q	.	.	.	V	.
19.367	0.1557	0.05	Q	.	.	.	V	.
19.383	0.1558	0.05	Q	.	.	.	V	.
19.400	0.1559	0.05	Q	.	.	.	V	.
19.417	0.1559	0.05	Q	.	.	.	V	.
19.433	0.1560	0.05	Q	.	.	.	V	.
19.450	0.1561	0.05	Q	.	.	.	V	.
19.467	0.1561	0.05	Q	.	.	.	V	.
19.483	0.1562	0.05	Q	.	.	.	V	.
19.500	0.1563	0.05	Q	.	.	.	V	.
19.517	0.1563	0.05	Q	.	.	.	V	.
19.533	0.1564	0.05	Q	.	.	.	V	.
19.550	0.1564	0.05	Q	.	.	.	V	.
19.567	0.1565	0.05	Q	.	.	.	V	.
19.583	0.1566	0.05	Q	.	.	.	V	.

19.600	0.1566	0.05	Q	.	.	.	V	.
19.617	0.1567	0.05	Q	.	.	.	V	.
19.633	0.1568	0.05	Q	.	.	.	V	.
19.650	0.1568	0.05	Q	.	.	.	V	.
19.667	0.1569	0.05	Q	.	.	.	V	.
19.683	0.1570	0.05	Q	.	.	.	V	.
19.700	0.1570	0.05	Q	.	.	.	V	.
19.717	0.1571	0.05	Q	.	.	.	V	.
19.733	0.1571	0.05	Q	.	.	.	V	.
19.750	0.1572	0.05	Q	.	.	.	V	.
19.767	0.1573	0.05	Q	.	.	.	V	.
19.783	0.1573	0.05	Q	.	.	.	V	.
19.800	0.1574	0.05	Q	.	.	.	V	.
19.817	0.1575	0.04	Q	.	.	.	V	.
19.833	0.1575	0.04	Q	.	.	.	V	.
19.850	0.1576	0.04	Q	.	.	.	V	.
19.867	0.1576	0.04	Q	.	.	.	V	.
19.883	0.1577	0.04	Q	.	.	.	V	.
19.900	0.1578	0.04	Q	.	.	.	V	.
19.917	0.1578	0.04	Q	.	.	.	V	.
19.933	0.1579	0.04	Q	.	.	.	V	.
19.950	0.1579	0.04	Q	.	.	.	V	.
19.967	0.1580	0.04	Q	.	.	.	V	.
19.983	0.1581	0.04	Q	.	.	.	V	.
20.000	0.1581	0.04	Q	.	.	.	V	.
20.017	0.1582	0.04	Q	.	.	.	V	.
20.033	0.1582	0.04	Q	.	.	.	V	.
20.050	0.1583	0.04	Q	.	.	.	V	.
20.067	0.1584	0.04	Q	.	.	.	V	.
20.083	0.1584	0.04	Q	.	.	.	V	.
20.100	0.1585	0.04	Q	.	.	.	V	.
20.117	0.1585	0.04	Q	.	.	.	V	.
20.133	0.1586	0.04	Q	.	.	.	V	.
20.150	0.1587	0.04	Q	.	.	.	V	.
20.167	0.1587	0.04	Q	.	.	.	V	.
20.183	0.1588	0.04	Q	.	.	.	V	.
20.200	0.1588	0.04	Q	.	.	.	V	.
20.217	0.1589	0.04	Q	.	.	.	V	.
20.233	0.1590	0.04	Q	.	.	.	V	.
20.250	0.1590	0.04	Q	.	.	.	V	.
20.267	0.1591	0.04	Q	.	.	.	V	.
20.283	0.1591	0.04	Q	.	.	.	V	.
20.300	0.1592	0.04	Q	.	.	.	V	.
20.317	0.1592	0.04	Q	.	.	.	V	.
20.333	0.1593	0.04	Q	.	.	.	V	.
20.350	0.1594	0.04	Q	.	.	.	V	.
20.367	0.1594	0.04	Q	.	.	.	V	.
20.383	0.1595	0.04	Q	.	.	.	V	.
20.400	0.1595	0.04	Q	.	.	.	V	.
20.417	0.1596	0.04	Q	.	.	.	V	.

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20.433      0.1596      0.04  Q        .         .         .      V  .
20.450      0.1597      0.04  Q        .         .         .      V  .
20.467      0.1597      0.04  Q        .         .         .      V  .
20.483      0.1598      0.04  Q        .         .         .      V  .
20.500      0.1599      0.04  Q        .         .         .      V  .
20.517      0.1599      0.04  Q        .         .         .      V  .
20.533      0.1600      0.04  Q        .         .         .      V  .
20.550      0.1600      0.04  Q        .         .         .      V  .
20.567      0.1601      0.04  Q        .         .         .      V  .
20.583      0.1601      0.04  Q        .         .         .      V  .
20.600      0.1602      0.04  Q        .         .         .      V  .
20.617      0.1602      0.04  Q        .         .         .      V  .
20.633      0.1603      0.04  Q        .         .         .      V  .
20.650      0.1604      0.04  Q        .         .         .      V  .
20.667      0.1604      0.04  Q        .         .         .      V  .
20.683      0.1605      0.04  Q        .         .         .      V  .
20.700      0.1605      0.04  Q        .         .         .      V  .
20.717      0.1606      0.04  Q        .         .         .      V  .
20.733      0.1606      0.04  Q        .         .         .      V  .
20.750      0.1607      0.04  Q        .         .         .      V  .
20.767      0.1607      0.04  Q        .         .         .      V  .
20.783      0.1608      0.04  Q        .         .         .      V  .
20.800      0.1608      0.04  Q        .         .         .      V  .
20.817      0.1609      0.04  Q        .         .         .      V  .
20.833      0.1609      0.04  Q        .         .         .      V  .
20.850      0.1610      0.04  Q        .         .         .      V  .
20.867      0.1610      0.04  Q        .         .         .      V  .
20.883      0.1611      0.04  Q        .         .         .      V  .
20.900      0.1612      0.04  Q        .         .         .      V  .
20.917      0.1612      0.04  Q        .         .         .      V  .
20.933      0.1613      0.04  Q        .         .         .      V  .
20.950      0.1613      0.04  Q        .         .         .      V  .
20.967      0.1614      0.04  Q        .         .         .       V .
20.983      0.1614      0.04  Q        .         .         .       V .
21.000      0.1615      0.04  Q        .         .         .       V .
21.017      0.1615      0.04  Q        .         .         .       V .
21.033      0.1616      0.04  Q        .         .         .       V .
21.050      0.1616      0.04  Q        .         .         .       V .
21.067      0.1617      0.04  Q        .         .         .       V .
21.083      0.1617      0.04  Q        .         .         .       V .
21.100      0.1618      0.04  Q        .         .         .       V .
21.117      0.1618      0.04  Q        .         .         .       V .
21.133      0.1619      0.04  Q        .         .         .       V .
21.150      0.1619      0.04  Q        .         .         .       V .
21.167      0.1620      0.04  Q        .         .         .       V .
21.183      0.1620      0.04  Q        .         .         .       V .
21.200      0.1621      0.04  Q        .         .         .       V .
21.217      0.1621      0.04  Q        .         .         .       V .
21.233      0.1622      0.04  Q        .         .         .       V .
21.250      0.1622      0.04  Q        .         .         .       V .
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21.267	0.1623	0.04	Q	.	.	.	V .
21.283	0.1623	0.04	Q	.	.	.	V .
21.300	0.1624	0.04	Q	.	.	.	V .
21.317	0.1624	0.04	Q	.	.	.	V .
21.333	0.1625	0.04	Q	.	.	.	V .
21.350	0.1625	0.04	Q	.	.	.	V .
21.367	0.1626	0.04	Q	.	.	.	V .
21.383	0.1626	0.04	Q	.	.	.	V .
21.400	0.1627	0.04	Q	.	.	.	V .
21.417	0.1627	0.04	Q	.	.	.	V .
21.433	0.1628	0.04	Q	.	.	.	V .
21.450	0.1628	0.04	Q	.	.	.	V .
21.467	0.1629	0.04	Q	.	.	.	V .
21.483	0.1629	0.04	Q	.	.	.	V .
21.500	0.1630	0.04	Q	.	.	.	V .
21.517	0.1630	0.04	Q	.	.	.	V .
21.533	0.1631	0.04	Q	.	.	.	V .
21.550	0.1631	0.04	Q	.	.	.	V .
21.567	0.1632	0.04	Q	.	.	.	V .
21.583	0.1632	0.04	Q	.	.	.	V .
21.600	0.1633	0.04	Q	.	.	.	V .
21.617	0.1633	0.03	Q	.	.	.	V .
21.633	0.1634	0.03	Q	.	.	.	V .
21.650	0.1634	0.03	Q	.	.	.	V .
21.667	0.1635	0.03	Q	.	.	.	V .
21.683	0.1635	0.03	Q	.	.	.	V .
21.700	0.1636	0.03	Q	.	.	.	V .
21.717	0.1636	0.03	Q	.	.	.	V .
21.733	0.1636	0.03	Q	.	.	.	V .
21.750	0.1637	0.03	Q	.	.	.	V .
21.767	0.1637	0.03	Q	.	.	.	V .
21.783	0.1638	0.03	Q	.	.	.	V .
21.800	0.1638	0.03	Q	.	.	.	V .
21.817	0.1639	0.03	Q	.	.	.	V .
21.833	0.1639	0.03	Q	.	.	.	V .
21.850	0.1640	0.03	Q	.	.	.	V .
21.867	0.1640	0.03	Q	.	.	.	V .
21.883	0.1641	0.03	Q	.	.	.	V .
21.900	0.1641	0.03	Q	.	.	.	V .
21.917	0.1642	0.03	Q	.	.	.	V .
21.933	0.1642	0.03	Q	.	.	.	V .
21.950	0.1643	0.03	Q	.	.	.	V .
21.967	0.1643	0.03	Q	.	.	.	V .
21.983	0.1643	0.03	Q	.	.	.	V .
22.000	0.1644	0.03	Q	.	.	.	V .
22.017	0.1644	0.03	Q	.	.	.	V .
22.033	0.1645	0.03	Q	.	.	.	V .
22.050	0.1645	0.03	Q	.	.	.	V .
22.067	0.1646	0.03	Q	.	.	.	V .
22.083	0.1646	0.03	Q	.	.	.	V .

22.100	0.1647	0.03	Q	.	.	.	V .
22.117	0.1647	0.03	Q	.	.	.	V .
22.133	0.1648	0.03	Q	.	.	.	V .
22.150	0.1648	0.03	Q	.	.	.	V .
22.167	0.1649	0.03	Q	.	.	.	V .
22.183	0.1649	0.03	Q	.	.	.	V .
22.200	0.1649	0.03	Q	.	.	.	V .
22.217	0.1650	0.03	Q	.	.	.	V .
22.233	0.1650	0.03	Q	.	.	.	V .
22.250	0.1651	0.03	Q	.	.	.	V .
22.267	0.1651	0.03	Q	.	.	.	V .
22.283	0.1652	0.03	Q	.	.	.	V .
22.300	0.1652	0.03	Q	.	.	.	V .
22.317	0.1653	0.03	Q	.	.	.	V .
22.333	0.1653	0.03	Q	.	.	.	V .
22.350	0.1653	0.03	Q	.	.	.	V .
22.367	0.1654	0.03	Q	.	.	.	V .
22.383	0.1654	0.03	Q	.	.	.	V .
22.400	0.1655	0.03	Q	.	.	.	V .
22.417	0.1655	0.03	Q	.	.	.	V .
22.433	0.1656	0.03	Q	.	.	.	V .
22.450	0.1656	0.03	Q	.	.	.	V.
22.467	0.1657	0.03	Q	.	.	.	V.
22.483	0.1657	0.03	Q	.	.	.	V.
22.500	0.1657	0.03	Q	.	.	.	V.
22.517	0.1658	0.03	Q	.	.	.	V.
22.533	0.1658	0.03	Q	.	.	.	V.
22.550	0.1659	0.03	Q	.	.	.	V.
22.567	0.1659	0.03	Q	.	.	.	V.
22.583	0.1660	0.03	Q	.	.	.	V.
22.600	0.1660	0.03	Q	.	.	.	V.
22.617	0.1660	0.03	Q	.	.	.	V.
22.633	0.1661	0.03	Q	.	.	.	V.
22.650	0.1661	0.03	Q	.	.	.	V.
22.667	0.1662	0.03	Q	.	.	.	V.
22.683	0.1662	0.03	Q	.	.	.	V.
22.700	0.1663	0.03	Q	.	.	.	V.
22.717	0.1663	0.03	Q	.	.	.	V.
22.733	0.1663	0.03	Q	.	.	.	V.
22.750	0.1664	0.03	Q	.	.	.	V.
22.767	0.1664	0.03	Q	.	.	.	V.
22.783	0.1665	0.03	Q	.	.	.	V.
22.800	0.1665	0.03	Q	.	.	.	V.
22.817	0.1666	0.03	Q	.	.	.	V.
22.833	0.1666	0.03	Q	.	.	.	V.
22.850	0.1666	0.03	Q	.	.	.	V.
22.867	0.1667	0.03	Q	.	.	.	V.
22.883	0.1667	0.03	Q	.	.	.	V.
22.900	0.1668	0.03	Q	.	.	.	V.
22.917	0.1668	0.03	Q	.	.	.	V.

22.933	0.1669	0.03	Q	.	.	.	V.
22.950	0.1669	0.03	Q	.	.	.	V.
22.967	0.1669	0.03	Q	.	.	.	V.
22.983	0.1670	0.03	Q	.	.	.	V.
23.000	0.1670	0.03	Q	.	.	.	V.
23.017	0.1671	0.03	Q	.	.	.	V.
23.033	0.1671	0.03	Q	.	.	.	V.
23.050	0.1672	0.03	Q	.	.	.	V.
23.067	0.1672	0.03	Q	.	.	.	V.
23.083	0.1672	0.03	Q	.	.	.	V.
23.100	0.1673	0.03	Q	.	.	.	V.
23.117	0.1673	0.03	Q	.	.	.	V.
23.133	0.1674	0.03	Q	.	.	.	V.
23.150	0.1674	0.03	Q	.	.	.	V.
23.167	0.1674	0.03	Q	.	.	.	V.
23.183	0.1675	0.03	Q	.	.	.	V.
23.200	0.1675	0.03	Q	.	.	.	V.
23.217	0.1676	0.03	Q	.	.	.	V.
23.233	0.1676	0.03	Q	.	.	.	V.
23.250	0.1676	0.03	Q	.	.	.	V.
23.267	0.1677	0.03	Q	.	.	.	V.
23.283	0.1677	0.03	Q	.	.	.	V.
23.300	0.1678	0.03	Q	.	.	.	V.
23.317	0.1678	0.03	Q	.	.	.	V.
23.333	0.1678	0.03	Q	.	.	.	V.
23.350	0.1679	0.03	Q	.	.	.	V.
23.367	0.1679	0.03	Q	.	.	.	V.
23.383	0.1680	0.03	Q	.	.	.	V.
23.400	0.1680	0.03	Q	.	.	.	V.
23.417	0.1681	0.03	Q	.	.	.	V.
23.433	0.1681	0.03	Q	.	.	.	V.
23.450	0.1681	0.03	Q	.	.	.	V.
23.467	0.1682	0.03	Q	.	.	.	V.
23.483	0.1682	0.03	Q	.	.	.	V.
23.500	0.1683	0.03	Q	.	.	.	V.
23.517	0.1683	0.03	Q	.	.	.	V.
23.533	0.1683	0.03	Q	.	.	.	V.
23.550	0.1684	0.03	Q	.	.	.	V.
23.567	0.1684	0.03	Q	.	.	.	V.
23.583	0.1685	0.03	Q	.	.	.	V.
23.600	0.1685	0.03	Q	.	.	.	V.
23.617	0.1685	0.03	Q	.	.	.	V.
23.633	0.1686	0.03	Q	.	.	.	V.
23.650	0.1686	0.03	Q	.	.	.	V.
23.667	0.1686	0.03	Q	.	.	.	V.
23.683	0.1687	0.03	Q	.	.	.	V.
23.700	0.1687	0.03	Q	.	.	.	V.
23.717	0.1688	0.03	Q	.	.	.	V.
23.733	0.1688	0.03	Q	.	.	.	V.
23.750	0.1688	0.03	Q	.	.	.	V.

23.767	0.1689	0.03	Q	.	.	.	V.
23.783	0.1689	0.03	Q	.	.	.	V.
23.800	0.1690	0.03	Q	.	.	.	V.
23.817	0.1690	0.03	Q	.	.	.	V.
23.833	0.1690	0.03	Q	.	.	.	V.
23.850	0.1691	0.03	Q	.	.	.	V.
23.867	0.1691	0.03	Q	.	.	.	V.
23.883	0.1692	0.03	Q	.	.	.	V.
23.900	0.1692	0.03	Q	.	.	.	V.
23.917	0.1692	0.03	Q	.	.	.	V.
23.933	0.1693	0.03	Q	.	.	.	V.
23.950	0.1693	0.03	Q	.	.	.	V.
23.967	0.1693	0.03	Q	.	.	.	V.
23.983	0.1694	0.03	Q	.	.	.	V.
24.000	0.1694	0.03	Q	.	.	.	V.
24.017	0.1695	0.03	Q	.	.	.	V.
24.033	0.1695	0.03	Q	.	.	.	V.
24.050	0.1695	0.03	Q	.	.	.	V.
24.067	0.1696	0.03	Q	.	.	.	V.
24.083	0.1696	0.03	Q	.	.	.	V.
24.100	0.1697	0.03	Q	.	.	.	V.
24.117	0.1697	0.03	Q	.	.	.	V.
24.133	0.1697	0.02	Q	.	.	.	V.
24.150	0.1697	0.02	Q	.	.	.	V.
24.167	0.1698	0.02	Q	.	.	.	V.
24.183	0.1698	0.01	Q	.	.	.	V.
24.200	0.1698	0.01	Q	.	.	.	V.
24.217	0.1698	0.01	Q	.	.	.	V.

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
(Note: 100% of Peak Flow Rate estimate assumed to have
an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
0%	1453.0
10%	245.0
20%	145.0
30%	95.0
40%	80.0
50%	70.0
60%	55.0
70%	40.0
80%	25.0
90%	15.0

==========

END OF FLOODSCx ROUTING ANALYSIS

APPENDIX D

Geotechnical Documents

May 28, 2019 Project No. 19035-01

Mr. Jeremy Krout
EPD Solutions, Inc.
2030 Main Street, Suite 1200
Irvine, CA 92614

Subject: ***Preliminary Geotechnical Evaluation and Design Recommendations for Proposed Great Scott Tree Service Development, 20865 Canada Road, Lake Forest, California***

In accordance with your request and authorization, LGC Geotechnical, Inc. has performed a preliminary geotechnical evaluation for the proposed Great Scott Tree Service Development located at 20865 Canada Road in the City of Lake Forest, California. The purpose of our study was to evaluate the existing onsite geotechnical conditions and to provide preliminary geotechnical recommendations relative to the proposed development.

Should you have any questions regarding this report, please do not hesitate to contact our office. We appreciate this opportunity to be of service.

Respectfully Submitted,

LGC Geotechnical, Inc.

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Distribution: (4) Addressee (3 wet-signed copies and 1 electronic copy)
(4) Great Scott Tree Service, Inc. (electronic copy)
Attn: Mr. Steve Guzowski

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1.0 INTRODUCTION

1.1 Purpose and Scope of Services

This report presents the results of our preliminary geotechnical evaluation for the proposed development located at 20865 Canada Road in the City of Lake Forest, California. Refer to the Site Location Map (Figure 1).

The purpose of our study was to provide a preliminary geotechnical evaluation relative to the proposed development. As part of our scope of work, we have: 1) reviewed available geotechnical background information including in-house regional geologic maps and published geotechnical literature pertinent to the site (Appendix A); 2) performed a limited subsurface geotechnical evaluation of the site consisting of the excavation of three small-diameter borings ranging in depth from approximately 5 to 50 feet below existing ground surface; 3) performed one field infiltration test; 4) performed laboratory testing of select soil samples obtained during our subsurface evaluation; and 5) prepared this geotechnical summary report presenting our preliminary findings, conclusions and recommendations for the development of the proposed project.

1.2 Existing Conditions

The approximately 6.4-acre irregular-shaped site is bound to the north by commercial/industrial developments, to the east by Dimension Drive, to the south by Linear Lane and two existing industrial buildings and to the west by Serrano Creek. Serrano Creek meanders from east to west through the site and is primarily located in the northern region of the site. The site's current use is primarily a residence/farm and vehicular storage yard. The central and western portion of the site contain a residential structure, barn, livestock stables, a horse corral/arena, unpaved and paved roads and miscellaneous debris. The eastern portion of the site contains a manmade lot currently used for vehicular storage. Entry to the site is from either Linear Lane or Canada Road. Vegetation across the site consists of grass, brush, bushes and areas of dense tree growth.

Based on review of historic aerials, it appears the barn structure was constructed some time before the year 1938 and the residential structure was constructed sometime between the years 1946 and 1952.

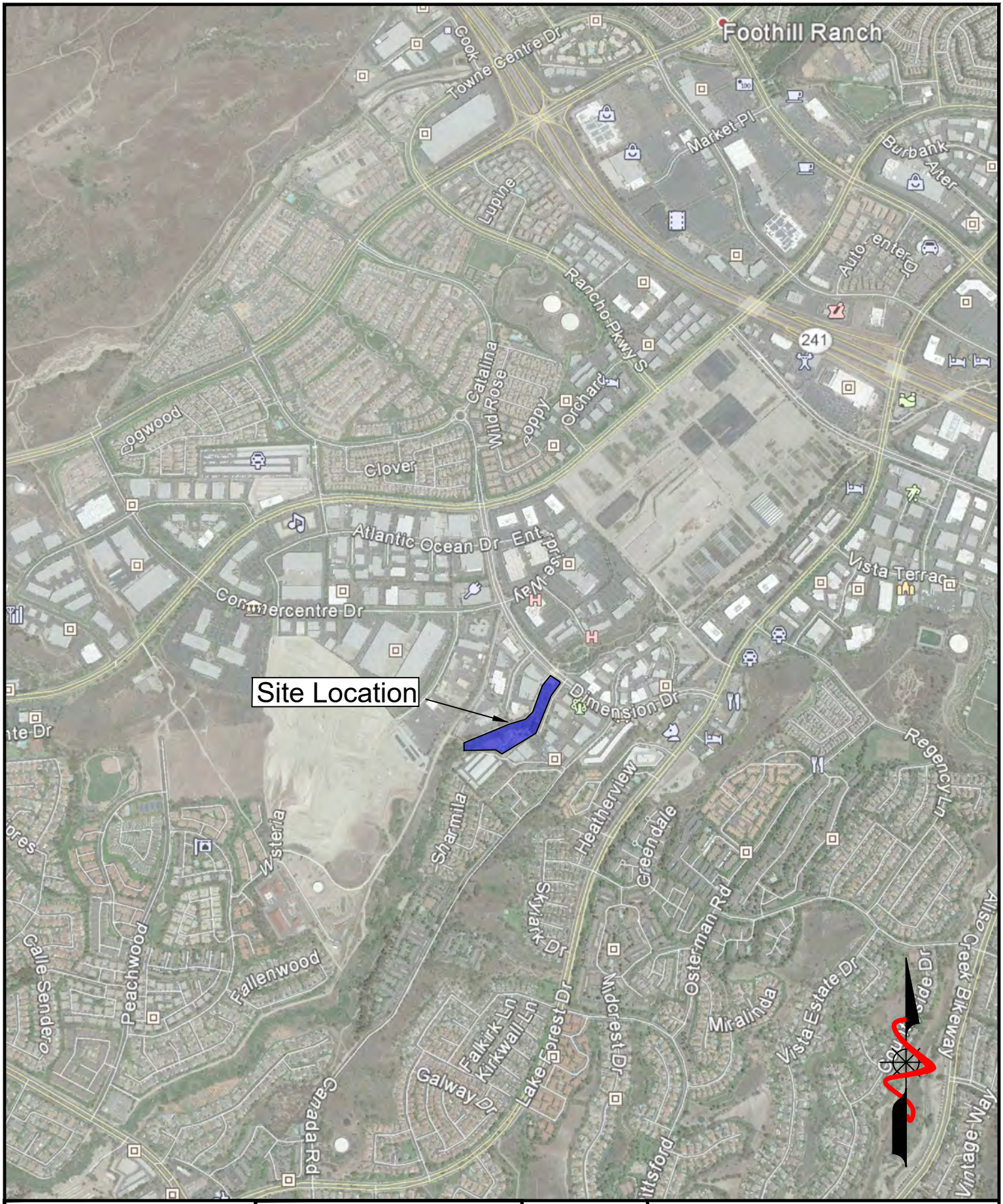
1.3 Project Description

Based on the conceptual site plan (Herdman, 2018), the proposed improvements include the construction of a restroom building addition, a modular office building, dump truck and boom truck parking areas, vehicular parking areas, a concrete pad for chip drying, freestanding block walls and a water quality basin/feature. The proposed development is located on the southern side of the existing Serrano Creek alignment. Design cuts and fills (not including required remedial grading) are anticipated to be on the order of 2 to 4 feet. The proposed temporary modular structures are anticipated to be relatively light with maximum column and wall loads of approximately 10 kips and 2 kips per linear foot, respectively. Please note no structural loads

were provided to us at the time of this report.

Some of the existing structures including the barn (storage building) and residence (office) are anticipated to remain in-place and keep the same building footprint that currently exists.

The recommendations given in this report are based upon the estimated structural loading, grading and layout information above. We understand that the project plans are currently being developed at this time; LGC Geotechnical should be provided with updated project plans and any changes to structural loads when they become available, in order to either confirm or modify the recommendations provided herein.



PROJECT NAME	Great Scott - Lake Forest
PROJECT NO.	19035-01
ENG. / GEOL.	RLD / KTM
SCALE	Not to Scale
DATE	May 2019

LGC Geotechnical, Inc.

FIGURE 1
Site Location Map

1.4 Subsurface Geotechnical Evaluation

LGC Geotechnical performed a limited subsurface geotechnical evaluation of the site consisting of the excavation of three hollow-stem auger borings to evaluate onsite geotechnical conditions.

Three hollow-stem borings (HS-1, HS-2 & I-1) were drilled to depths ranging from approximately 5 to 50 feet below existing grade. An LGC Geotechnical staff engineer observed the drilling operations, logged the borings, and collected soil samples for laboratory testing. The borings were excavated by Calpac Drilling under subcontract to LGC Geotechnical using a truck-mounted drill rig equipped with 8-inch-diameter hollow-stem augers. Driven soil samples were collected by means of the Standard Penetration Test (SPT) and Modified California Drive (MCD) sampler generally obtained at 2.5 to 5-foot vertical increments. The MCD is a split-barrel sampler with a tapered cutting tip and lined with a series of 1-inch-tall brass rings. The SPT sampler (1.4-inch ID) and MCD sampler (2.4-inch ID, 3.0-inch OD) were driven using a 140-pound automatic hammer falling 30 inches to advance the sampler a total depth of 18 inches. The raw blow counts for each 6-inch increment of penetration were recorded on the boring logs. Bulk samples of the near-surface soils were also collected and logged at select borings for laboratory testing. At the completion of drilling, the borings were backfilled with the native soil cuttings and tamped. Some settlement of the backfill soils may occur over time.

Infiltration testing was performed within one of the borings (I-1) to a depth of 5 feet below existing grade. An LGC Geotechnical staff engineer installed standpipe, backfilled the boring with crushed rock and pre-soaked the infiltration hole prior to testing. Infiltration testing was performed per the County of Orange testing guidelines. The location was subsequently backfilled with native soils at the completion of testing.

The approximate locations of our subsurface explorations are provided on the Geotechnical Exploration Location Map (Figure 2). The boring logs are provided in Appendix B.

1.5 Laboratory Testing

Representative bulk and driven (relatively undisturbed) samples were obtained for laboratory testing during our field evaluation. Laboratory testing included in-situ moisture content and in-situ dry density, Atterberg Limits, fines content, expansion index, consolidation, R-value and corrosion (sulfate, chloride, pH and minimum resistivity).

The following is a summary of the laboratory test results:

- Dry density of the samples collected ranged from approximately 91 pounds per cubic foot (pcf) to 117 pcf, with an average of 106 pcf. Field moisture contents ranged from approximately 1 to 26 percent, with an average of 13 percent.
- Four fines content tests were performed and indicated a fines content (passing No. 200 sieve) ranging from approximately 6 to 37 percent. Based on the Unified Soils Classification System (USCS), the tested samples would be classified as “coarse-grained.”
- One Atterberg Limit (liquid limit and plastic limit) test was performed. Results indicated a Plasticity Index (PI) value of 17.
- One consolidation test was performed. The load versus deformation plot is provided in

Appendix C.

- Expansion potential testing indicated an expansion index value of 8, corresponding to "Very Low" expansion potential.
- One R-value test was performed on a bulk sample collected and resulted in an R-Value of 66.
- Corrosion testing indicated soluble sulfate contents of approximately 0.02 percent, a chloride content of 103 parts per million (ppm), pH of 8.2, and a minimum resistivity of 857 ohm-centimeters.

A summary of the laboratory test results is presented in Appendix C. The moisture and dry density results are presented on the boring logs in Appendix B.

2.0 GEOTECHNICAL CONDITIONS

2.1 Geologic Conditions

The subject site is located within the foothills of the Santa Ana Mountains, part of the Peninsular Ranges Geomorphic Province. The region consists of dissected foothills bordering the Los Angeles Basin to the northwest and the granite-core Santa Ana Mountains to the east. The Southern California Batholith forms the core of the Santa Ana Mountains, which is overlain by a thick sequence of sedimentary units, which comprise the foothills including the subject site. Late Miocene to Early Pliocene bedrock materials of the Oso Member of the Capistrano Formation that underlie the subject site at depth are primarily composed of sandstone and silty sandstone (USGS, 2004).

The site is specifically located within the Serrano Creek drainage course and the area just southeast of the active drainage. The southwest-flowing creek has deposited variable alluvial materials as observed during our subsurface investigation.

2.2 Generalized Subsurface Conditions

The subsurface evaluation performed at the subject site indicated that site soils consist of variable alluvium ranging from very moist to wet, moderate to dark brown clayey sand and sand, to an alluvial deposit consisting of light gray, relatively dry, medium to coarse sand with few pebbles. The material is labelled "younger alluvium" on boring logs. Bedrock of the Capistrano Formation, Oso Member was encountered at depth below the alluvium, consisting of light yellowish brown, silty sandstone, moist, very dense, observed to the maximum explored depth of approximately 50 feet below existing grade.

It should be noted that the borings are only representative of the location and time where/when they are performed and varying subsurface conditions may exist outside of the performed location. In addition, subsurface conditions can change over time. The soil descriptions provided above should not be construed to mean that the subsurface profile is uniform and that soil is homogeneous within the project area. For details on the stratigraphy at the exploration locations, refer to Appendix B.

2.3 Groundwater

Groundwater was encountered in our boring HS-1 at a depth of approximately 15 feet below existing grade. Historic high groundwater is estimated to be about 10 feet below existing grade (CDMG, 2000).

Seasonal fluctuations of groundwater elevations should be expected over time. In general, groundwater levels fluctuate with the seasons and local zones of perched groundwater may be present due to local seepage caused by irrigation and/or recent precipitation. Local perched groundwater conditions or surface seepage may develop once site development is completed.

2.4 Field Infiltration Testing

One field percolation test was performed in the area of the proposed infiltration trench and the location is depicted on Figure 2 – Geotechnical Exploration Location Map. Test well installation consisted of placing a 3-inch diameter perforated PVC pipe in the excavated borehole and backfilling the annulus with crushed rock including the placement of approximately 2 inches of crushed rock at the bottom of the borehole. The infiltration test well was presoaked the day of installation and testing took place within 24 hours of presoaking. During the pre-test the water level was observed to drop less than 6 inches in 25 minutes for two consecutive readings. Therefore, the test procedure for fine-grained soils or "slow test" was followed. Test well installation and the estimation of infiltration rates were accomplished in general accordance with the guidelines set forth by the County of Orange (2013). In general, three-dimensional flow out of the test well (*percolation*), as observed in the field, is mathematically reduced to one-dimensional flow out of the bottom of the test well (*infiltration*). Infiltration tests are performed using relatively clean water, free of particulates, silt, etc. The results of our recent field infiltration testing are presented in Appendix D and summarized below.

TABLE 1

Summary of Field Infiltration Testing

Infiltration Test Identification	Approx. Depth Below Existing Grade (ft)	Observed Infiltration Rate* (in./hr.)	Measured Infiltration Rate** (in./hr.)
I-1	5	0.7	0.35

*Observed Infiltration Rates Do Not Include Factor of Safety.

**Measured Infiltration Rates Include a Factor of Safety of 2 in Order to Evaluate Feasibility.

The tested infiltration rates provided in this report are considered a general representation of the infiltration rates at the location of the proposed infiltration trench. Please note, the testing of infiltration rates is highly dependent upon the materials encountered at the point of testing (i.e. location and depth of testing). Varying subsurface conditions may exist outside of the test location which could alter the calculated infiltration rate. Please refer to Section 4.6 for subsurface water infiltration recommendations.

2.5 Seismic Design Criteria

The site seismic characteristics were evaluated per the guidelines set forth in Chapter 16, Section 1613 of the 2016 California Building Code (CBC). Since the site contains soils that are susceptible to liquefaction (refer to above Section "Liquefaction and Dynamic Settlement"), ASCE 7 which has been adopted by the CBC requires that site soils be assigned Site Class "F" and a site-specific response spectrum be performed. However, in accordance with Section 20.3.1 of ASCE 7, if the fundamental periods of vibration of the planned structure are equal to or less than 0.5 second, a site-specific response spectrum is not required and ASCE 7/2016 CBC site class and seismic parameters may be used in lieu of a site-specific response spectrum. **It should be noted that the seismic parameters provided herein are not applicable for any structure having a fundamental period of vibration greater than 0.5 second.**

Representative site coordinates of latitude 33.6606 degrees north and longitude -117.6751 degrees west were utilized in our analyses. The maximum considered earthquake (MCE) spectral response accelerations (S_{MS} and S_{M1}) and adjusted design spectral response acceleration parameters (S_{DS} and S_{D1}) for Site Class D are provided in Table 2 below.

TABLE 2

Seismic Design Parameters for Structures with a Period of Vibration ≤ 0.5 Second

Selected Parameters from 2016 CBC, Section 1613 - Earthquake Loads	Seismic Design Values
Site Class per Chapter 20 of ASCE 7	D*
Risk-Targeted Spectral Acceleration for Short Periods (S_S)**	1.453g
Risk-Targeted Spectral Accelerations for 1-Second Periods (S_1)**	0.540g
Site Coefficient F_a per Table 1613.3.3(1)	1.0
Site Coefficient F_v per Table 1613.3.3(2)	1.5
Site Modified Spectral Acceleration for Short Periods (S_{MS}) for Site Class D [Note: $S_{MS} = F_aS_S$]	1.453g
Site Modified Spectral Acceleration for 1-Second Periods (S_{M1}) for Site Class D [Note: $S_{M1} = F_vS_1$]	0.811g
Design Spectral Acceleration for Short Periods (S_{DS}) for Site Class D [Note: $S_{DS} = (^2/_3)S_{MS}$]	0.968g
Design Spectral Acceleration for 1-Second Periods (S_{D1}) for Site Class D [Note: $S_{D1} = (^2/_3)S_{M1}$]	0.540g
Mapped Risk Coefficient at 0.2 sec Spectral Response Period, C_{RS} (per ASCE 7)	1.020
Mapped Risk Coefficient at 1 sec Spectral Response Period, C_{R1} (per ASCE 7)	1.052

* Site is Class F, seismic parameters provided herein are only applicable for structure period ≤ 0.5 second, refer to discussion above.

** From SEAOC, 2019

Section 1803.5.12 of the 2016 CBC (per Section 11.8.3 of ASCE 7) states that the maximum considered earthquake geometric mean (MCE_G) Peak Ground Acceleration (PGA) should be used for liquefaction potential. The PGA_M for the site is equal to 0.533g (SEAOC, 2019).

A deaggregation of the PGA based on a 2,475-year average return period indicates that an earthquake magnitude of 6.9 at a distance of approximately 5.4 km from the site would contribute the most to this ground motion (USGS, 2008).

2.6 Faulting

The subject site is not located within a State of California Earthquake Fault Zone (Alquist-Priolo) and no faults were identified on the site during our site evaluation (CGS, 2018). The possibility of damage due to ground rupture is considered low since no active faults are known to cross the site. The closest known active faults are associated with the San Joaquin Hills Fault, located approximately 3.1 miles from the site; the Elsinore Fault Zone, approximately 12.6 miles northeast of the site; and the Newport Inglewood Fault Zone, approximately 12.7 miles southwest of the site.

Secondary effects of seismic shaking resulting from large earthquakes on the major faults in the Southern California region, which may affect the site, include ground lurching and shallow ground rupture, soil liquefaction, and dynamic settlement. These secondary effects of seismic shaking are a possibility throughout the Southern California region and are dependent on the distance between the site and causative fault and the onsite geology. A discussion of these secondary effects is provided in the following sections.

2.6.1 Liquefaction and Dynamic Settlement

Liquefaction is a seismic phenomenon in which loose, saturated, granular soils behave similarly to a fluid when subject to high-intensity ground shaking. Liquefaction occurs when three general conditions coexist: 1) shallow groundwater; 2) low density non-cohesive (granular) soils; and 3) high-intensity ground motion. Studies indicate that saturated, loose near-surface cohesionless soils exhibit the highest liquefaction potential, while dry, dense, cohesionless soils and cohesive soils exhibit low to negligible liquefaction potential. In general, cohesive soils are not considered susceptible to liquefaction, depending on their plasticity and moisture content (Bray & Sancio, 2006). Effects of liquefaction on level ground include settlement, sand boils, and bearing capacity failures below structures. Dynamic settlement of dry loose sands can occur as the sand particles tend to settle and densify as a result of a seismic event.

Based on our review of the State of California Seismic Hazard Zone for liquefaction potential (CDMG, 2001), the site is located within a liquefaction hazard zone. In general, site soils are medium dense to dense and not susceptible to liquefaction. However, isolated loose sand layers are present and considered susceptible to liquefaction. The recent encountered in-situ groundwater depth of 15 feet below existing grade and historic high groundwater depth of 10 feet below existing grade were both used in the liquefaction analysis. The liquefaction evaluation was performed using data from boring HS-1. Liquefaction potential was evaluated using the procedures outlined by Special Publication 117A (SCEC, 1999 & CGS, 2008) and based on the seismic criteria of the 2016 California Building Code (CBC) and historic high groundwater depth. Liquefaction induced settlement was estimated using the PGA_M per the 2016 CBC and a moment magnitude of 6.9 (USGS, 2008).

Results indicate total seismic settlement on the order of 2-inches or less. Differential seismic settlement can be estimated as half of the total estimated settlement over a horizontal span of about 40 feet (i.e., 1-inch over a horizontal span of 40 feet). Seismically induced settlements were estimated by the procedure outlined by Tokimatsu and Seed (1987). Liquefaction calculations are provided in Appendix E.

2.6.2 Lateral Spreading

Lateral spreading is a type of liquefaction-induced ground failure associated with the lateral displacement of surficial blocks of sediment resulting from liquefaction in a subsurface layer. Once liquefaction transforms the subsurface layer into a fluid mass, gravity plus the earthquake inertial forces may cause the mass to move downslope towards a free face (such as a river channel or an embankment). Lateral spreading may cause large horizontal displacements and such movement typically damages pipelines, utilities, bridges, and structures.

Based on site liquefaction potential, lateral spreading and consequently zones of instability (horizontal displacements) near the banks of the adjacent creek are possible during the design basis earthquake ground motion. A corrected $(N_1)_{60}$ blow count of less than 15 is typically used for screening of potential lateral spreading (Youd, Hansen, Bartlett, 2002). Based on the obtained data, the soils within the lateral zone of the creek generally have corrected $(N_1)_{60}$ values of at least 15. Based on the obtained apparent density (i.e., blow counts) obtained from our field evaluation the potential for lateral spreading is generally considered low.

2.7 Expansion Potential

Based on the results of our recent laboratory testing, site soils are anticipated to have a "Very Low" expansion potential. Final expansion potential of site soils should be determined at the completion of grading. Results of expansion testing at finish grades will be utilized to confirm final foundation design.

3.0 CONCLUSIONS

Based on the results of our geotechnical evaluation, it is our opinion that the proposed development is feasible from a geotechnical standpoint, provided the following conclusions and recommendations are implemented.

The following is a summary of the primary geotechnical factors that may affect future development of the site:

- Groundwater was encountered during our subsurface evaluation at a depth of approximately 15 feet below existing ground surface. Historic high groundwater is estimated to be about 10 feet below existing grade (CDMG, 2000).
- The subject site is not located within a State of California Earthquake Fault Zone (Alquist-Priolo). The main seismic hazard that may affect the site is ground shaking from one of the active regional faults. The subject site will likely experience strong seismic ground shaking during its design life.
- Site soils are considered susceptible to liquefaction. The site is located in a State of California Seismic Hazard Zone for liquefaction. Total dynamic settlement is estimated to be on the order of 2-inches or less. Differential dynamic settlement can be estimated at half of the total settlement over a horizontal span of 40 feet for design of foundations.
- Based on the results of preliminary laboratory testing, site soils are anticipated to have "Very Low" expansion potential. Final design expansion potential must be determined at the completion of grading.
- From a geotechnical perspective, the existing onsite soils are suitable material for use as general fill (not retaining wall backfill), provided that they are relatively free from oversized material (larger than 8 inches in maximum dimension), construction debris, and significant organic material.
- Some portions of the onsite soils have high fines content and are not suitable for backfill of site retaining walls. Therefore, import and/or select grading and stockpiling of onsite sandy soils meeting project recommendations may be required.
- Excavations into the existing site soils should be feasible with heavy construction equipment in good working order.

4.0 PRELIMINARY RECOMMENDATIONS

The following recommendations are to be considered preliminary and should be confirmed upon completion of grading and earthwork operations. In addition, they should be considered minimal from a geotechnical viewpoint, as there may be more restrictive requirements from the architect, structural engineer, building codes, governing agencies, or the owner.

It should be noted that the following geotechnical recommendations are intended to provide sufficient information to develop the site in general accordance with the 2016 CBC requirements. With regard to the potential occurrence of potentially catastrophic geotechnical hazards such as fault rupture, earthquake-induced landslides, liquefaction, etc. the following geotechnical recommendations should provide adequate protection for the proposed development to the extent required to reduce seismic risk to an "acceptable level." The "acceptable level" of risk is defined by the California Code of Regulations as "that level that provides reasonable protection of the public safety, though it does not necessarily ensure continued structural integrity and functionality of the project" [Section 3721(a)]. Therefore, repair and remedial work of the proposed improvements may be required after a significant seismic event. With regards to the potential for less significant geologic hazards to the proposed development, the recommendations contained herein are intended as a reasonable protection against the potential damaging effects of geotechnical phenomena such as expansive soils, fill settlement, groundwater seepage, etc. It should be understood, however, that although our recommendations are intended to maintain the structural integrity of the proposed development and structures given the site geotechnical conditions, they cannot preclude the potential for some cosmetic distress or nuisance issues to develop as a result of the site geotechnical conditions.

The geotechnical recommendations contained herein must be confirmed to be suitable or modified based on the actual as-graded conditions.

4.1 Site Earthwork

We anticipate that earthwork at the site will consist of demolition of the existing site improvements, required earthwork removals, subgrade preparation, precise grading and construction of the proposed new improvements including the modular buildings, parking areas, subsurface utilities, water quality facilities, etc.

We recommend that earthwork be performed in accordance with the following recommendations, future grading plan review report(s), the 2016 CBC/City of Lake Forest grading requirements, and the General Earthwork and Grading Specifications included in Appendix F. In case of conflict, the following recommendations shall supersede those included in Appendix F. The following recommendations should be considered preliminary and may be revised based upon future evaluation and review of the project plans and/or based on the actual conditions encountered during site grading/construction.

4.1.1 Site Preparation

Prior to grading of areas to receive structural fill or engineered improvements, the areas should be cleared of existing building structures, asphalt, surface obstructions, and

demolition debris. Vegetation and debris should be removed and properly disposed of off-site. Holes resulting from the removal of buried obstructions, which extend below proposed finish grades, should be replaced with suitable compacted fill material. Any abandoned sewer or storm drain lines should be completely removed and replaced with properly placed compacted fill. Deeper demolition may be required in order to remove existing foundations. We recommend the trenches associated with demolition which extend below the remedial grading depth be backfilled and properly compacted prior to the demolition contractor leaving the site.

If cesspools or septic systems are encountered during earthwork, they should be removed in their entirety. The resulting excavation should be backfilled with properly compacted fill soils. As an alternative, cesspools can be backfilled with lean sand-cement slurry. Any encountered wells should be properly abandoned in accordance with regulatory requirements. At the conclusion of the clearing operations, a representative of LGC Geotechnical should observe and accept the site prior to further grading.

4.1.2 Removal and Recompaction Depths and Limits

In order to provide a relatively uniform bearing condition for the planned building structures and improvements, we recommend the site soils be removed and recompacted.

Buildings: We recommend that soils within the proposed building addition areas and modular building pads be removed and recompacted to a minimum depth of 4 feet below existing grade or 3 feet beneath the base of the foundations, whichever is deeper. Where adequate space is available, the base of removal and recompaction bottoms should extend laterally a minimum distance equal to the depth of removal and recompaction below finish grade or at a minimum distance of 4 feet beyond the edges of the proposed building foundations, whichever is larger.

Minor Site Structures: For minor site structures such as free-standing, screen walls, trash enclosures, etc., removal and recompaction should extend at least 3 feet beneath the existing grade or 2 feet beneath the base of foundations, whichever is deeper. In general, the envelope for removal and recompaction should extend laterally a minimum distance of 3 feet beyond the edges of the proposed improvements mentioned above, where space permits.

Pavement and Hardscape: Within pavement areas, removal and recompaction should extend to a depth of at least 1 foot below the existing grade or 1 foot beneath the finished subgrade (i.e., beneath planned aggregate base/asphalt concrete or gravel). Within hardscape areas, removal and recompaction should extend to a depth of at least 1 foot below the existing grade or 1 foot beneath the finished subgrade (i.e., beneath planned concrete).

Local conditions may be encountered during excavation that could require deep remedial grading beyond the above noted minimum in order to obtain an acceptable subgrade. The actual depths and lateral extents of grading will be determined by the geotechnical consultant, based on subsurface conditions encountered during grading. Removal and

recompaction areas should be accurately staked in the field by the Project Surveyor.

4.1.3 Temporary Excavations

Temporary excavations should be performed in accordance with project plans, specifications, and all Occupational Safety and Health Administration (OSHA) requirements. Excavations should be laid back or shored in accordance with OSHA requirements before personnel or equipment are allowed to enter. Based on our field investigation, the majority of site soils are anticipated to be OSHA Type "B" soils (refer to the attached boring logs). Sandy soils are present and should be considered susceptible to caving. Raveling of the sandy soils should be anticipated for temporary slopes. Flatter slope inclinations should be considered if raveling cannot be tolerated. The exposed slope surface may be kept surficially moist (but not saturated) during construction to reduce (not eliminate) potential sloughing. Soil conditions should be regularly evaluated during construction to verify conditions are as anticipated. The contractor shall be responsible for providing the "competent person" required by OSHA standards to evaluate soil conditions. Close coordination with the geotechnical consultant should be maintained to facilitate construction while providing safe excavations. Excavation safety is the sole responsibility of the contractor.

Surcharge loads (vehicular traffic, soil stockpiles, construction equipment, etc.) should be set back from the perimeter of excavations a minimum distance equivalent to a 1:1 projection from the bottom of the excavation or 5 feet, whichever is greater, unless the cut is properly shored and designed for the applicable surcharge load. Once an excavation has been initiated, it should be backfilled as soon as practical. Prolonged exposure of temporary excavations may result in some localized instability. Excavations should be planned so that they are not initiated without sufficient time to shore/fill them prior to weekends, holidays, or forecasted rain.

It should be noted that any excavation that extends below a 1:1 (horizontal to vertical) projection of an existing foundation will remove existing support of the structure foundation. If requested, temporary shoring parameters will be provided.

4.1.4 Removal Bottoms and Subgrade Preparation

In general, removal bottoms and areas to receive compacted fill should be scarified to a minimum depth of 6 inches, brought to a near-optimum moisture condition (generally within optimum and 2 percent above optimum moisture content), and re-compacted per project recommendations.

Removal bottoms and areas to receive fill should be observed and accepted by the geotechnical consultant prior to subsequent fill placement. Soil subgrade for planned footings and improvements (e.g., slabs, etc.) should be firm and competent.

4.1.5 Material for Fill

From a geotechnical perspective, the onsite soils are generally considered suitable for use as general compacted fill, provided they are screened of significant organic materials, construction debris and oversized material (8 inches in greatest dimension).

From a geotechnical viewpoint, any required import soils for general fill (i.e., non-retaining wall backfill) should consist of soils of "Very Low" expansion potential (expansion index 20 or less based on American Society for Testing and Materials [ASTM] D 4829), and free of significant organic materials, construction debris and any material greater than 3 inches in maximum dimension. Import for any required retaining wall backfill should meet the criteria outlined in the following paragraph. Source samples should be provided to the geotechnical consultant for laboratory testing a minimum of four working days prior to any planned importation.

Retaining wall backfill should consist of imported or onsite free draining, clean granular (sandy) soils with a maximum of 35 percent fines (passing the No. 200 sieve) per ASTM Test Method D1140 (or ASTM D6913/D422) and a "Very Low" expansion potential (EI of 20 or less per ASTM D4829). Soils should also be screened of significant organic materials, construction debris, and any material greater than 3 inches in maximum dimension. The site contains soils that are not suitable for retaining wall backfill due to their fines content; therefore, select grading and stockpiling and/or import of soils meeting the criteria outlined above will be required by the contractor for obtaining suitable retaining wall backfill soil. These preliminary findings should be confirmed during grading.

Aggregate base (crushed aggregate base or crushed miscellaneous base) should conform to the requirements of Section 200-2 of the most recent version of the Standard Specifications for Public Works Construction ("Greenbook") for untreated base materials (except processed miscellaneous base) and/or City of Lake Forest requirements.

The placement of inert demolition materials in compacted fill is acceptable from a geotechnical viewpoint provided the demolition material is broken up into pieces not larger than typically used for aggregate base (approximately 1-inch in maximum dimension) and well blended into fill soils with essentially no resulting voids. Demolition material placed in fills must be free of construction debris (wood, organics, etc.) and reinforcing steel. If asphalt concrete fragments will be incorporated into the demolition materials, approval from an environmental viewpoint may be required and is not the purview of the geotechnical consultant. From our previous experience, we recommend that asphalt concrete fragments be limited to fill areas within planned parking and drive aisle areas (i.e., not within building pad areas).

4.1.6 Placement and Compaction of Fills

Material to be placed as fill should be brought to near-optimum moisture content (generally within optimum and 2 percent above optimum moisture content) and recompacted to at least 90 percent relative compaction (per ASTM D1557). Moisture conditioning of site soils will be required in order to achieve adequate compaction. Drying and or mixing of very moist soils will be required prior to reusing the materials in

compacted fills. Soils are also present that will require additional moisture in order to achieve the required compaction.

The optimum lift thickness to produce a uniformly compacted fill will depend on the type and size of compaction equipment used. In general, fill should be placed in uniform lifts not exceeding 8 inches in compacted thickness. Each lift should be thoroughly compacted and accepted prior to subsequent lifts. Generally, placement and compaction of fill should be performed in accordance with local grading ordinances and with observation and testing performed by the geotechnical consultant. Oversized material as previously defined should be removed from site fills.

During backfill of excavations, the fill should be properly benched into firm and competent soils of temporary backcut slopes as it is placed in lifts.

Aggregate base material should be compacted to at least 95 percent relative compaction at or slightly above optimum moisture content per ASTM D1557. Subgrade below aggregate base should be compacted to at least 90 percent relative compaction per ASTM D1557 at near-optimum moisture content (generally within optimum and 2 percent above optimum moisture content).

4.1.7 Trench and Retaining Wall Backfill and Compaction

The onsite soils may generally be suitable as trench backfill, provided the soils are screened of rocks, construction debris, other material greater than 6 inches in diameter and significant organic matter. If trenches are shallow or the use of conventional equipment may result in damage to the utilities, sand having a sand equivalent (SE) of 30 or greater (per California Test Method [CTM] 217) may be used to bed and shade the pipes. Based on our field evaluation, onsite soils will not meet this sand equivalent requirement. Sand backfill within the pipe bedding zone may be densified by jetting or flooding and then tamping to ensure adequate compaction. Subsequent trench backfill should be compacted in uniform lifts (as outlined above in section "Placement and Compaction of Fills") by mechanical means to at least 90 percent relative compaction (per ASTM D1557).

Utility trenches running parallel to footings should not be excavated within a 1:1 (horizontal to vertical) downward projection from adjacent footings ("footing influence zone") to avoid potential undermining. Depending on the utility line and structural loading of the footing, utility trenches running perpendicular to footings may require special provisions such as sand-cement slurry backfill of the utility trench in this zone or flexible sleeves through the footings. These conditions should be evaluated on a case-by-case basis.

Retaining wall backfill should consist of sandy soils as outlined in preceding Section 4.1.5. The limits of select sandy backfill should extend at minimum ½ the height of the retaining wall or the width of the heel (if applicable), whichever is greater (Figure 3). Retaining wall backfill soils should be compacted in relatively uniform thin lifts to at least 90 percent relative compaction (per ASTM D1557). Jetting or flooding of retaining wall backfill materials should not be permitted.

In backfill areas where mechanical compaction of soil backfill is impractical due to space constraints, typically sand-cement slurry may be substituted for compacted backfill. The slurry should contain about one sack of cement per cubic yard. When set, such a mix typically has the consistency of compacted soil. Sand cement slurry placed near the surface within landscape areas should be evaluated for potential impacts on planned improvements.

A representative from LGC Geotechnical should observe, probe, and test the backfill to verify compliance with the project recommendations.

4.2 Preliminary Foundation Recommendations

The proposed building additions and modular structures may be supported on a conventional slab and spread footings or a mat slab, provided earthwork is performed in accordance with the recommendations presented in this report. All footings should be supported on properly compacted fill. Please note that the following foundation recommendations are preliminary and must be confirmed by LGC Geotechnical at the completion of grading.

Preliminary foundation recommendations are provided in the following sections. The foundation design must be performed by the structural engineer based on the following geotechnical parameters and minimum values provided.

4.2.1 Slab Design and Construction

We recommend building additions be founded on a conventional slab with a minimum thickness of 4 inches. We recommend the prefabricated modular buildings (office structures, etc.) be founded on a mat slab a minimum thickness of 6 inches. Conventional slabs and mat slabs are to be supported on compacted fill soils properly prepared in accordance with the recommendations provided in this report. Minimum slab reinforcement should be determined by the structural engineer based on the imposed loading, crack control, etc.

It is recommended that subgrade soils below mat slabs be moisture conditioned in order to maintain the recommended moisture content up to the time of concrete placement. The recommended moisture content of the mat slab subgrade soils should be approximately 0 to 4 percent above optimum moisture content to a minimum depth of 12 inches. The moisture content of the mat slab subgrade should be verified by the geotechnical engineer within 1 to 2 days prior to concrete placement. In addition, this moisture content should be maintained around the immediate perimeter of the mat slabs during construction.

4.2.2 Slab Underlayment Guidelines

The following is for informational purposes only since slab underlayment (e.g., moisture retarder, sand or gravel layers for concrete curing and/or capillary break) is unrelated to the geotechnical performance of the foundation and thereby not the purview of the geotechnical consultant. Post-construction moisture migration should be expected below the foundation. The foundation engineer should determine whether the use of a capillary break (sand or gravel layer), in conjunction with the vapor retarder, is necessary or required by code. Sand layer thickness and location (above and/or below vapor retarder) should also be determined by the foundation engineer/architect.

4.3 Soil Bearing and Lateral Resistance

Provided our earthwork recommendations are implemented, an allowable soil bearing pressure of 2,000 pounds per square foot (psf) may be used for the design of footings having a minimum width of 12 inches and minimum embedment of 12 inches below lowest adjacent ground surface. These allowable bearing pressures are applicable for level (ground slope equal to or flatter than 5H:1V) conditions only. Bearing values indicated are for total dead loads and frequently applied live loads and may be increased by ⅓ for short duration loading (i.e., wind or seismic loads).

In utilizing the above-mentioned allowable bearing capacity and provided our earthwork recommendations are implemented, foundation settlement due to structural loads is anticipated to be ½-inch or less. Differential settlement may be taken as half of the total settlement (i.e., ¼-inch over a horizontal span of 40 feet).

Resistance to lateral loads can be provided by friction acting at the base of foundations and by passive earth pressure. For concrete/soil frictional resistance, an allowable coefficient of friction of 0.3 may be assumed with dead-load forces. For slabs constructed over a moisture retarder, the allowable friction coefficient should be provided by the manufacturer. An allowable passive lateral earth pressure of 225 psf per foot of depth (or pcf) to a maximum of 2,250 psf may be used for lateral resistance. Allowable passive pressure may be increased to 300 pcf to a maximum of 3,000 psf for short duration seismic or wind loading. These passive pressures are applicable for level (ground slope equal to or flatter than 5H:1V) conditions only. For a 2:1 (horizontal to vertical) downward sloping condition, a reduced allowable passive lateral earth pressure of 100 pcf to a maximum of 1,000 psf may be used. We recommend that the upper foot of passive resistance be neglected if finished grade will not be covered with concrete or asphalt. Frictional resistance and passive pressure may be used in combination without reduction. The provided allowable passive pressures are based on a factor of safety of 1.5 and 1.1 for static and seismic loading conditions, respectively. The structural designer should incorporate appropriate factors of safety and/or load factors in their design.

4.4 Lateral Earth Pressures for Retaining Walls

The following may be used for design of site retaining walls. Lateral earth pressures are provided as equivalent fluid unit weights, in psf per foot of depth (or pcf). These values do not contain an appreciable factor of safety, so the retaining wall designer should apply the applicable factors of safety and/or load factors during design. A soil unit weight of 120 pcf may be assumed for

calculating the actual weight of soil over the wall footing.

The following lateral earth pressures are presented in Table 3 for approved import or onsite free draining, clean granular (sandy) soils with a maximum of 35 percent fines (passing the No. 200 sieve per ASTM D-421/422) and a "Very Low" expansion potential (EI of 20 or less per ASTM D4829). Portions of the onsite soils are not suitable for retaining wall backfill due to their fines content. Therefore, select grading and stockpiling and/or import of soils meeting the criteria outlined above will be required by the contractor for obtaining suitable retaining wall backfill soil. The wall designer should clearly indicate on the retaining wall plans the required select sandy soil backfill criteria. These preliminary findings should be confirmed during grading.

TABLE 3

Lateral Earth Pressures – Approved Sandy Soils

Conditions	**Equivalent Fluid Unit Weight (pcf)**	**Equivalent Fluid Unit Weight (pcf)**
	Level Backfill	**2:1 Sloped Backfill**
	Approved Sandy Soils	**Approved Sandy Soils**
Active	35	55
At-Rest	55	70

If the wall can yield enough to mobilize the full shear strength of the soil, it can be designed for "active" pressure. If the wall cannot yield under the applied load, the earth pressure will be higher. This would include 90-degree corners of retaining walls. Such walls should be designed for "at-rest." The equivalent fluid pressure values assume free-draining conditions and a drainage system will be installed and maintained to prevent the build-up of hydrostatic pressures. If conditions other than those assumed above are anticipated, the equivalent fluid pressure values should be provided on an individual-case basis by the geotechnical engineer.

Retaining wall structures should be provided with appropriate drainage and appropriately waterproofed. To reduce, but not eliminate, saturation of near-surface (upper approximate 1-foot) soils in front of the retaining walls, the perforated subdrain pipe should be located as low as possible behind the retaining wall. The outlet pipe should be sloped to drain to a suitable outlet. In general, we do not recommend retaining wall outlet pipes be connected to area drains. If subdrains are connected to area drains, special care should be taken to maintain these drains. Typical conventional retaining wall drainage is shown on Figure 3. It should be noted that the recommended subdrain does not provide protection against seepage through the face of the wall and/or efflorescence. Waterproofing and outlet systems are not the purview of the geotechnical consultant.

Surcharge loading effects from any adjacent structures should be evaluated by the retaining wall designer. In general, structural loads within a 1:1 (horizontal: vertical) upward projection from the bottom of the proposed retaining wall footing will surcharge the proposed retaining wall. In addition to the recommended earth pressure, retaining walls adjacent to streets should

be designed to resist a uniform lateral pressure of 85 pounds per square foot (psf) due to normal street vehicle traffic, if applicable. Uniform lateral surcharges may be estimated using the applicable coefficient of lateral earth pressure using a rectangular distribution. A factor of 0.45 and 0.3 may be used for at-rest and active conditions, respectively. The retaining wall designer should contact the geotechnical consultant for any required geotechnical input in estimating surcharge loads.

If required, the retaining wall designer may use a seismic lateral earth pressure increment of 10 pcf for a level backfill condition. This increment should be applied in addition to the provided static lateral earth pressure using a triangular distribution with the resultant acting at H/3 in relation to the base of the retaining structure (where H is the retained height). Per Section 1803.5.12 of the 2016 CBC, the seismic lateral earth pressure is applicable to structures assigned to Seismic Design Category D through F for retaining wall structures supporting more than 6 feet of backfill height. The provided seismic lateral earth pressure should not be used for retaining walls exceeding 10 feet in height. If a retaining wall greater than 10 feet in height is proposed or a retaining wall with a sloping backfill condition, the retaining wall designer should contact the geotechnical engineer for specific seismic lateral earth pressure increments based on the configuration of the planned retaining wall structures. This seismic lateral earth pressure is estimated using the procedure outlined by the Structural Engineers Association of California (Lew, et al, 2010).

Soil bearing and lateral resistance (friction coefficient and passive resistance) are provided in Section 4.3 (Soil Bearing and Lateral Resistance). Earthwork considerations (temporary backcuts, backfill, compaction, etc.) for retaining walls are provided in Section 4.1 (Site Earthwork) and the subsequent earthwork related sub-sections.

4.5 Soil Corrosivity

Although not corrosion engineers (LGC Geotechnical is not a corrosion consultant), several governing agencies in Southern California require the geotechnical consultant to determine the corrosion potential of soils to buried concrete and metal facilities. We therefore present the results of our testing with regard to corrosion for the use of the client and other consultants, as they determine necessary.

Corrosion testing of a near-surface bulk sample indicated a soluble sulfate content less than approximately 0.02 percent, a chloride content of 103 parts per million (ppm), pH of 8.2, and a minimum resistivity of 857 ohm-centimeters. Based on Caltrans Corrosion Guidelines (Caltrans, 2015), soils are considered corrosive to structural elements if the pH is 5.5 or less, or the chloride concentration is 500 ppm or greater, or the sulfate concentration is 2,000 ppm (0.2 percent) or greater. Based on the preliminary test results, soils are not considered corrosive using Caltrans criteria.

Based on laboratory sulfate test results, the near surface soils are designated to a class “S0” per ACI 318, Table 19.3.1.1 with respect to sulfates. Concrete in direct contact with the onsite soils can be designed according to ACI 318, Table 19.3.2.1 using the “S0” sulfate classification.

Laboratory testing may need to be performed at the completion of grading by the project corrosion engineer to further evaluate the as-graded soil corrosivity characteristics.

Accordingly, revision of the corrosion potential may be needed, should future test results differ substantially from the conditions reported herein. The client and/or other members of the development team should consider this during the design and planning phase of the project and formulate an appropriate course of action.

4.6 Control of Surface Water and Drainage Control

From a geotechnical perspective, we recommend that compacted finished grade soils adjacent to the proposed warehouse structures be sloped away from the proposed structures towards an approved drainage device or unobstructed swale. Drainage swales, wherever feasible, should not be constructed within 5 feet of buildings. Where lot and building geometry necessitates that the drainage swales be routed closer than 5 feet to structural foundations, we recommend the use of area drains together with drainage swales. Drainage swales used in conjunction with area drains should be designed by the project civil engineer so that a properly constructed and maintained system will prevent ponding within 5 feet of the foundation. Code compliance of grades is not the purview of the geotechnical consultant.

Planters with open bottoms adjacent to buildings should be avoided. Planters should not be designed adjacent to buildings unless provisions for drainage, such as catch basins, liners, and/or area drains, are made. Overwatering must be avoided.

4.7 Subsurface Water Infiltration

Recent regulatory changes in some jurisdictions have recommended that low flow runoff be infiltrated rather than discharged via conventional storm drainage systems. In general, the vast majority of geotechnical distress issues are directly related to improper drainage. In general, distress in the form of movement of improvements could occur as a result of soil saturation and loss of soil support, expansion, internal soil erosion, collapse and/or settlement. Infiltrated water may enter underground utility pipe zones and migrate along the pipe backfill, potentially impacting other improvements located far away from the point of infiltration.

Geotechnical stability and integrity of the project site is reliant upon appropriate handling of surface water. Due to the low infiltration rate, shallow groundwater and site liquefaction potential, we strongly recommend against the intentional infiltration of storm water.

4.8 Preliminary Asphalt Concrete Pavement Sections

The following provisional minimum asphalt concrete (AC) street sections are provided in Table4 for Traffic Indices (TI) of 5.5, 6.0 and 6.5 to be utilized in the design of the auto and truck parking/circulation areas. These sections are based on an assumed R-value of 50. These recommendations must be confirmed with R-value testing of representative near-surface soils at the completion of grading and after underground utilities have been installed and backfilled. Final pavement sections should be confirmed by the project civil engineer based upon the final design Traffic Index. If requested, LGC Geotechnical will provide sections for alternate TI values.

TABLE 4

Preliminary Asphalt Concrete Pavement Section Options

Assumed Traffic Index	5.5	6.0	6.5
R -Value Subgrade	50	50	50
AC Thickness	4.0 inches	4.0 inches	4.0 inches
Aggregate Base Thickness	4.0 inches	4.0 inches	4.5 inches

The pavement section thicknesses provided above are considered minimum thicknesses. Increasing the thickness of any or all of the above layers will reduce the likelihood of the pavement experiencing distress during its service life. The above recommendations are based on the assumption that proper maintenance and irrigation of the areas adjacent to the roadway will occur throughout the design life of the pavement. Failure to maintain a proper maintenance and/or irrigation program may jeopardize the integrity of the pavement.

Earthwork recommendations regarding aggregate base and subgrade are provided in the previous Section "Site Earthwork" and the related sub-sections of this report.

4.9 Preliminary Gravel Parking Area Recommendations

It is our understanding that the equipment parking areas will consist of compacted gravel (1-inch to 1 ½-inch) over compacted subgrade and asphalt concrete paving is not desired. A minimum of 4 inches of compacted gravel over compacted subgrade is recommended.

The thickness shown is a minimum thickness. Increasing the thickness of the above will reduce the likelihood of the equipment parking area experiencing distress during its service life. The above recommendations are based on the assumption that proper maintenance and irrigation of the areas adjacent to the equipment parking areas will occur through the design life of the pavement. Failure to maintain a proper maintenance and/or irrigation program may jeopardize the integrity of the equipment parking areas.

Earthwork recommendations regarding aggregate base and subgrade are provided in the previous Section "Site Earthwork" and the related sub-sections of this report.

4.10 Nonstructural Concrete Flatwork

Nonstructural concrete flatwork (such as walkways, patio slabs, etc.) has a potential for cracking due to changes in soil volume related to soil-moisture fluctuations. To reduce the potential for excessive cracking and lifting, concrete may be designed in accordance with the minimum guidelines outlined in Table 5. These guidelines will reduce the potential for irregular cracking and promote cracking along construction joints, but will not eliminate all cracking or lifting. Thickening the concrete and/or adding additional reinforcement will further reduce cosmetic distress.

TABLE 5

Preliminary Geotechnical Parameters for Nonstructural Concrete Flatwork Placed on Very Low to Low Expansion Potential Subgrade

	Sidewalks	**Private Drives**	**Patios/ Entryways**	**City Sidewalk Curb and Gutters**
Minimum Thickness (in.)	4 (nominal)	4 (full)	4 (full)	City/Agency Standard
Presoaking	Wet down prior to placing	Wet down prior to placing	Wet down prior to placing	City/Agency Standard
Reinforcement	—	No. 3 at 24 inches on centers	No. 3 at 24 inches on centers	City/Agency Standard
Thickened Edge (in.)	—	8 x 8	—	City/Agency Standard
Crack Control Joints	Saw cut or deep open tool joint to a minimum of $^1/_3$ the concrete thickness	Saw cut or deep open tool joint to a minimum of $^1/_3$ the concrete thickness	Saw cut or deep open tool joint to a minimum of $^1/_3$ the concrete thickness	City/Agency Standard
Maximum Joint Spacing	5 feet	10 feet or quarter cut whichever is closer	6 feet	City/Agency Standard
Aggregate Base Thickness (in.)	—	—	—	City/Agency Standard

4.11 Geotechnical Plan Review

When available, project plans (grading, foundation, retaining wall, etc.) should be reviewed by this office prior to construction to verify that our geotechnical recommendations have been incorporated. Additional field work and/or modified geotechnical recommendations may be necessary.

4.12 Geotechnical Observation and Testing During Construction

The recommendations provided in this report are based on limited subsurface observations and geotechnical analysis. The interpolated subsurface conditions should be checked in the field during construction by a representative of LGC Geotechnical. Geotechnical observation and testing is required per Section 1705 of the 2016 California Building Code (CBC).

Geotechnical observation and/or testing should be performed by LGC Geotechnical at the following stages:

- During grading (removal and recompaction bottoms, fill placement, etc.);
- During retaining wall backfill and compaction;
- During utility trench backfill and compaction;
- After moisture conditioning building pads and other concrete-flatwork subgrades, and prior to placement of aggregate base or concrete;
- Preparation of pavement subgrade and placement of aggregate base;
- After building and wall footing excavation and prior to placing steel reinforcement and/or concrete; and
- When any unusual soil conditions are encountered during any construction operation subsequent to issuance of this report.

5.0 LIMITATIONS

Our services were performed using the degree of care and skill ordinarily exercised, under similar circumstances, by reputable soils engineers and geologists practicing in this or similar localities. No other warranty, expressed or implied, is made as to the conclusions and professional advice included in this report.

This report is based on data obtained from limited observations of the site, which have been extrapolated to characterize the site. While the scope of services performed is considered suitable to adequately characterize the site geotechnical conditions relative to the proposed development, no practical evaluation can completely eliminate uncertainty regarding the anticipated geotechnical conditions in connection with a subject site. Variations may exist and conditions not observed or described in this report may be encountered during grading and construction.

This report is issued with the understanding that it is the responsibility of the owner, or of his/her representative, to ensure that the information and recommendations contained herein are brought to the attention of the other consultants (at a minimum the civil engineer, structural engineer, landscape architect) and incorporated into their plans. The contractor should properly implement the recommendations during construction and notify the owner if they consider any of the recommendations presented herein to be unsafe, or unsuitable.

The findings of this report are valid as of the present date. However, changes in the conditions of a site can and do occur with the passage of time, whether they be due to natural processes or the works of man on this or adjacent properties. The findings, conclusions, and recommendations presented in this report can be relied upon only if LGC Geotechnical has the opportunity to observe the subsurface conditions during grading and construction of the project, in order to confirm that our preliminary findings are representative for the site. This report is intended exclusively for use by the client, any use of or reliance on this report by a third party shall be at such party's sole risk.

In addition, changes in applicable or appropriate standards may occur, whether they result from legislation or the broadening of knowledge. Accordingly, the findings of this report may be invalidated wholly or partially by changes outside our control. Therefore, this report is subject to review and modification.

LEGEND

Proposed Location of Hollow Stem Boring by LGC Geotechnical, with Approximate Proposed Depth in Feet

Proposed Location of Hollow Stem Auger Infiltration Boring by LGC Geotechnical, with Approximate Proposed Depth in Feet

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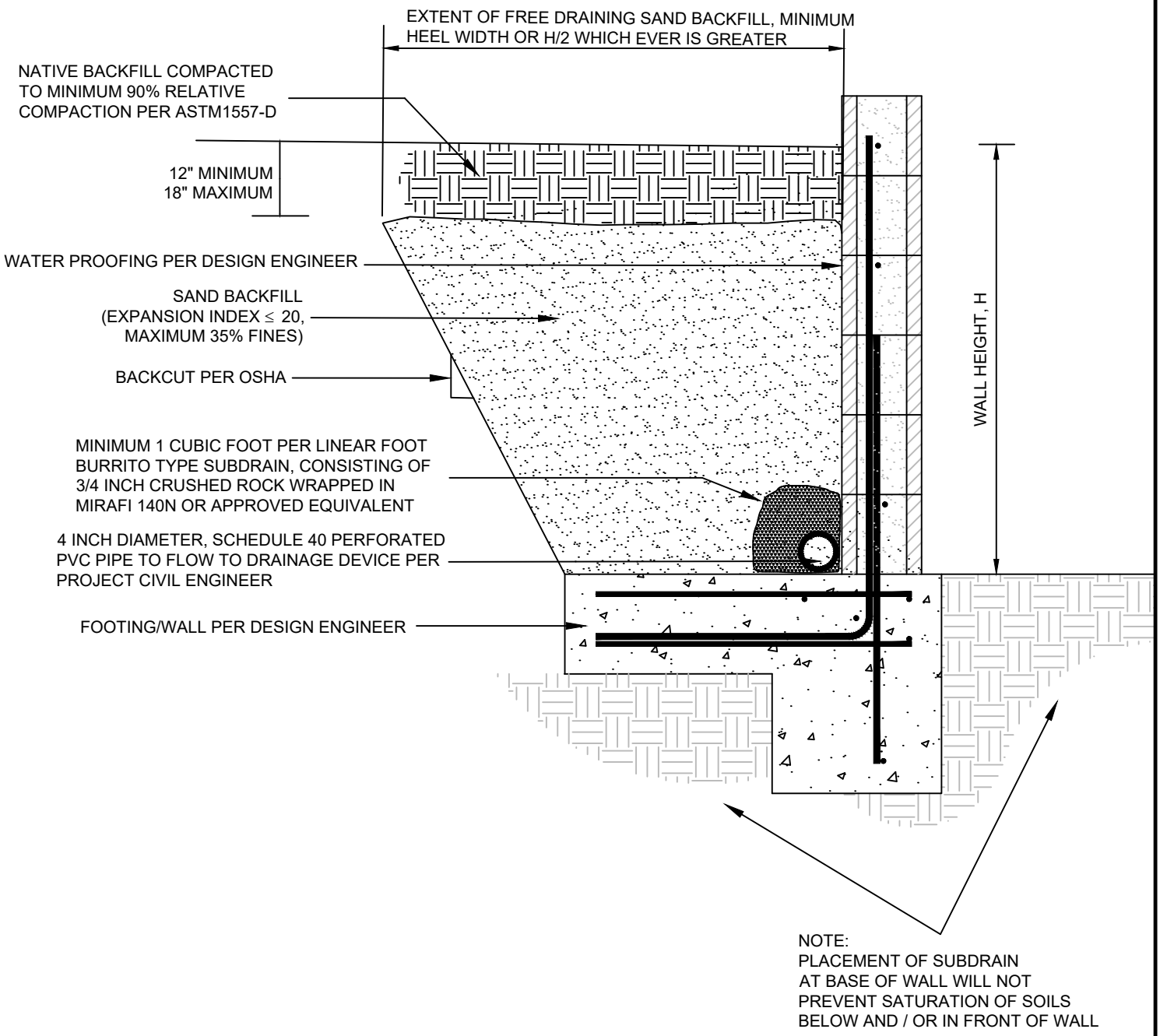
FIGURE 2
Geotechnical Exploration Location Map

PROJECT NAME	*Great Scott - Lake Forest*
PROJECT NO.	*19035-01*
ENG. / GEOL.	*RLD / KTM*
SCALE	*Not to Scale*
DATE	*May 2019*



LGC Geotechnical, Inc.

FIGURE 3
Retaining Wall Detail

PROJECT NAME	Great Scott - Lake Forest
PROJECT NO.	19035-01
ENG.	RLD
SCALE	Not to Scale
DATE	May 2019

Appendix A
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APPENDIX A

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Appendix B
Field Exploration Logs

Geotechnical Boring Log Borehole HS-1

Date: 4/8/2019 | **Drilling Company:** Cal Pac

Project Name: Great Scott - Lake Forest | **Type of Rig:** Track Rig

Project Number: 19035-01 | **Drop:** 30" | **Hole Diameter:** 8"

Elevation of Top of Hole: ~631' MSL | **Drive Weight:** 140 pounds

Hole Location: See Geotechnical Map

Logged By BPP
Sampled By BPP
Checked By RLD

Elevation (ft)	Depth (ft)	Graphic Log	Sample Number	Blow Count	Dry Density (pcf)	Moisture (%)	USCS Symbol	DESCRIPTION	Type of Test
630	0	B-1					SP-SC	**@0' to 30' - Quaternary Alluvium (Qal)** @0' - Silty SAND: dark brown, slightly moist	EI,CR
			R-1	5 6 6	111.8	12.1	SM	@2.5' - Silty SAND: gray, moist, loose	
625	5		R-2	2 3 3	98.2	14.2		@5' - Silty SAND: brown, very moist, loose	
			R-3	2 4 7	112.2	14.6	SC	@7.5' - Clayey SAND: dark olive brown, very moist, loose	CN
620	10		R-4	2 2 3	101.8	21.8		@10' - Clayey SAND: brown, very moist, loose	-#200
615	15	▽	SPT-1	2 2 3		26.2	CL	@15' - Sandy CLAY: brown, wet, medium stiff; groundwater	AL
610	20		R-5	11 12 11	112.7	15.1	SP-SM	@20' - SAND with Silt: light brown, wet, medium dense	-#200
605	25		SPT-2	5 11 12		18.4	SM	@25' - Silty SAND: brown, wet, medium dense	-#200
	30							**@30' to T.D. - Tertiary Capistrano Formation, Oso Member (Tco)**	

LGC Geotechnical, Inc.

THIS SUMMARY APPLIES ONLY AT THE LOCATION OF THIS BORING AND AT THE TIME OF DRILLING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH THE PASSAGE OF TIME. THE DATA PRESENTED IS A SIMPLIFICATION OF THE ACTUAL CONDITIONS ENCOUNTERED. THE DESCRIPTIONS PROVIDED ARE QUALITATIVE FIELD DESCRIPTIONS AND ARE NOT BASED ON QUANTITATIVE ENGINEERING ANALYSIS.

SAMPLE TYPES:

B	BULK SAMPLE
R	RING SAMPLE (CA Modified Sampler)
G	GRAB SAMPLE
SPT	STANDARD PENETRATION TEST SAMPLE
▽	GROUNDWATER TABLE

TEST TYPES:

DS	DIRECT SHEAR
MD	MAXIMUM DENSITY
SA	SIEVE ANALYSIS
S&H	SIEVE AND HYDROMETER
EI	EXPANSION INDEX
CN	CONSOLIDATION
CR	CORROSION
AL	ATTERBERG LIMITS
CO	COLLAPSE/SWELL
RV	R-VALUE
-#200	% PASSING # 200 SIEVE

Last Edited: 4/25/2019

Geotechnical Boring Log Borehole HS-1

Date: 4/8/2019 | **Drilling Company:** Cal Pac

Project Name: Great Scott - Lake Forest | **Type of Rig:** Track Rig

Project Number: 19035-01 | **Drop:** 30" | **Hole Diameter:** 8"

Elevation of Top of Hole: ~631' MSL | **Drive Weight:** 140 pounds

Hole Location: See Geotechnical Map

Logged By BPP
Sampled By BPP
Checked By RLD

Elevation (ft)	Depth (ft)	Graphic Log	Sample Number	Blow Count	Dry Density (pcf)	Moisture (%)	USCS Symbol	DESCRIPTION	Type of Test
600	30		R-6	9 11 22	117.0	14.5	SC	@30' - Clayey SAND with some gravel: gray-brown, wet, medium dense; extremely weathered bedrock	-#200
595	35		SPT-3	3 11 27		17.2	SM	@35' - Silty SAND: yellowish brown, wet, dense	
590	40		R-7	50/2"	105.4	24.8	SC	@40' - Clayey SAND: gray-brown with iron oxide staining, wet, very dense; slightly weathered bedrock	
585	45		SPT-4	50/6"		17.5		@45' - Clayey SAND: gray with iron oxide staining, wet, very dense @47' - Auger Refusal	
580	50							Total Depth = 50' Groundwater Encountered at Approximately 15' Backfilled with Cuttings on 4/8/2019	
575	55								
	60								

LGC Geotechnical, Inc.

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EI	EXPANSION INDEX
CN	CONSOLIDATION
CR	CORROSION
AL	ATTERBERG LIMITS
CO	COLLAPSE/SWELL
RV	R-VALUE
-#200	% PASSING # 200 SIEVE

Geotechnical Boring Log Borehole HS-2

Date: 4/8/2019	**Drilling Company:** Cal Pac
Project Name: Great Scott - Lake Forest	**Type of Rig:** Track Rig
Project Number: 19035-01	**Drop:** 30" **Hole Diameter:** 8"
Elevation of Top of Hole: ~646' MSL	**Drive Weight:** 140 pounds
Hole Location: See Geotechnical Map	Page 1 of 1

Logged By BPP
Sampled By BPP
Checked By N/A

Elevation (ft)	Depth (ft)	Graphic Log	Sample Number	Blow Count	Dry Density (pcf)	Moisture (%)	USCS Symbol	DESCRIPTION	Type of Test
645	0	B-1					SM	**@0' to T.D. - <u>Quaternary Young Alluvium (Qya)</u>** @0' - Silty SAND with Gravel: brown and dry	RV
			R-1	8 8 12	105.6	0.8	SP	@2.5' - SAND: pinkish-brown, dry, medium dense	
640	5		R-2	7 7 9	100.0	2.4		@5' - SAND: light brown, dry, medium dense	
			R-3	7 9 12	103.0	1.1		@7.5' - SAND: yellowish brown, dry, medium dense	
635	10		R-4	7 13 14	91.4	0.7		@10' - SAND: pinkish gray, dry, medium dense	
630	15							Total Depth = 10' Groundwater Not Encountered Backfilled with Cuttings on 4/8/2019	
625	20								
620	25								
	30								

LGC Geotechnical, Inc.

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B	BULK SAMPLE
R	RING SAMPLE (CA Modified Sampler)
G	GRAB SAMPLE
SPT	STANDARD PENETRATION TEST SAMPLE
▽	GROUNDWATER TABLE

TEST TYPES:

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S&H	SIEVE AND HYDROMETER
EI	EXPANSION INDEX
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CR	CORROSION
AL	ATTERBERG LIMITS
CO	COLLAPSE/SWELL
RV	R-VALUE
-#200	% PASSING # 200 SIEVE

Last Edited: 4/25/2019

Geotechnical Boring Log Borehole I-1

Date: 4/8/2019 | **Drilling Company:** Cal Pac

Project Name: Great Scott - Lake Forest | **Type of Rig:** Track Rig

Project Number: 19035-01 | **Drop:** 30" | **Hole Diameter:** 8"

Elevation of Top of Hole: ~630' MSL | **Drive Weight:** 140 pounds

Hole Location: See Geotechnical Map

Logged By BPP
Sampled By BPP
Checked By N/A

Elevation (ft)	Depth (ft)	Graphic Log	Sample Number	Blow Count	Dry Density (pcf)	Moisture (%)	USCS Symbol	DESCRIPTION	Type of Test
	0		R-1	2 2 3	110.6	10.2	SM	**@0' to T.D. - <u>Quaternay Alluvium (Qal)</u>** @0' - Silty SAND: brown and moist @2.5' - Silty SAND: gray-brown, wet, very loose	
625	5							Total Depth = 5' Groundwater Not Encountered Backfilled with Cuttings on 4/8/2019	
620	10								
615	15								
610	20								
605	25								
	30								

LGC Geotechnical, Inc.

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AL	ATTERBERG LIMITS
CO	COLLAPSE/SWELL
RV	R-VALUE
-#200	% PASSING # 200 SIEVE

Last Edited: 4/25/2019

Appendix C
Laboratory Test Results

APPENDIX C

Laboratory Test Results

The laboratory testing program was directed towards providing quantitative data relating to the relevant engineering properties of the soils. Samples considered representative of site conditions were tested in general accordance with American Society for Testing and Materials (ASTM) procedure and/or California Test Methods (CTM), where applicable. The following summary is a brief outline of the test type and a table summarizing the test results.

Moisture and Density Determination Tests: Moisture content (ASTM D2216) and dry density determinations (ASTM D2937) were performed on driven samples obtained from the test borings. The results of these tests are presented in the boring logs. Where applicable, only moisture content was determined from SPT or disturbed samples.

Grain Size Distribution/Fines Content: Representative samples were dried, weighed, and soaked in water until individual soil particles were separated (per ASTM D421) and then washed on a No. 200 sieve (ASTM D1140). Where applicable, the portion retained on the No. 200 sieve was dried and then sieved on a U.S. Standard brass sieve set in accordance with ASTM D6913 (sieve) or ASTM D422 (sieve and hydrometer).

Sample Location	Description	% Passing # 200 Sieve
HS-1 @ 10 ft	Clayey Sand	37
HS-1 @ 20 ft	Sand with Silt	6
HS-1 @ 25 ft	Silty Sand	16
HS-1 @ 30 ft	Clayey Sand with some Gravel	37

Atterberg Limits: The liquid and plastic limits ("Atterberg Limits") were determined per ASTM D4318 for engineering classification of fine-grained material and presented in the table below. The USCS soil classification indicated in the table below is based on the portion of sample passing the No. 40 sieve and may not necessarily be representative of the entire sample. The plot is provided in this Appendix.

Sample Location	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	USCS Soil Classification
HS-1 @ 15 ft	35	18	17	CL

Laboratory Test Results

Consolidation: One consolidation test was performed per ASTM D2435. A sample (2.4 inches in diameter and 1 inch in height) was placed in a consolidometer and increasing loads were applied. The sample was allowed to consolidate under "double drainage" and total deformation for each loading step was recorded. The percent consolidation for each load step was recorded as the ratio of the amount of vertical compression to the original sample height. The consolidation pressure curve is provided in this Appendix.

Expansion Index: The expansion potential of a selected representative sample was evaluated by the Expansion Index Test per ASTM D4829.

Sample Location	Expansion Index	Expansion Potential*
HS-1 @ 1-5 ft	8	Very Low

* Per ASTM D4829

R-value Test: R-value test was performed in general accordance with California Test Method 301. The plot is included in the Appendix.

Sample Location	R-value
HS-2 @ 1-5 ft	66

Soluble Sulfates: The soluble sulfate content of a selected sample was determined by standard geochemical methods (CTM 417). The test results are presented in the table below.

Sample Location	Sulfate Content (%)
HS-1 @ 1-5 ft	< 0.02

Chloride Content: Chloride content was tested per CTM 422. The results are presented below.

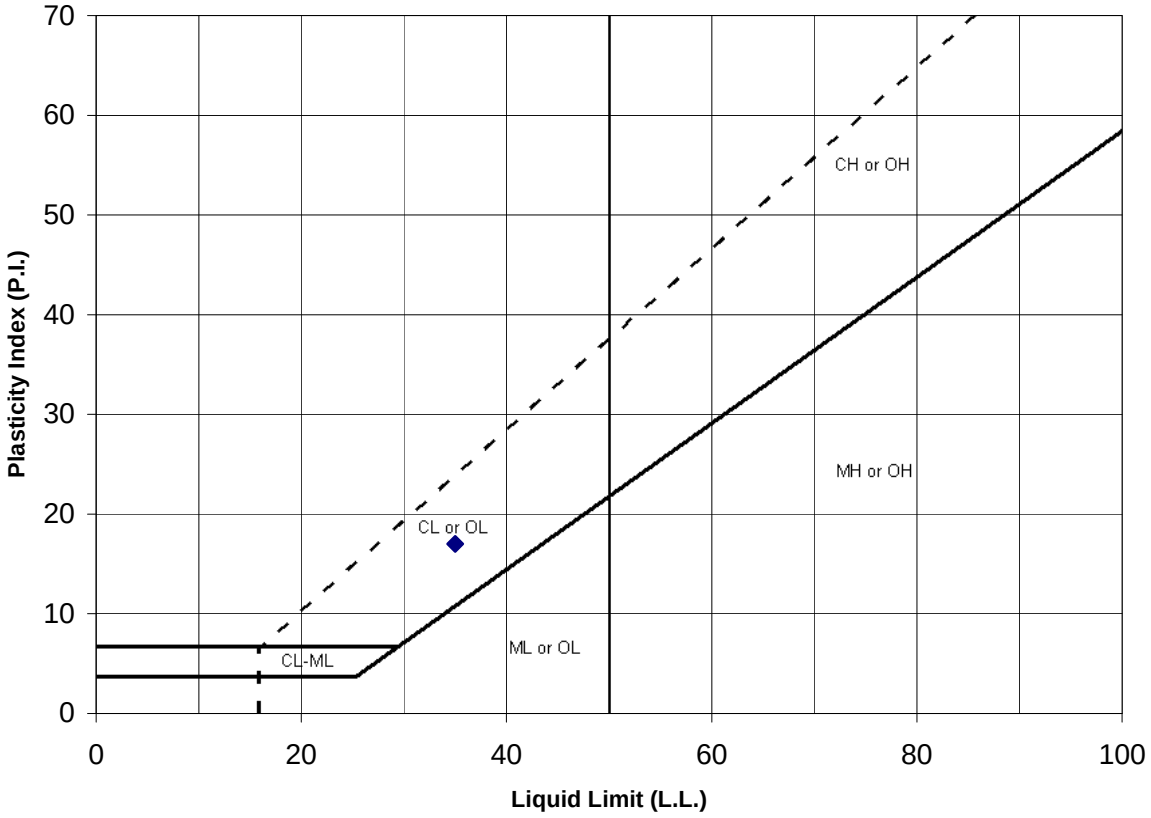
Sample Location	Chloride Content (ppm)
HS-1 @ 1-5 ft	103

Laboratory Test Results

Minimum Resistivity and pH Tests: Minimum resistivity and pH tests were performed in general accordance with CTM 643 and standard geochemical methods. The results are presented in the table below.

Sample Location	pH	Minimum Resistivity (ohms-cm)
HS-1 @ 1-5 ft	8.2	857

PLASTICITY CHART - CLASSIFICATION OF FINE-GRAINED SOILS



Symbol	Location.:	Sample No.:	Depth (ft)	Passing No. 200 Sieve (%)	Liquid Limit (%) LL	Plastic Limit (%) PL	Plasticity Index (%) PI	USCS
◆	HS-1	SPT-1	15	-	35	18	17	CL

LGC Geotechnical, Inc.

ATTERBERG LIMITS
(ASTM D 4318)

Project Number: 19035-01
Date: Apr-19

Great Scott - Lake Forest

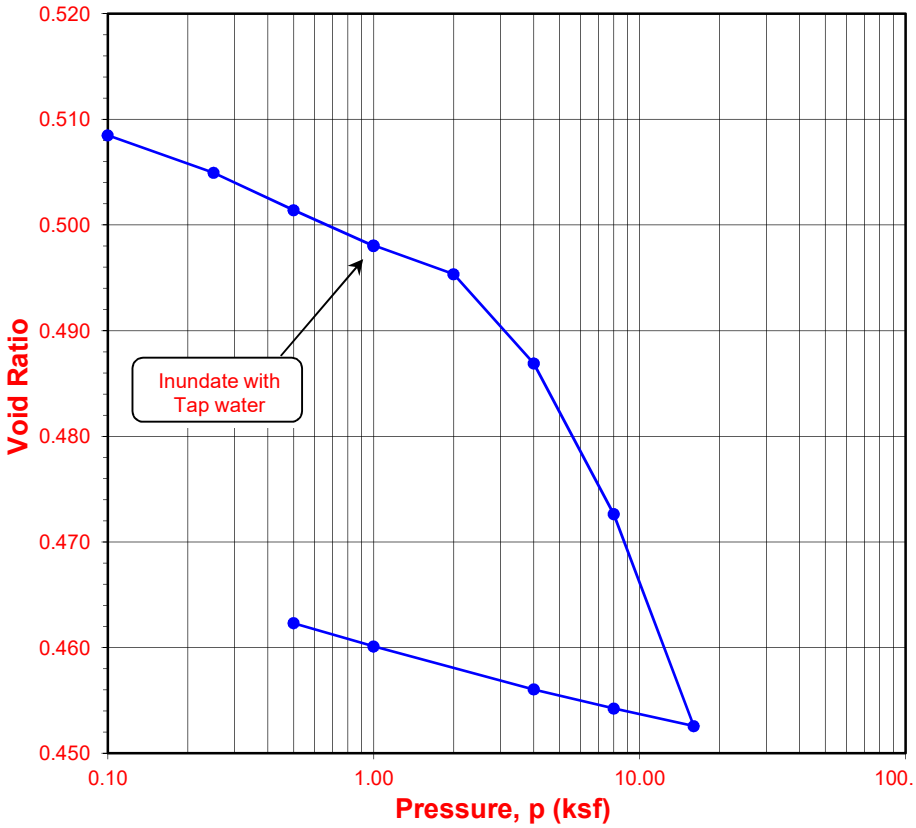
ONE-DIMENSIONAL CONSOLIDATION PROPERTIES of SOILS

ASTM D 2435

Project Name: Lake Forest
Project No.: 19035-01
Boring No.: HS-1
Sample No.: R-3
Soil Identification: Dark olive brown clayey sand (SC)

Tested By: G. Bathala Date: 04/10/19
Checked By: J. Ward Date: 04/24/19
Depth (ft.): 7.5
Sample Type: Ring

Sample Diameter (in.)	2.415
Sample Thickness (in.)	1.000
Wt. of Sample + Ring (g)	199.51
Weight of Ring (g)	45.62
Height after consol. (in.)	0.9688
Before Test	
Wt.Wet Sample+Cont. (g)	208.34
Wt.of Dry Sample+Cont. (g)	190.23
Weight of Container (g)	66.23
Initial Moisture Content (%)	14.6
Initial Dry Density (pcf)	111.7
Initial Saturation (%)	77
Initial Vertical Reading (in.)	0.3164
After Test	
Wt.of Wet Sample+Cont. (g)	269.38
Wt. of Dry Sample+Cont. (g)	250.41
Weight of Container (g)	71.40
Final Moisture Content (%)	14.22
Final Dry Density (pcf)	114.5
Final Saturation (%)	81
Final Vertical Reading (in.)	0.2809
Specific Gravity (assumed)	2.70
Water Density (pcf)	62.43

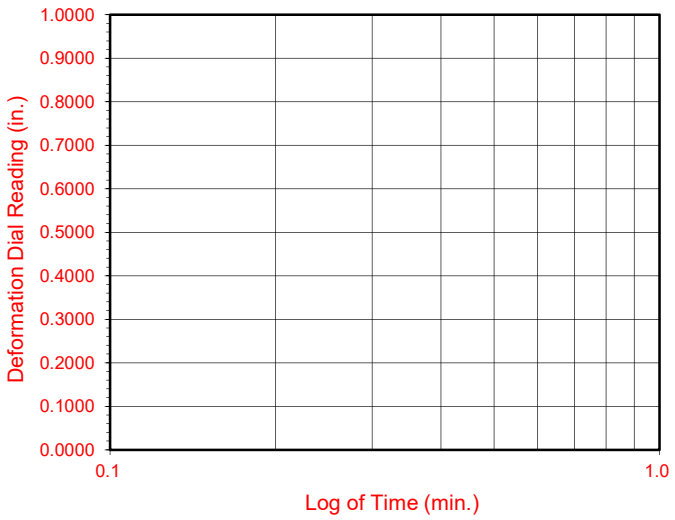


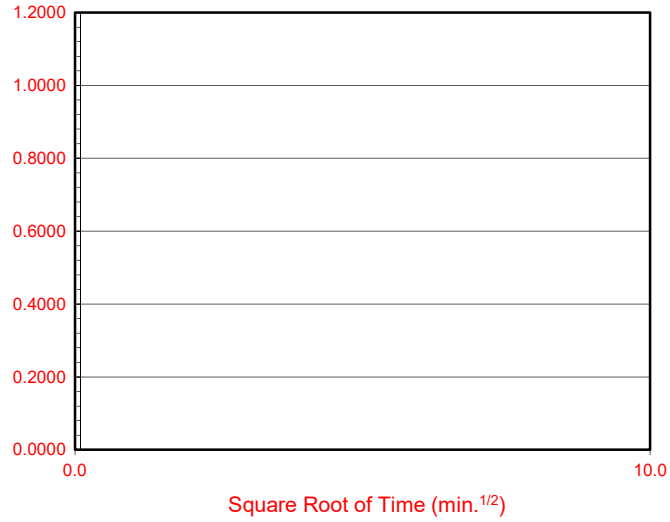
Pressure (p) (ksf)	Final Reading (in.)	Apparent Thickness (in.)	Load Compliance (%)	Deformation % of Sample Thickness	Void Ratio	Corrected Deformation (%)
0.10	0.3158	0.9994	0.00	0.06	0.508	0.06
0.25	0.3128	0.9964	0.07	0.37	0.505	0.30
0.50	0.3098	0.9934	0.13	0.66	0.501	0.53
1.00	0.3068	0.9904	0.21	0.96	0.498	0.75
1.00	0.3068	0.9904	0.21	0.96	0.498	0.75
2.00	0.3038	0.9874	0.33	1.26	0.495	0.93
4.00	0.2969	0.9805	0.46	1.95	0.487	1.49
8.00	0.2857	0.9693	0.64	3.08	0.473	2.44
16.00	0.2702	0.9538	0.86	4.63	0.453	3.77
8.00	0.2721	0.9557	0.78	4.44	0.454	3.66
4.00	0.2743	0.9579	0.68	4.22	0.456	3.54
1.00	0.2788	0.9624	0.50	3.77	0.460	3.27
0.50	0.2809	0.9645	0.43	3.55	0.462	3.12

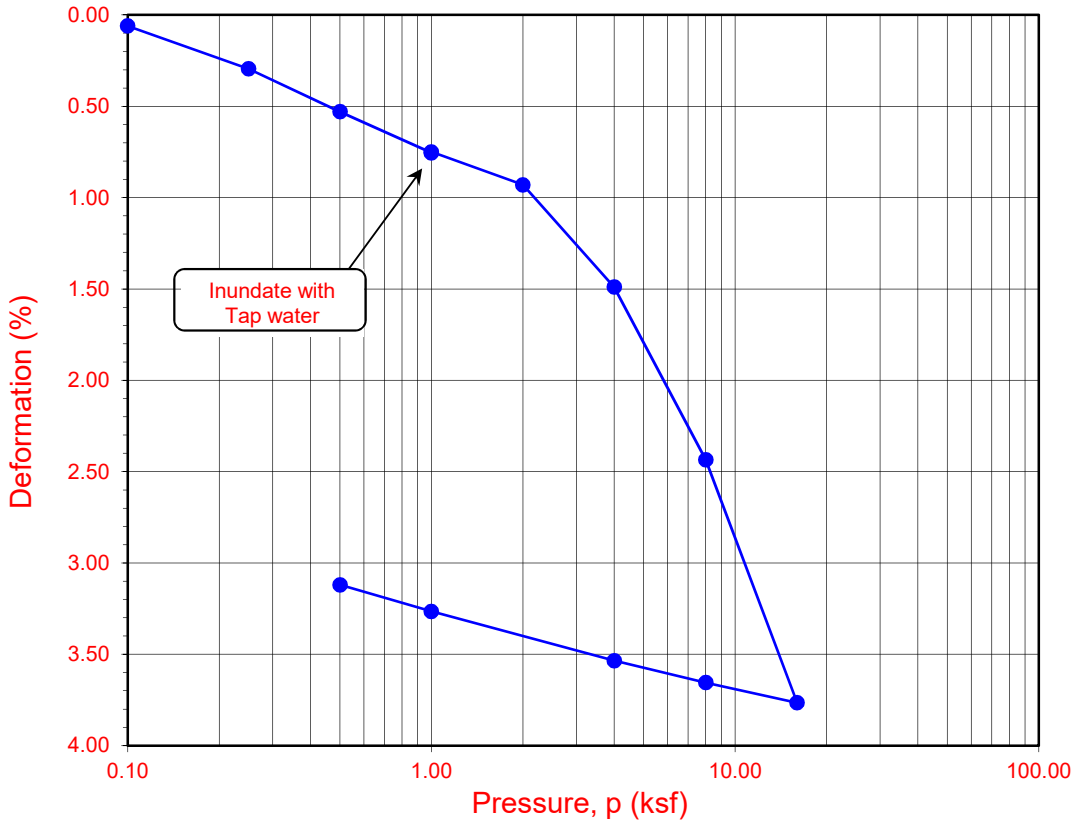
Time Readings

Date	Time	Elapsed Time (min)	Square Root of Time	Dial Rdgs. (in.)

Time Readings







Boring No.	Sample No.	Depth (ft.)	Moisture Content (%)		Dry Density (pcf)		Void Ratio		Degree of Saturation (%)	
			Initial	Final	Initial	Final	Initial	Final	Initial	Final
HS-1	**R-3**	**7.5**	**14.6**	**14.2**	**111.7**	**114.5**	**0.509**	**0.462**	**77**	**81**

Soil Identification: Dark olive brown clayey sand (SC)

ONE-DIMENSIONAL CONSOLIDATION PROPERTIES of SOILS
ASTM D 2435

Project No.: 19035-01

Lake Forest

04-19

R-VALUE TEST RESULTS

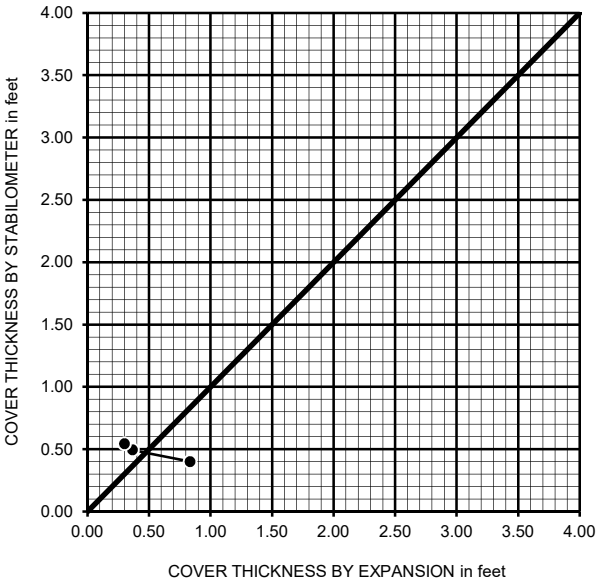
DOT CA Test 301

PROJECT NAME:	Lake Forest	PROJECT NUMBER:	19035-01
BORING NUMBER:	HS-2	DEPTH (FT.):	1-5
SAMPLE NUMBER:	B-1	TECHNICIAN:	S. Felter
SAMPLE DESCRIPTION:	Brown silty sand with Gravel (SM)	DATE COMPLETED:	4/16/2019

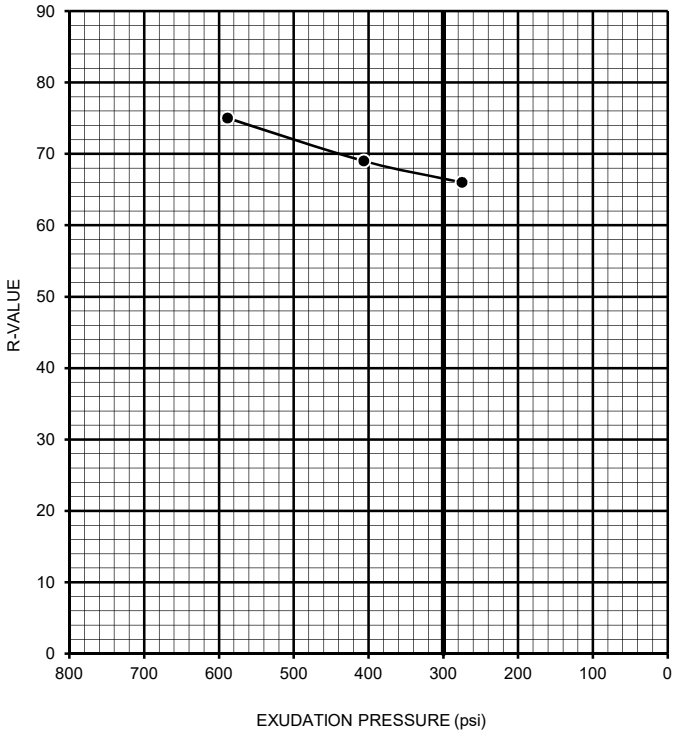
TEST SPECIMEN	a	b	c
MOISTURE AT COMPACTION %	11.0	11.4	11.8
HEIGHT OF SAMPLE, Inches	2.49	2.50	2.59
DRY DENSITY, pcf	118.4	120.3	116.5
COMPACTOR PRESSURE, psi	350	300	250
EXUDATION PRESSURE, psi	588	406	275
EXPANSION, Inches x 10exp-4	25	11	9
STABILITY Ph 2,000 lbs (160 psi)	26	33	38
TURNS DISPLACEMENT	4.26	4.32	4.42
R-VALUE UNCORRECTED	75	69	64
R-VALUE CORRECTED	75	69	66

DESIGN CALCULATION DATA	a	b	c
GRAVEL EQUIVALENT FACTOR	1.0	1.0	1.0
TRAFFIC INDEX	5.0	5.0	5.0
STABILOMETER THICKNESS, ft.	0.40	0.50	0.54
EXPANSION PRESSURE THICKNESS, ft.	0.83	0.37	0.30

EXPANSION PRESSURE CHART



EXUDATION PRESSURE CHART



R-VALUE BY EXPANSION:	70
R-VALUE BY EXUDATION:	66
EQUILIBRIUM R-VALUE:	66

Appendix D
Infiltration Test Data

Infiltration Test Data Sheet

LGC Geotechnical, Inc

131 Calle Iglesia Suite 200, San Clemente, CA 92672 tel. (949) 369-6141

Project Name: Great Scott - Lake Forest

Project Number: 19035-01

Date: 4/4/2019

Boring Number: I-1

Test hole dimensions (if circular)	
Boring Depth (feet)*:	5
Boring Diameter (inches):	8
Pipe Diameter (inches):	2

*measured at time of test

Test pit dimensions (if rectangular)	
Pit Depth (feet):	
Pit Length (feet):	
Pit Breadth (feet):	

Minimum test Head (D_o):

(What the sounder tape should read)

Boring Depth - (5 x Boring Radius) 3.4 ft

(Shallow) The value on the sounder tape should be close to this value during testing for **DEEP** testing fill to 4 feet below top of hole

*Pre-Test (Sandy Soil Criteria)**

Trial No.	Start Time (24:HR)	Stop Time (24:HR)	Time Interval (min)	Initial Depth to Water (feet)	Final Depth to Water (feet)	Total Change in Water Level (feet)	Greater Than or Equal to 0.5 feet (yes/no)
1	8:37	9:02	25.0	2.54	2.92	0.38	No
2	9:02	9:27	25.0	2.60	2.93	0.33	No

*If two consecutive measurements show that six inches of water seeps away in less than 25 minutes, the test shall be run for an additional hour with measurements taken every 10 minutes. Otherwise, pre-soak (fill) overnight, and then obtain at least twelve measurements per hole over at least six hours (approximately 30 minute intervals) with a precision of at least 0.25 inches

Main Test Data

Trial No.	Start Time (24:HR)	Stop Time (24:HR)	Time Interval, Δt (min)	Initial Depth to Water, D_o (feet)	Final Depth to Water, D_f (feet)	Change in Water Level, ΔD (feet)	Calculated Infiltration Rate(in/hr)
1	9:28	9:58	30.0	2.50	2.88	0.38	0.6
2	9:59	10:29	30.0	2.47	2.88	0.41	0.7
3	10:30	11:00	30.0	2.53	2.91	0.38	0.6
4	11:01	11:31	30.0	2.53	2.93	0.4	0.7
5	11:32	12:02	30.0	2.54	2.95	0.41	0.7
6	12:03	12:33	30.0	2.49	2.91	0.42	0.7
7	12:34	13:04	30.0	2.58	3.00	0.42	0.7
8	13:05	13:35	30.0	2.52	2.93	0.41	0.7
9	13:36	14:06	30.0	2.53	2.95	0.42	0.7
10	14:07	14:37	30.0	2.48	2.89	0.41	0.7
11	14:38	15:08	30.0	2.45	2.90	0.45	0.7
12	15:09	15:39	30.0	2.53	2.98	0.45	0.7

Calculated Infiltration Rate (No factors of safety)	**0.7**
Factor of Safety	**2.0**
Calculated Infiltration Rate (With Factor of Safety)	**0.35**

Sketch:

Notes:

Based on Guidelines from: Orange County 05/19/2011

Spreadsheet Revised on: 10/26/2016

LGC Geotechnical, Inc.

Appendix E
Liquefaction Analysis

LIQUEFACTION EVALUATION

Based on *Proceeding of the NCEER Workshop on Evaluation of Liquefaction Resistance of Soils*, Technical Report NCEER-97-0022, December 31, 1997
and *Evaluation of Settlments in Sand due to Earthquake Shaking*, Tokimatsu and Seed, 1987

Seismic Event		**Profile Constants**		**Depth to GWT**		**Project Name**	Great Scott M.V.
Moment Magnitude	6.9	Total Unit Weight (lb/ft^3)	120	During Investigation (ft)	15	**Project Number**	19035-01
Peak Ground Acceleration	0.53 g	Unit Weight of Water (lbs/ft^3	62.4	During Design Event (ft)	10	**Boring**	HS- 1

Determination of Cyclic Resitance Ratio

Sampling Data					During Investigation			Sampling Correction Factors											
		Blow Count		Thickness	Total Stress	Pore Pressure	Effective	Sampler	SPT	Overburden	Energy	Borehole	Rod Length	Sampler Type		Fines			
Depth (ft)	Depth (m)	SPT	Rings	(ft)	Stress (psf)	Pressure (psf)	Stress (psf)	Diameter	N_m	C_N	C_E	C_B	C_R	C_S	$(N_1)_{60}$	Content	$(N_1)_{60cs}$	K_σ	$CRR_{7.5}$
2.5	0.8		12	3.75	420	0	420	0.62	7.44	1.70	1.25	1.00	0.75	1.00	11.86	5	11.9	1.000	0.128
5	1.5		6	2.5	720	0	720	0.62	3.72	1.70	1.25	1.00	0.75	1.00	5.94	25	10.9	1.000	0.118
7.5	2.3		11	3.75	1020	0	1020	0.62	6.82	1.43	1.25	1.00	0.75	1.00	9.15	25	14.5	1.000	0.157
10	3.0		5	2.5	1320	0	1320	0.62	3.10	1.26	1.25	1.00	0.75	1.00	3.66	37	9.4	1.000	0.102
15	4.6	5		5	1920	0	1920	1.00	5.00	1.04	1.25	1.00	0.85	1.10	6.09	50	12.3	1.000	0.133
20	6.1		23	5	2520	312	2208	0.62	14.26	0.97	1.25	1.00	0.95	1.00	16.47	6	16.6	0.986	0.176
25	7.6	23		5	3120	624	2496	1.00	23.00	0.91	1.25	1.00	0.95	1.10	27.48	16	31.7	0.965	SPT >30 NF
30	9.1		33	5	3720	936	2784	0.62	20.46	0.87	1.25	1.00	0.95	1.00	21.04	37	30.2	0.946	SPT >30 NF
35	10.7	38		5	4320	1248	3072	1.00	38.00	0.82	1.25	1.00	1.00	1.10	43.08	15	47.6	0.927	SPT >30 NF
40	12.2		100	5	4920	1560	3360	0.62	62.00	0.79	1.25	1.00	1.00	1.00	61.09	15	66.5	0.910	SPT >30 NF
45	13.7	100		2.5	5520	1872	3648	1.00	100.00	0.76	1.25	1.00	1.00	1.10	104.03	15	111.5	0.893	SPT >30 NF

Determination of Cyclic Stress Ratio

Sampling Data					During Design Event						
		Blow Count			Total Stress	Pore Pressure	Effective				
Depth (ft)	Depth (m)	SPT	Rings	Thickness	Stress (psf)	Pressure (psf)	Stress (psf)	r_d	CSR	MSF	FS
2.5	0.76		12	3.75	300	0	300	0.99615	0.343174	1.238	Above GWT
5	1.52		6	2.5	600	0	600	0.99024	0.341136	1.238	Above GWT
7.5	2.29		11	3.75	900	0	900	0.98456	0.339181	1.238	Above GWT
10	3.05		5	2.5	1200	0	1200	0.97914	0.337314	1.238	0.37
15	4.57	5		5	1800	312	1488	0.96856	0.403631	1.238	Bray-Clay
20	6.10		23	5	2400	624	1776	0.9569	0.445474	1.238	0.49
25	7.62	23		5	3000	936	2064	0.94183	0.471601	1.238	Corr. SPT>30
30	9.14		33	5	3600	1248	2352	0.92058	0.485417	1.238	Corr. SPT>30
35	10.67	38		5	4200	1560	2640	0.89062	0.488119	1.238	Corr. SPT>30
40	12.19		100	5	4800	1872	2928	0.85103	0.480625	1.238	Corr. SPT>30
45	13.72	100		2.5	5400	2184	3216	0.80363	0.464861	1.238	Corr. SPT>30

Appendix F
General Earthwork and Grading Specifications for Rough Grading

General Earthwork and Grading Specifications for Rough Grading

1.0 General

1.1 Intent: These General Earthwork and Grading Specifications are for the grading and earthwork shown on the approved grading plan(s) and/or indicated in the geotechnical report(s). These Specifications are a part of the recommendations contained in the geotechnical report(s). In case of conflict, the specific recommendations in the geotechnical report shall supersede these more general Specifications. Observations of the earthwork by the project Geotechnical Consultant during the course of grading may result in new or revised recommendations that could supersede these specifications or the recommendations in the geotechnical report(s).

1.2 The Geotechnical Consultant of Record: Prior to commencement of work, the owner shall employ a qualified Geotechnical Consultant of Record (Geotechnical Consultant). The Geotechnical Consultant shall be responsible for reviewing the approved geotechnical report(s) and accepting the adequacy of the preliminary geotechnical findings, conclusions, and recommendations prior to the commencement of the grading.

Prior to commencement of grading, the Geotechnical Consultant shall review the "work plan" prepared by the Earthwork Contractor (Contractor) and schedule sufficient personnel to perform the appropriate level of observation, mapping, and compaction testing.

During the grading and earthwork operations, the Geotechnical Consultant shall observe, map, and document the subsurface exposures to verify the geotechnical design assumptions. If the observed conditions are found to be significantly different than the interpreted assumptions during the design phase, the Geotechnical Consultant shall inform the owner, recommend appropriate changes in design to accommodate the observed conditions, and notify the review agency where required.

The Geotechnical Consultant shall observe the moisture-conditioning and processing of the subgrade and fill materials and perform relative compaction testing of fill to confirm that the attained level of compaction is being accomplished as specified. The Geotechnical Consultant shall provide the test results to the owner and the Contractor on a routine and frequent basis.

1.3 The Earthwork Contractor: The Earthwork Contractor (Contractor) shall be qualified, experienced, and knowledgeable in earthwork logistics, preparation and processing of ground to receive fill, moisture-conditioning and processing of fill, and compacting fill. The Contractor shall review and accept the plans, geotechnical report(s), and these Specifications prior to commencement of grading. The Contractor shall be solely responsible for performing the grading in accordance with the project plans and specifications. The Contractor shall prepare and submit to the owner and the Geotechnical Consultant a work plan that indicates the sequence of earthwork grading, the number of "equipment" of work and the estimated quantities of daily earthwork contemplated for the site prior to commencement of grading. The Contractor shall inform the owner and the

Geotechnical Consultant of changes in work schedules and updates to the work plan at least 24 hours in advance of such changes so that appropriate personnel will be available for observation and testing. The Contractor shall not assume that the Geotechnical Consultant is aware of all grading operations.

The Contractor shall have the sole responsibility to provide adequate equipment and methods to accomplish the earthwork in accordance with the applicable grading codes and agency ordinances, these Specifications, and the recommendations in the approved geotechnical report(s) and grading plan(s). If, in the opinion of the Geotechnical Consultant, unsatisfactory conditions, such as unsuitable soil, improper moisture condition, inadequate compaction, insufficient buttress key size, adverse weather, etc., are resulting in a quality of work less than required in these specifications, the Geotechnical Consultant shall reject the work and may recommend to the owner that construction be stopped until the conditions are rectified. It is the contractor's sole responsibility to provide proper fill compaction.

2.0 Preparation of Areas to be Filled

2.1 Clearing and Grubbing: Vegetation, such as brush, grass, roots, and other deleterious material shall be sufficiently removed and properly disposed of in a method acceptable to the owner, governing agencies, and the Geotechnical Consultant.

The Geotechnical Consultant shall evaluate the extent of these removals depending on specific site conditions. Earth fill material shall not contain more than 1 percent of organic materials (by volume). Nesting of the organic materials shall not be allowed.

If potentially hazardous materials are encountered, the Contractor shall stop work in the affected area, and a hazardous material specialist shall be informed immediately for proper evaluation and handling of these materials prior to continuing to work in that area.

As presently defined by the State of California, most refined petroleum products (gasoline, diesel fuel, motor oil, grease, coolant, etc.) have chemical constituents that are considered to be hazardous waste. As such, the indiscriminate dumping or spillage of these fluids onto the ground may constitute a misdemeanor, punishable by fines and/or imprisonment, and shall not be allowed. The contractor is responsible for all hazardous waste relating to his work. The Geotechnical Consultant does not have expertise in this area. If hazardous waste is a concern, then the Client should acquire the services of a qualified environmental assessor.

2.2 Processing: Existing ground that has been declared satisfactory for support of fill by the Geotechnical Consultant shall be scarified to a minimum depth of 6 inches. Existing ground that is not satisfactory shall be overexcavated as specified in the following section. Scarification shall continue until soils are broken down and free of oversize material and the working surface is reasonably uniform, flat, and free of uneven features that would inhibit uniform compaction.

2.3 ***Overexcavation:*** In addition to removals and overexcavations recommended in the approved geotechnical report(s) and the grading plan, soft, loose, dry, saturated, spongy, organic-rich, highly fractured or otherwise unsuitable ground shall be overexcavated to competent ground as evaluated by the Geotechnical Consultant during grading.

2.4 ***Benching:*** Where fills are to be placed on ground with slopes steeper than 5:1 (horizontal to vertical units), the ground shall be stepped or benched. Please see the Standard Details for a graphic illustration. The lowest bench or key shall be a minimum of 15 feet wide and at least 2 feet deep, into competent material as evaluated by the Geotechnical Consultant. Other benches shall be excavated a minimum height of 4 feet into competent material or as otherwise recommended by the Geotechnical Consultant. Fill placed on ground sloping flatter than 5:1 shall also be benched or otherwise overexcavated to provide a flat subgrade for the fill.

2.5 ***Evaluation/Acceptance of Fill Areas:*** All areas to receive fill, including removal and processed areas, key bottoms, and benches, shall be observed, mapped, elevations recorded, and/or tested prior to being accepted by the Geotechnical Consultant as suitable to receive fill. The Contractor shall obtain a written acceptance from the Geotechnical Consultant prior to fill placement. A licensed surveyor shall provide the survey control for determining elevations of processed areas, keys, and benches.

3.0 Fill Material

3.1 ***General:*** Material to be used as fill shall be essentially free of organic matter and other deleterious substances evaluated and accepted by the Geotechnical Consultant prior to placement. Soils of poor quality, such as those with unacceptable gradation, high expansion potential, or low strength shall be placed in areas acceptable to the Geotechnical Consultant or mixed with other soils to achieve satisfactory fill material.

3.2 ***Oversize:*** Oversize material defined as rock, or other irreducible material with a maximum dimension greater than 8 inches, shall not be buried or placed in fill unless location, materials, and placement methods are specifically accepted by the Geotechnical Consultant. Placement operations shall be such that nesting of oversized material does not occur and such that oversize material is completely surrounded by compacted or densified fill. Oversize material shall not be placed within 10 vertical feet of finish grade or within 2 feet of future utilities or underground construction.

3.3 ***Import:*** If importing of fill material is required for grading, proposed import material shall meet the requirements of the geotechnical consultant. The potential import source shall be given to the Geotechnical Consultant at least 48 hours (2 working days) before importing begins so that its suitability can be determined and appropriate tests performed.

4.0 Fill Placement and Compaction

4.1 Fill Layers: Approved fill material shall be placed in areas prepared to receive fill (per Section 3.0) in near-horizontal layers not exceeding 8 inches in loose thickness. The Geotechnical Consultant may accept thicker layers if testing indicates the grading procedures can adequately compact the thicker layers. Each layer shall be spread evenly and mixed thoroughly to attain relative uniformity of material and moisture throughout.

4.2 Fill Moisture Conditioning: Fill soils shall be watered, dried back, blended, and/or mixed, as necessary to attain a relatively uniform moisture content at or slightly over optimum. Maximum density and optimum soil moisture content tests shall be performed in accordance with the American Society of Testing and Materials (ASTM Test Method D1557).

4.3 Compaction of Fill: After each layer has been moisture-conditioned, mixed, and evenly spread, it shall be uniformly compacted to not less than 90 percent of maximum dry density (ASTM Test Method D1557). Compaction equipment shall be adequately sized and be either specifically designed for soil compaction or of proven reliability to efficiently achieve the specified level of compaction with uniformity.

4.4 Compaction of Fill Slopes: In addition to normal compaction procedures specified above, compaction of slopes shall be accomplished by backrolling of slopes with sheepsfoot rollers at increments of 3 to 4 feet in fill elevation, or by other methods producing satisfactory results acceptable to the Geotechnical Consultant. Upon completion of grading, relative compaction of the fill, out to the slope face, shall be at least 90 percent of maximum density per ASTM Test Method D1557.

4.5 Compaction Testing: Field tests for moisture content and relative compaction of the fill soils shall be performed by the Geotechnical Consultant. Location and frequency of tests shall be at the Consultant's discretion based on field conditions encountered. Compaction test locations will not necessarily be selected on a random basis. Test locations shall be selected to verify adequacy of compaction levels in areas that are judged to be prone to inadequate compaction (such as close to slope faces and at the fill/bedrock benches).

4.6 Frequency of Compaction Testing: Tests shall be taken at intervals not exceeding 2 feet in vertical rise and/or 1,000 cubic yards of compacted fill soils embankment. In addition, as a guideline, at least one test shall be taken on slope faces for each 5,000 square feet of slope face and/or each 10 feet of vertical height of slope. The Contractor shall assure that fill construction is such that the testing schedule can be accomplished by the Geotechnical Consultant. The Contractor shall stop or slow down the earthwork construction if these minimum standards are not met.

4.7 Compaction Test Locations: The Geotechnical Consultant shall document the approximate elevation and horizontal coordinates of each test location. The Contractor shall coordinate with the project surveyor to assure that sufficient grade stakes are established so that the Geotechnical Consultant can determine the test locations with sufficient accuracy. At a minimum, two grade stakes within a horizontal distance of 100 feet and vertically less than 5 feet apart from potential test locations shall be provided.

5.0 Subdrain Installation

Subdrain systems shall be installed in accordance with the approved geotechnical report(s), the grading plan, and the Standard Details. The Geotechnical Consultant may recommend additional subdrains and/or changes in subdrain extent, location, grade, or material depending on conditions encountered during grading. All subdrains shall be surveyed by a land surveyor/civil engineer for line and grade after installation and prior to burial. Sufficient time should be allowed by the Contractor for these surveys.

6.0 Excavation

Excavations, as well as over-excavation for remedial purposes, shall be evaluated by the Geotechnical Consultant during grading. Remedial removal depths shown on geotechnical plans are estimates only. The actual extent of removal shall be determined by the Geotechnical Consultant based on the field evaluation of exposed conditions during grading. Where fill-over-cut slopes are to be graded, the cut portion of the slope shall be made, evaluated, and accepted by the Geotechnical Consultant prior to placement of materials for construction of the fill portion of the slope, unless otherwise recommended by the Geotechnical Consultant.

7.0 Trench Backfills

7.1 The Contractor shall follow all OHSA and Cal/OSHA requirements for safety of trench excavations.

7.2 All bedding and backfill of utility trenches shall be done in accordance with the applicable provisions of Standard Specifications of Public Works Construction. Bedding material shall have a Sand Equivalent greater than 30 (SE>30). The bedding shall be placed to 1 foot over the top of the conduit and densified by jetting. Backfill shall be placed and densified to a minimum of 90 percent of maximum from 1 foot above the top of the conduit to the surface.

7.3 The jetting of the bedding around the conduits shall be observed by the Geotechnical Consultant.

7.4 The Geotechnical Consultant shall test the trench backfill for relative compaction. At least one test should be made for every 300 feet of trench and 2 feet of fill.

7.5 Lift thickness of trench backfill shall not exceed those allowed in the Standard Specifications of Public Works Construction unless the Contractor can demonstrate to the Geotechnical Consultant that the fill lift can be compacted to the minimum relative compaction by his alternative equipment and method.

Lake Forest
County of Orange/Santa Ana Region Priority Project
Water Quality Management Plan (WQMP)

Project Name:

Great Scott Tree Care

South Orange County

20795 Linear Lane

Lake Forest, CA, 92630

APNs : 610-301-07, 610-301-20, 610-301-21

Prepared for:

Great Scott Tree Care

(714) 826-1750

PRELIMINARY

Prepared by:

Marc J. Haslinger, P.E.

Huitt-Zollars, Inc.

2603 Main Street, Suite 400plot

Irvine, CA, 92614

(949) 988-5815

Date Prepared: October 2rd, 2023

Project Owner's Certification			
Planning Application No. (If applicable)	UP 03-18-5146	Grading Permit No.	
Tract/Parcel Map and Lot(s) No.	Parcel Map 86-133, Parcel A LLA 82-30	Building Permit No.	
Address of Project Site and APN (If no address, specify Tract/Parcel Map and Lot Numbers)			20795 Canada Road, Lake Forest, CA, 92630 APNS: 610-301-07, 610-301-20, 610-301-21

This Water Quality Management Plan (WQMP) has been prepared for **Griffiths Ranch, LLC** by **Huitt-Zollars, Inc**.. The WQMP is intended to comply with the requirements of the County of Orange NPDES Stormwater Program requiring the preparation of the plan.

The undersigned, while it owns the subject property, is responsible for the implementation of the provisions of this plan , including the ongoing operation and maintenance of all best management practices (BMPs), and will ensure that this plan is amended as appropriate to reflect up-to-date conditions on the site consistent with the current Orange County Drainage Area Management Plan (DAMP) and the intent of the non-point source NPDES Permit for Waste Discharge Requirements for the County of Orange, Orange County Flood Control District and the incorporated Cities of Orange County within the Santa Ana Region. Once the undersigned transfers its interest in the property, its successors-in-interest shall bear the aforementioned responsibility to implement and amend the WQMP. An appropriate number of approved and signed copies of this document shall be available on the subject site in perpetuity.

PRELIMINARY

Owner: Scott Griffiths			
Title	President		
Company	Griffiths Ranch, LLC.		
Address	12 Polena, Irvine, CA, 92620		
Email	sgriffiths@gstsinc.com		
Telephone #	(714) 826-1750		
I understand my responsibility to implement the provisions of this WQMP including the ongoing operation and maintenance of the best management practices (BMPs) described herein.			
Owner Signature		Date	

Preparer (Engineer): Marc J. Haslinger			
Title	Vice President / Principal-in-Charge	PE Registration #	49158
Company	HUITT-ZOLLARS, INC.		
Address	2603 Main Street, Suite 400, Irvine, CA, 92614		
Email	mhaslinger@huitt-zollars.com		
Telephone #	(949) 988-5815		

I hereby certify that this Water Quality Management Plan is in compliance with, and meets the requirements set forth in, Order No. R8-2009-0030/NPDES No. CAS618030, of the Santa Ana Regional Water Quality Control Board.

Preparer Signature		Date	
Place Stamp Here			

PRELIMINARY

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Attachments

Appendix A..... Vicinity Map & Exhibits

Appendix B..... Site Plans

Appendix C..... Soils Information

Appendix D..... BMP Design Details

Appendix E.....O&M

Appendix F..... Encumbrance Map

PRELIMINARY

Section I Permit(s) and Water Quality Conditions of Approval or Issuance

Provide discretionary or grading/building permit information and water quality conditions of approval, or permit issuance, applied to the project. If conditions are unknown, please request applicable conditions from staff. *Refer to Section 2.1 in the Technical Guidance Document (TGD) available on the OC Planning website (ocplanning.net).*

Project Infomation			
Permit/Application No. (If applicable)	UP 03-18-5146	Grading or Building Permit No. (If applicable)	
Address of Project Site (or Tract Map and Lot Number if no address) and APN	20795 Canada Road, Lake Forest, CA, 92630 APN: 610-301-07, 610-301-20, 610-301-21		
Water Quality Conditions of Approval or Issuance			
Water Quality Conditions of Approval or Issuance applied to this project. (Please list verbatim.)	This submittal is for preliminary review. Conditions of Approval will be provided with Final WQMP.		
Conceptual WQMP			
Was a Conceptual Water Quality Management Plan previously approved for this project?	This submittal is for preliminary review.		

PRELIMINARY

Watershed-Based Plan Conditions	
Provide applicable conditions from watershed - based plans including WIHMPs and TMDLS.	This submittal is for preliminary review.

PRELIMINARY

Section II Project Description

II.1 Project Description

Provide a detailed project description including:

- Project areas;
- Land uses;
- Land cover;
- Design elements;
- A general description not broken down by drainage management areas (DMAs).

Include attributes relevant to determining applicable source controls. *Refer to Section 2.2 in the Technical Guidance Document (TGD) for information that must be included in the project description.*

PRELIMINARY

Description of Proposed Project				
Development Category (From Model WQMP, Table 7.11-2; or -3):	Parking lot of 5,000 square feet or more			
Project Area (ft²): 87,120	Number of Dwelling Units: 0		SIC Code: 2411,2421,5099, 7521	
Project Area	*Pervious		*Impervious	
	Area (acres or sq ft)	Percentage	Area (acres or sq ft)	Percentage
Pre-Project Conditions	51,575.0 sq ft	58.3%	36,987.3 sq ft	41.7%
Post-Project Conditions	80,063.3 sq ft	90.4%	8,499.7 sq ft	9.6%
Drainage Patterns/Connections	In existing condition, the majority of the Project site generally drains north west and sheet flows into Serrano Creek. A small portion of the site is on the opposite side of Serrano Creek and sheets flows south, directly into the Creek. This area will be undisturbed throughout the existing and proposed conditions. The catch basins, area drains, and underground storm drain conduits in the proposed condition will be integrated into proposed storm drain infrastructure on site which will discharge into a detention system onsite. The detention system will then outlet into Serrano Creek. The existing drainage patterns and existing storm drain outlets to Serrano Creek were field verified on February 7, 2023. The Project intends to maintain existing grades and drainage patterns across the site,			

	and does not result in increases of flow rate, volume, and time of concentration for storm water leaving the Site.
Narrative Project Description: (Use as much space as necessary.)	The Project Site is located within the City of Lake Forest, CA, at the southwest corner of Dimension Drive and Linear Lane. It is bound by existing light industrial development on the north and south. Existing Serrano Creek runs east-west, through the length of the Project Site. In existing conditions, runoff from the Project Site sheet flows directly into Serrano Creek. The Project site is currently zoned for a combination of A-1 agricultural and M-1 light industrial uses There is one residential structure (with garage and landscaped yard) and a few portable storage structures. The Project intends to maintain existing grades and drainage patterns across the site, and will not cause hydrologic conditions of concern (HCOC) to the downstream channel in accordance with the definition found in Section 5.3.1 of the Orange County Technical Guidance Document. The Time of Concentration requirement was met using values obtained from the AES rational method, and the Volume requirement was met using the Simple Method Runoff Coefficient for Volume-Based BMP Sizing (Eq. III.1) found in the TGD for project areas is less than 5 ac. The existing residential structure and one storage structure (historic barn) will remain in the proposed condition. Gravel will be laid over a large portion of the site to stabilize the existing native surface and allow for all-weather access and parking for Great Scott Tree Service vehicles. The existing residential structure will be converted into office space for Great Scott Tree Service, Inc., and a minimum parking lot constructed for office employee and guest parking. Three vegetated bioswale systems will be constructed to treat the Design Capture Volume (DCV). The proposed detention system is designed to provide mitigation of the 100-year discharge. Please refer to the drainage report for 100-year storm event calculations. Majority of project site runoff for all storm events will be conveyed through storm drain pipe to a detention system before reaching Serrano Creek which will result in the mitigation of post flows for all storm events. Stormwater runoff will first infiltrate into the gravel layer and flow towards inlet curbs that collects the water in a catch basin. Oil and hydrocarbon based pollutants will be filtered through a filter sock before being directed to the bioswale for further treatment. Water is then captured by pipes and then outletted to the detention system. The existing grade will allow runoff to naturally drain to the bioswale systems. Refer to Appendix A for a graphic of the treatment train in addition to the location of the bioswale systems. Refer to Appendix A for the Proposed Site Plan. See included Encumbrance Map (Appendix F) for Site Location.

PRELIMINARY

II.2 Potential Stormwater Pollutants

Determine and list expected stormwater pollutants based on land uses and site activities. *Refer to Section 2.2.2 and Table 2.1 in the Technical Guidance Document (TGD) for guidance.*

Pollutants of Concern			
Pollutant	Check One for each: E=Expected to be of concern N=Not Expected to be of concern		Additional Information and Comments
Suspended-Solid/ Sediment	E ☒	N ☐	Expected pollutant due to the proposed vehicle parking on site.
Nutrients	E ☒	N ☐	Depressed drought tolerant landscaping should be implemented to prevent suspended – solids/sediments, otherwise it is expected.
Heavy Metals	E ☒	N ☐	Expected pollutant due to proposed vehicle parking lot on-site and uncovered parking areas.
Pathogens (Bacteria/Virus)	E ☒	N ☐	Expected due to bacterial indicators in runoff.
Pesticides	E ☒	N ☐	Depressed drought tolerant landscaping should be implemented to prevent suspended – solids/sediments, otherwise it is expected.
Oil and Grease	E ☒	N ☐	Expected due to the proposed vehicle parking on site. Hydrocarbon filter socks should be implemented in the catch basins to capture oil and grease from vehicles.
Toxic Organic Compounds	E ☒	N ☐	Expected due to the proposed vehicle parking on site.
Trash and Debris	E ☒	N ☐	Expected due to the proposed vehicle parking on site.

PRELIMINARY

II.3 Hydrologic Conditions of Concern

Determine if streams located downstream from the project area are potentially susceptible to hydromodification impacts. *Refer to Section 2.2.3.1 in the Technical Guidance Document (TGD) for North Orange County or Section 2.2.3.2 for South Orange County.*

☐ No – Show map

☒ Yes – Describe applicable hydrologic conditions of concern below. *Refer to Section 2.2.3 in the Technical Guidance Document (TGD).*

Existing Serrano Creek runs through the Project Site. Serrano Creek is identified as an unstable earth channel on OC TGD Figure XVI-3d. The referenced Figure also indicates that the Project Site is within a "Potential Area of Erosion, Habitat & Physical Structure Susceptibility.

Note that this project does not qualify as a Hydrologic Condition of Concern as outlined in the Orange County TGD as the time of concentration and runoff volume requirements have been met. A comparison for the 2-year storm event pre vs post development (unmitigated) was analyzed using Advance Engineering Software (AES) at compliance point (See Appendix D for the Existing Condition and Proposed Condition Unit Hydrographs calculations). The results from the analysis are summarized in the table below for peak flow rate and time of concentration.

Unmitigated Flows			
	Q_2 (cfs)	V_2 (ft^3)	T_{c2} (min)
Existing Condition	5.40	7,396	10.79
Proposed Condition	5.31	6,155	9.82
Pre Vs Post Unmitigated Flows- Delta (%)	-1.7%	-16.8%	-9.0%
Mitigated Flows			
Proposed Condition	1.4*	-	-
***Delta Q is -44.0%**			

The amount of impervious area is increased from the existing to the proposed condition. Using the AES, the peak discharge rate is not increased by more than 5% in the proposed condition, however Tc is shorter by 9%. The site has a Hydrologic Condition of Concern. Accordingly, the onsite flows are mitigated by a detention system as a hydromodification BMP, which reduces the flow offsite by 44% for a 2 year storm. See attached AES calculations in Appendix D and Exhibits in Attachment A.

PRELIMINARY

II.4 Post Development Drainage Characteristics

Describe post development drainage characteristics. *Refer to Section 2.2.4 in the Technical Guidance Document (TGD).*

The Project intends to maintain existing grades and drainage patterns across the site, and does not cause negative impacts to the flow rate, volume, and time of concentration for storm water leaving the Site. Three vegetated swales will be constructed along the perimeter of the project site to intercept the onsite stormwater runoff before it reaches Serrano Creek. The underdrains of the vegetated swale will be connected to a proposed stormdrain system that conveys on site runoff underneath the project site to a detention system in the southwest corner of the site. This detention system will outlet into Serrano Creek. A detention system is proposed due to erosion issues along Serrano Creek, and future developments have been requested to reduce flows by a minimum of 38%. The detention basin was designed using the 100-year storm event.

PRELIMINARY

II.5 Property Ownership/Management

Describe property ownership/management. *Refer to Section 2.2.5 in the Technical Guidance Document (TGD).*

Project Site will be owned and maintained by Great Scott Tree Service, Inc.

Section III Site Description

III.1 Physical Setting

Fill out table with relevant information. *Refer to Section 2.3.1 in the Technical Guidance Document (TGD).*

Name of Planned Community/Planning Area (if applicable)	N/A
Location/Address	20795 Cañada Road Lake Forest, CA, 92630
General Plan Land Use Designation	Regional Park/Open Space
Zoning	M-1 (Light Industrial) with Planned Development (PD), A-1 (General Agriculture
Acreage of Project Site	7.36 acres
Predominant Soil Type	Type D (per NRCS Soil Survey)

PRELIMINARY

III.2 Site Characteristics

Fill out table with relevant information and include information regarding BMP sizing, suitability, and feasibility, as applicable. *Refer to Section 2.3.2 in the Technical Guidance Document (TGD).*

Site Characteristics	
Precipitation Zone	0.9 (per OC TGD Figure XVI-1)
Topography	Site generally slopes north west at 3% to 6%

Drainage Patterns/Connections	Site generally slopes north west, drains via surface sheet flow directly to Serrano Creek. An underground storm conduit is proposed from the bio-swales to the proposed detention basin.
Soil Type, Geology, and Infiltration Properties	Soil Type D (Per NRCS Soil Survey), Serrano Creek runs through the Site and is not susceptible to erosion, soil is primarily Sandy Loam and Sorrento Loam along the top and upper banks for Serrano Creek, with Riverwash (sandy gravelly alluvium) located along the bottom of the Creek.
Hydrogeologic (Groundwater) Conditions	Per the OC TGM North Orange County Mapped Shallow Groundwater Map the proposed development is not located within a region that encounters groundwater depth equal to or less than 5 feet and 5 feet to 10 feet.
Geotechnical Conditions (relevant to infiltration)	The geotechnical report advises against intentional infiltration of stormwater due to low infiltration rate, shallow groundwater, and high liquefaction potential.
Off-Site Drainage	N/A. Site does not receive off-site drainage. The assumption was field verified on February 7, 2020.
Utility and Infrastructure Information	Project site is currently serviced by wet and dry utilities.

PRELIMINARY

III.3 Watershed Description

Fill out table with relevant information and include information regarding BMP sizing, suitability, and feasibility, as applicable. *Refer to Section 2.3.3 in the Technical Guidance Document (TGD).*

Receiving Waters	Serrano Creek, San Diego Creek Reach 2, San Diego Creek Reach 1, Newport Bay
303(d) Listed Impairments	Bacteria Indicators/Pathogens, Metals, Nutrients, Toxicity, Turbidity, Other Organics
Applicable TMDLs	Bacteria Indicators/Pathogens, Metals, Nutrients, Pesticides, Turbidity/Siltation
Pollutants of Concern for the Project	Suspended Solis/Sediments, Nutrients, Heavy Metals, Pathogens (Bacteria/Virus), Pesticides, Oil & Grease, Toxic Organic Compounds, Trash & Debris
Environmentally Sensitive and Special Biological Significant Areas	N/A

Section IV Best Management Practices (BMPs)

IV. 1 Project Performance Criteria

Describe project performance criteria. Several steps must be followed in order to determine what performance criteria will apply to a project. These steps include:

- If the project has an approved WIHMP or equivalent, then any watershed specific criteria must be used and the project can evaluate participation in the approved regional or sub-regional opportunities. (Please ask your assigned planner or plan checker regarding whether your project is part of an approved WIHMP or equivalent.)
- Determine applicable hydromodification control performance criteria. *Refer to Section 7.II-2.4.2.2 of the Model WQMP.*
- Determine applicable LID performance criteria. *Refer to Section 7.II-2.4.3 of the Model WQMP.*
- Determine applicable treatment control BMP performance criteria. *Refer to Section 7.II-3.2.2 of the Model WQMP.*
- Calculate the LID design storm capture volume for the project. *Refer to Section 7.II-2.4.3 of the Model WQMP.*

PRELIMINARY

(NOC Permit Area only) Is there an approved WIHMP or equivalent for the project area that includes more stringent LID feasibility criteria or if there are opportunities identified for implementing LID on regional or sub-regional basis?		YES ☐	NO ☒
If yes, describe WIHMP feasibility criteria or regional/sub-regional LID opportunities.	N/A		

Project Performance Criteria	
If HCOC exists, list applicable hydromodification control performance criteria (Section 7.II-2.4.2.2 in MWQMP)	Project does not cause negative impacts in runoff volume, changes in time of concentration, increase for post development downstream erosion, or adverse downstream impacts. The Project intends to revise drainage patterns across the site to stay onsite, will concentrate flow to bioswales, underdrains, and a detention basin, and will include applicable water quality features. Additionally, the Project proposed to lay gravel over a large portion of the property. From a conservative standpoint The Project will assume all gravel areas to be paved for modeling purposes.
List applicable LID performance criteria (Section 7.II-2.4.3 from MWQMP)	• Priority Projects must infiltrate, harvest and use, evapotranspire, or biotreat/biofilter, the 85th percentile, 24-hour storm event (Design Capture Volume). • A properly designed biotreatment system may only be considered if infiltration, harvest and use, and evapotranspiration (ET) cannot be feasibly implemented for the full design capture volume. In this case, infiltration, harvest and use, and ET practices must be implemented to the greatest extent feasible and biotreatment may be provided for the remaining design capture volume. A diversity of controls will be provided, if feasible, to achieve the greatest feasible retention of the Design Capture Volume, then if necessary, biotreatment of the remaining design capture volume. Equivalent performance criteria have been synthesized from permit requirements with consideration of the MEP standard and analysis of local precipitation and ET patterns. The following performance criteria result in capture and retention and/or biotreatment of 80 percent of average annual stormwater runoff volume. The performance criteria for LID are stated as follows: • LID BMPs must be designed to retain, on-site, (infiltrate, harvest and use, or evapotranspire) stormwater runoff up to 80 percent average annual capture efficiency • LID BMPs must be designed to: o Retain, on-site, (infiltrate, harvest and use, or evapotranspire) stormwater runoff as feasible up to the Design Capture Volume, and o Recover (i.e., draw down) the storage volume as soon as possible after a storm event (see criteria for maximizing drawdown rate in the TGD Appendix XI), and, if necessary o Biotreat, on-site, additional runoff, as feasible, up to 80 percent average annual capture efficiency (cumulative, retention plus biotreatment), and, if necessary o NOC Permit Area only – retain or biotreat, in a regional facility, the remaining runoff up to 80 percent average annual capture efficiency (cumulative, retention plus biotreatment, on-site plus off-site), and, if necessary

PRELIMINARY

	o Fulfill alternative compliance obligations for runoff volume not retained or biotreated up to 80 percent average annual capture efficiency using treatment controls or other alternative approaches as described in Section 7.II-3.
List applicable treatment control BMP performance criteria (Section 7.II-3.2.2 from MWQMP)	Retain onsite Stormwater runoff, as feasible, up to the Design Capture Volume; Recover the storage volume as soon as possible after a storm event; Biotreat onsite additional runoff, as feasible, up to 80 percent average annual capture efficeiency;
Calculate LID design storm capture volume for Project.	DCV = C × d × A × 43560 sf/ac × 1/12 in/ft Q=CiA Where: DCV = design storm capture volume, cu-ft C = runoff coefficient = (0.75 × imp + 0.15) Imp = impervious fraction of drainage area (ranges from 0 to 1) d = storm depth (inches) A = tributary area (acres) Q_{Design} = Design Flow Rate

PRELIMINARY

	DMA		
	A	**B**	**C**
Design Capture Storm Depth	0.9	0.9	0.9
Drainage Area (SF)	3,294	70,132	13,418
Impervious Area (SF)	1,930	50,260	7,917
Pervious Area (SF)	1,364	19,871	5,501
% Impervious	0.59	0.72	0.59
Eff. Ret. Depth of HSC (in)	0.00	0.00	0.00
Design Infiltration Rate (in/hr)	0.00	0.00	0.00
Design Capture Volume (CF)	**146**	**3,616**	**596**
i (design intensity) (inches/hr)	0.26	0.26	0.26
Design Treatment Flow Rate (CFS)	**0.01**	**0.29**	**0.05**

IV.2. Site Design and Drainage

Describe site design and drainage including

- A narrative of site design practices utilized or rationale for not using practices;
- A narrative of how site is designed to allow BMPs to be incorporated to the MEP
- A table of DMA characteristics and list of LID BMPs proposed in each DMA.
- Reference to the WQMP "BMP Exhibit."
- Calculation of Design Capture Volume (DCV) for each drainage area.
- A listing of GIS coordinates for LID and Treatment Control BMPs.

Refer to Section 2.4.2 in the Technical Guidance Document (TGD).

PRELIMINARY

The Project intends to revise existing grades and drainage patterns across the site to remain on site until routed through bio-swales and a detention basin, and does not cause negative impacts to the flow rate, volume, and time of concentration for storm water leaving the Site. The catch basins, area drains, and underground storm drain conduits in the proposed condition will be integrated into a minimal amount of new storm drain infrastructure on site.

Gravel will be laid over a majority of the site to stabilize the existing native soil and allow for all weather access and vehicle parking. Water quality treatment will be provided via proposed vegetated swales located at the edge of the gravel. The swales will capture and bio-treat runoff prior to conveyance to a detention system through a storm drain system. The proposed detention system will discharge to Serrano Creek with reduced flows. The gravel and swales are intended to maintain dispersed sheet flow across the site and into the bio-swales.

IV.3 LID BMP Selection and Project Conformance Analysis

Each sub-section below documents that the proposed design features conform to the applicable project performance criteria via check boxes, tables, calculations, narratives, and/or references to worksheets. *Refer to Section 2.4.2.3 in the Technical Guidance Document (TGD) for selecting LID BMPs and Section 2.4.3 in the Technical Guidance Document (TGD) for conducting conformance analysis with project performance criteria.*

IV.3.1 Hydrologic Source Controls (HSCs)

If required HSCs are included, fill out applicable check box forms. If the retention criteria are otherwise met with other LID BMPs, include a statement indicating HSCs not required.

Name	Included?
Localized on-lot infiltration	☐
Impervious area dispersion (e.g. roof top disconnection)	☒
Street trees (canopy interception)	☒
Residential rain barrels (not actively managed)	☐
Green roofs/Brown roofs	☐
Blue roofs	☐
Impervious area reduction (e.g. permeable pavers, site design)	☒
Other:	☐
Other:	☐
Other:	☐
Other:	☐
Other:	☐
Other:	☐
Other:	☐
Other:	☐

PRELIMINARY

IV.3.2 Infiltration BMPs

Identify infiltration BMPs to be used in project. If design volume cannot be met, state why.

Infiltration BMPs are not applicable to the site.

Name	Included?
Bioretention without underdrains	☐
Rain gardens	☐
Porous landscaping	☐
Infiltration planters	☐
Retention swales	☐
Infiltration trenches	☐
Infiltration basins	☐
Drywells	☐
Subsurface infiltration galleries	☐
French drains	☐
Permeable asphalt	☐
Permeable concrete	☐
Permeable concrete pavers	☐
Other:	☐
Other:	☐

PRELIMINARY

Show calculations below to demonstrate if the LID Design Strom Capture Volume can be met with infiltration BMPs. If not, document how much can be met with infiltration and document why it is not feasible to meet the full volume with infiltration BMPs.

Onsite infiltration testing indicates an observed infiltration rate of 0.7 in/hr and a design infiltration rate of 0.35 in/hr. This is higher than the minimum 0.3 in/hr required for infiltration-based BMPs which means that the proposed vegetated swale is feasible although not recommended by the geotechnical report due to other factors including shallow groundwater and liquefaction potential.

Using the methods found in the Orange County Technical Guidance Document, a more conservative safety factor of approximately 3.4 would be calculated resulting in a measured infiltration rate under 0.3 in/hr. However, the site can benefit from incidental infiltration in the gravel area and vegetated swales, thus making the bioswales feasible.

PRELIMINARY

IV.3.3 Evapotranspiration, Rainwater Harvesting BMPs

If the full Design Storm Capture Volume cannot be met with infiltration BMPs, describe any evapotranspiration and/or rainwater harvesting BMPs included.

Name	Included?
All HSCs; *See Section IV.3.1*	☐
Surface-based infiltration BMPs	☐
Biotreatment BMPs	☐
Above-ground cisterns and basins	☐
Underground detention	☐
Other:	☐
Other:	☐
Other:	☐

Show calculations below to demonstrate if the LID Design Storm Capture Volume can be met with evapotranspiration and/or rainwater harvesting BMPs in combination with infiltration BMPs. If not, document below how much can be met with either infiltration BMPs, evapotranspiration, rainwater harvesting BMPs, or a combination, and document why it is not feasible to meet the full volume with these BMP categories.

Evapotranspiration, Rainwater Harvesting BMPs not applicable.

PRELIMINARY

IV.3.4 Biotreatment BMPs

If the full Design Storm Capture Volume cannot be met with infiltration BMPs, and/or evapotranspiration and rainwater harvesting BMPs, describe biotreatment BMPs included. Include sections for selection, suitability, sizing, and infeasibility, as applicable.

Name	Included?
Bioretention with underdrains	☐
Stormwater planter boxes with underdrains	☐
Rain gardens with underdrains	☐
Constructed wetlands	☐
Vegetated swales	☒
Vegetated filter strips	☐
Proprietary vegetated biotreatment systems	☐
Wet extended detention basin	☐
Dry extended detention basins	☐
Other:	☐
Other:	☐

Show calculations below to demonstrate if the LID Design Storm Capture Volume can be met with infiltration, evapotranspiration, rainwater harvesting and/or biotreatment BMPs. If not, document how much can be met with either infiltration BMPs, evapotranspiration, rainwater harvesting BMPs, or a combination, and document why it is not feasible to meet the full volume with these BMP categories.

PRELIMINARY

Three (3) bioswales (Bio-2) will be employed for treatment of the required runoff flowrates.

	DMA		
	A	**B**	**C**
Design Capture Storm Depth	0.9	0.9	0.9
Drainage Area (SF)	3,294	70,132	13,418
Impervious Area (SF)	1,930	50,260	7,917
Pervious Area (SF)	1,364	19,871	5,501
% Impervious	0.59	0.72	0.59
Eff. Ret. Depth of HSC (in)	0.00	0.00	0.00
Design Infiltration Rate (in/hr)	0.00	0.00	0.00
Design Capture Volume (CF)	**146**	**3,616**	**596**
i (design intensity) (inches/hr)	0.26	0.26	0.26
Design Treatment Flow Rate (CFS)	**0.01**	**0.29**	**0.05**

Vegetated Swale (per OC TGD BIO-2)			
	DMA		
	A	**B**	**C**
swale slope (ft/ft)	0.0100	0.0100	0.0100
bottom width, calculated (ft)	0.10	2.46	0.41
bottom width used (2 ft min) (ft)	2.00	3.00	2.00
y, depth (ft)	0.05	0.29	0.13
Vwq	0.10	0.25	0.17
Required Length, ft	61	165	100
Length Provided, ft	100	200	150

PRELIMINARY

IV.3.5 Hydromodification Control BMPs

Describe hydromodification control BMPs. *See Section 5 of the Technical Guidance Document (TGD).* Include sections for selection, suitability, sizing, and infeasibility, as applicable. Detail compliance with Prior Conditions of Approval (if applicable).

Hydromodification Control BMPs	
BMP Name	**BMP Description**
N/A	

IV.3.6 Regional/Sub-Regional LID BMPs

Describe regional/sub-regional LID BMPs in which the project will participate. *Refer to Section 7.II-2.4.3.2 of the Model WQMP.*

Regional/Sub-Regional LID BMPs
N/A

IV.3.7 Treatment Control BMPs

Treatment control BMPs can only be considered if the project conformance analysis indicates that it is not feasible to retain the full design capture volume with LID BMPs. Describe treatment control BMPs including sections for selection, sizing, and infeasibility, as applicable.

PRELIMINARY

Treatment Control BMPs	
BMP Name	**BMP Description**
Grated Inlet	Acts as a trash rack for larger pollutants
Hydrocarbon filter socks	Filters oil-based pollutants

IV.3.8 Non-structural Source Control BMPs

Fill out non-structural source control check box forms or provide a brief narrative explaining if non-structural source controls were not used.

Non-Structural Source Control BMPs				
Identifier	**Name**	**Check One**		**If not applicable, state brief reason**
		Included	**Not Applicable**	
N1	Education for Property Owners, Tenants and Occupants	☒	☐	
N2	Activity Restrictions	☒	☐	
N3	Common Area Landscape Management	☒	☐	
N4	BMP Maintenance	☒	☐	
N5	Title 22 CCR Compliance (How development will comply)	☒	☐	
N6	Local Industrial Permit Compliance	☒	☐	
N7	Spill Contingency Plan	☒	☐	
N8	Underground Storage Tank Compliance	☐	☒	No underground storage tanks
N9	Hazardous Materials Disclosure Compliance	☒	☐	
N10	Uniform Fire Code Implementation	☒	☐	
N11	Common Area Litter Control	☒	☐	
N12	Employee Training	☒	☐	
N13	Housekeeping of Loading Docks	☐	☒	No load docks
N14	Common Area Catch Basin Inspection	☒	☐	
N15	Street Sweeping Private Streets and Parking Lots	☒	☐	
N16	Retail Gasoline Outlets	☐	☒	Not a retail gasoline outlet

PRELIMINARY

IV.3.9 Structural Source Control BMPs

Fill out structural source control check box forms or provide a brief narrative explaining if structural source controls were not used.

Structural Source Control BMPs				
Identifier	**Name**	**Check One**		**If not applicable, state brief reason**
		Included	**Not Applicable**	
S1	Provide storm drain system stenciling and signage	☒	☐	
S2	Design and construct outdoor material storage areas to reduce pollution introduction	☒	☐	
S3	Design and construct trash and waste storage areas to reduce pollution introduction	☒	☐	
S4	Use efficient irrigation systems & landscape design, water conservation, smart controllers, and source control	☒	☐	
S5	Protect slopes and channels and provide energy dissipation	☒	☐	
	Incorporate requirements applicable to individual priority project categories (from SDRWQCB NPDES Permit)	☒	☐	
S6	Dock areas	☐	☒	No dock areas proposed
S7	Maintenance bays	☐	☒	No maintenance bays
S8	Vehicle wash areas	☐	☒	No vehicle wash area
S9	Outdoor processing areas	☒	☐	
S10	Equipment wash areas	☐	☒	No equipment wash area
S11	Fueling areas	☐	☒	No fueling area
S12	Hillside landscaping	☐	☒	No hillside landscaping
S13	Wash water control for food preparation areas	☐	☒	No wash water control for food preparation area
S14	Community car wash racks	☐	☒	No community car wash racks

PRELIMINARY

IV.4 Alternative Compliance Plan (If Applicable)

Describe an alternative compliance plan (if applicable). Include alternative compliance obligations (i.e., gallons, pounds) and describe proposed alternative compliance measures. *Refer to Section 7.II 3.0 in the WQMP.*

IV.4.1 Water Quality Credits

Determine if water quality credits are applicable for the project. *Refer to Section 3.1 of the Model WQMP for description of credits and Appendix VI of the Technical Guidance Document (TGD) for calculation methods for applying water quality credits.*

PRELIMINARY

Description of Proposed Project				
Project Types that Qualify for Water Quality Credits (Select all that apply): None				
☐Redevelopment projects that reduce the overall impervious footprint of the project site.	☐Brownfield redevelopment, meaning redevelopment, expansion, or reuse of real property which may be complicated by the presence or potential presence of hazardous substances, pollutants or contaminants, and which have the potential to contribute to adverse ground or surface WQ if not redeveloped.	☐ Higher density development projects which include two distinct categories (credits can only be taken for one category): those with more than seven units per acre of development (lower credit allowance); vertical density developments, for example, those with a Floor to Area Ratio (FAR) of 2 or those having more than 18 units per acre (greater credit allowance).		
☐ Mixed use development, such as a combination of residential, commercial, industrial, office, institutional, or other land uses which incorporate design principles that can demonstrate environmental benefits that would not be realized through single use projects (e.g. reduced vehicle trip traffic with the potential to reduce sources of water or air pollution).		☐ Transit-oriented developments, such as a mixed use residential or commercial area designed to maximize access to public transportation; similar to above criterion, but where the development center is within one half mile of a mass transit center (e.g. bus, rail, light rail or commuter train station). Such projects would not be able to take credit for both categories, but may have greater credit assigned		☐ Redevelopment projects in an established historic district, historic preservation area, or similar significant city area including core City Center areas (to be defined through mapping).
☐Developments with dedication of undeveloped portions to parks, preservation areas and other pervious uses.	☐ Developments in a city center area.	☐ Developments in historic districts or historic preservation areas.	☐ Live-work developments, a variety of developments designed to support residential and vocational needs together – similar to criteria to mixed use development; would not be able to take credit for both categories.	☐In-fill projects, the conversion of empty lots and other underused spaces into more beneficially used spaces, such as residential or commercial areas.

Calculation of Water Quality Credits (if applicable)	N/A

IV.4.2 Alternative Compliance Plan Information

Describe an alternative compliance plan (if applicable). Include alternative compliance obligations (i.e., gallons, pounds) and describe proposed alternative compliance measures. *Refer to Section 7.II 3.0 in the Model WQMP.*

N/A

PRELIMINARY

Section V Inspection/Maintenance Responsibility for BMPs

Fill out information in table below. Prepare and attach an Operation and Maintenance Plan. Identify the funding mechanism through which BMPs will be maintained. Inspection and maintenance records must be kept for a minimum of five years for inspection by the regulatory agencies. *Refer to Section 7.II 4.0 in the Model WQMP.*

BMP Inspection/Maintenance			
BMP	**Reponsible Party(s)**	**Inspection/ Maintenance Activities Required**	**Minimum Frequency of Activities**
Will be provided in Final WQMP			

PRELIMINARY

Section VI BMP Exhibit (Site Plan)

VI.1 BMP Exhibit (Site Plan)

Include a BMP Exhibit (Site Plan), at a size no less than 24" by 36," which includes the following minimum information:

- Insert in the title block (lower right hand corner) of BMP Exhibit: the WQMP Number (assigned by staff) and the grading/building or Planning Application permit numbers
- Project location (address, tract/lot number(s), etc.)
- Site boundary
- Land uses and land covers, as applicable
- Suitability/feasibility constraints
- Structural BMP locations
- Drainage delineations and flow information
- Delineate the area being treated by each structural BMP
- GIS coordinates for LID and Treatment Control BMPs
- Drainage connections
- BMP details
- Preparer name and stamp

Please do not include any areas outside of the project area or any information not related to drainage or water quality. The approved BMP Exhibit (Site Plan) shall be submitted as a plan sheet on all grading and building plan sets submitted for plan check review and approval. The BMP Exhibit shall be at the same size as the rest of the plan sheets in the submittal and shall have an approval stamp and signature prior to plan check submittal.

PRELIMINARY

VI.2 Submittal and Recordation of Water Quality Management Plan

Following approval of the Final Project-Specific WQMP, three copies of the approved WQMP (including BMP Exhibit, Operations and Maintenance (O&M) Plan, and Appendices) shall be submitted. In addition, these documents shall be submitted in a PDF format.

Each approved WQMP (including BMP Exhibit, Operations and Maintenance (O&M) Plan, and Appendices) shall be recorded in the Orange County Clerk-Recorder's Office, prior to close-out of grading and/or building permit. Educational Materials are not required to be included.

Section VII Educational Materials

Refer to the Orange County Stormwater Program (ocwatersheds.com) for a library of materials available. Please only attach the educational materials specifically applicable to this project. Other materials specific to the project may be included as well and must be attached.

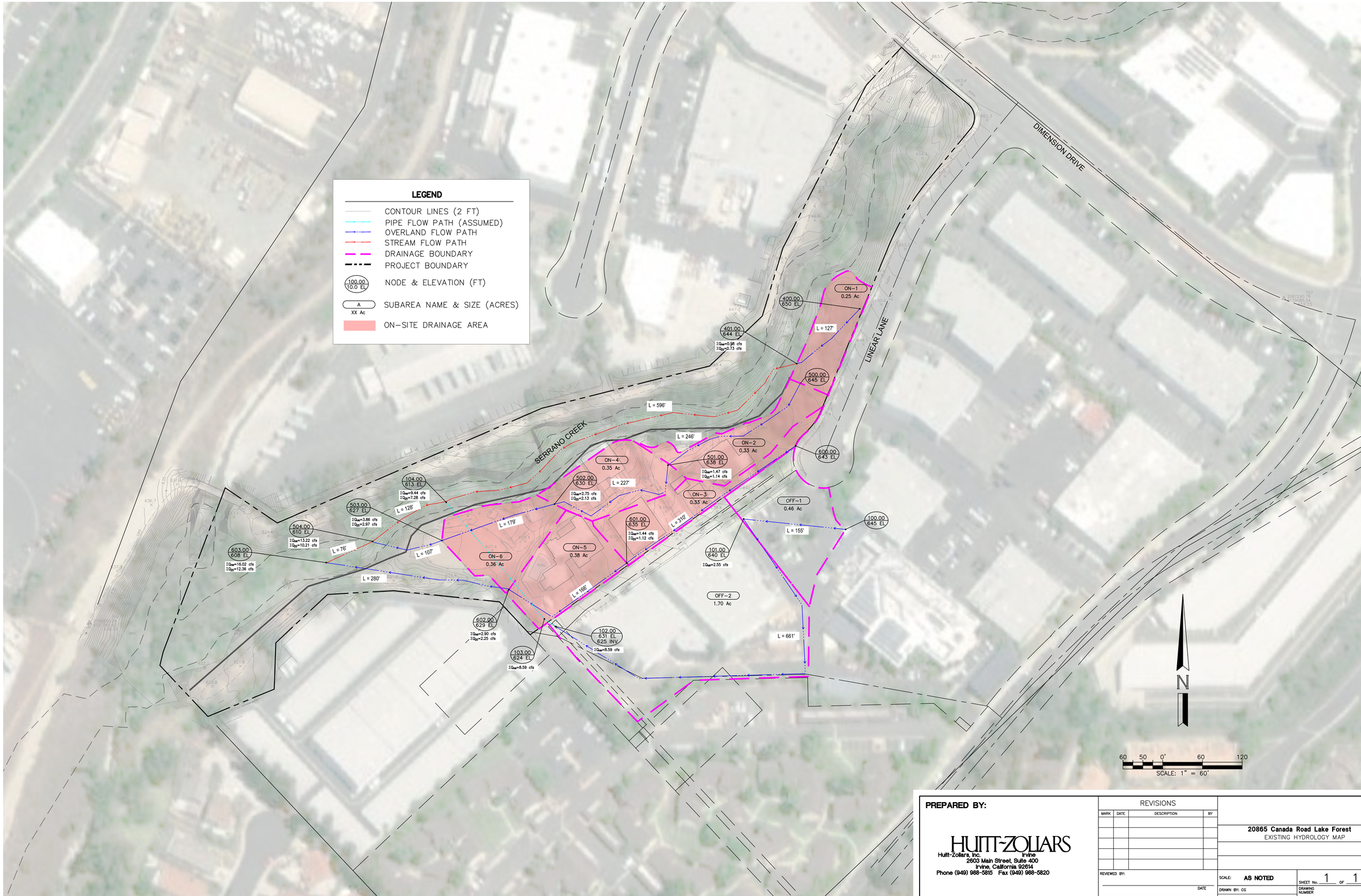
Education Materials			
Residential Material (http://www.ocwatersheds.com)	**Check If Applicable**	**Business Material (http://www.ocwatersheds.com)**	**Check If Applicable**
The Ocean Begins at Your Front Door	☐	Tips for the Automotive Industry	☐
Tips for Car Wash Fund-raisers	☐	Tips for Using Concrete and Mortar	☐
Tips for the Home Mechanic	☐	Tips for the Food Service Industry	☐
Homeowners Guide for Sustainable Water Use	☐	Proper Maintenance Practices for Your Business	☒
Household Tips	☐	**Other Material**	**Check If Attached**
Proper Disposal of Household Hazardous Waste	☐		
Recycle at Your Local Used Oil Collection Center (North County)	☐		☐
Recycle at Your Local Used Oil Collection Center (Central County)	☐		☐
Recycle at Your Local Used Oil Collection Center (South County)	☐		☐
Tips for Maintaining a Septic Tank System	☐		☐
Responsible Pest Control	☐		☐
Sewer Spill	☐		☐
Tips for the Home Improvement Projects	☐		☐
Tips for Horse Care	☐		☐
Tips for Landscaping and Gardening	☐		☐
Tips for Pet Care	☐		☐
Tips for Pool Maintenance	☐		☐
Tips for Residential Pool, Landscape and Hardscape Drains	☐		☐
Tips for Projects Using Paint	☐		☐

PRELIMINARY

Appendix A

Vicinity Map & Exhibits

PRELIMINARY



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REVISIONS

MARK	DATE	DESCRIPTION	BY

REVIEWED BY:

DATE

DATE

20865 Canada Road Lake Forest
EXISTING HYDROLOGY MAP

SCALE: **AS NOTED**

DRAWN BY: CG

CHECKED BY: MH

SHEET No. 1 OF 1

DRAWING NUMBER

LEGEND

- CONTOUR LINES (2 FT)
- PIPE FLOW PATH (ASSUMED)
- OVERLAND FLOW PATH
- STREAM FLOW PATH
- DRAINAGE BOUNDARY
- PROJECT BOUNDARY
- 100.00 / 10.0 EL — NODE & ELEVATION (FT)
- A / XX Ac — SUBAREA NAME & SIZE (ACRES)
- ON-SITE DRAINAGE AREA
- PROPOSED DETENTION BASIN
- PROPOSED BIOSWALES

DIMENSION DRIVE

SERRANO CREEK

LINEAR LANE

EXISTING 18" CSP

104.00
613 EL
UNMITIGATED FLOW
ΣQ_{UM}=16.25 cfs
ΣQ_{DS}=12.46 cfs
MITIGATED FLOW
ΣQ_{MM}=5.XX cfs

404.00
623 INV
ΣQ_{MM}=5.38 cfs
ΣQ_{DS}=4.13 cfs

403.00
631 EL
624 INV
ΣQ_{MM}=5.38 cfs
ΣQ_{DS}=4.13 cfs

405.00
614 INV
ΣQ_{MM}=16.25 cfs
ΣQ_{DS}=12.46 cfs

103.00
624 EL
ΣQ_{MM}=8.59 cfs

102.00
631 EL
625 INV
ΣQ_{MM}=8.59 cfs

400.00
651 EL

401.00
642 EL
637 INV
ΣQ_{UM}=1.06 cfs
ΣQ_{DS}=0.82 cfs

402.00
644 EL
636 INV
ΣQ_{UM}=1.06 cfs
ΣQ_{DS}=0.82 cfs

100.00
645 EL

101.00
640 EL
ΣQ_{MM}=2.55 cfs

ON-1
0.24 Ac

ON-2
1.13 Ac

ON-3
0.63 Ac

OFF-1
0.46 Ac

OFF-2
1.70 Ac

L = 155'
L = 47'
L = 463'
L = 70'
L = 114'
L = 49'
L = 155'
L = 661'

*NOTE: ALL OFF-SITE DRAINAGE FLOWS UNDER THE PROPOSED PROJECT SITE.

N

60 50 0' 60 120
SCALE: 1" = 60'

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Phone (949) 988-5815 Fax (949) 988-5820

REVISIONS

MARK	DATE	DESCRIPTION	BY

REVIEWED BY: _____ DATE _____

_____ DATE _____

20865 Canada Road Lake Forest
PROPOSED HYDROLOGY MAP

SCALE: **AS NOTED**
DRAWN BY: CG
CHECKED BY: MH

SHEET No. 1 OF 1
DRAWING NUMBER

LEGEND

- CONTOUR LINES (2 FT)
- DRAINAGE BOUNDARY
- PROJECT BOUNDARY
- A / XX Ac — SUBAREA NAME & SIZE (ACRES)
- BARREN PERVIOUS SURFACE
- PERVIOUS SURFACE
- IMPERVIOUS SURFACE

BMP DMA A
PROPOSED
BIO-SWALE
DCV=146 FT³
Q_{DESIGN}=0.01 CFS

BMP DMA B
PROPOSED
BIO-SWALE
DCV=3,616 FT³
Q_{DESIGN}=0.29 CFS

BMP DMA C
PROPOSED
BIO-SWALE
DCV=596 FT³
Q_{DESIGN}=0.05 CFS

DMA-A
0.24 Ac

DMA-B
1.13 Ac

DMA-C
0.63 Ac

DIMENSION DRIVE

LINEAR LANE

SERRANO CREEK

N

60 50 0' 60 120

SCALE: 1" = 60'

PREPARED BY:

HUITT-ZOLLARS
Irvine
Huitt-Zollars, Inc.
2603 Main Street, Suite 400
Irvine, California 92614
Phone (949) 988-5815 Fax (949) 988-5820

REVISIONS

MARK	DATE	DESCRIPTION	BY

REVIEWED BY:

DATE

DATE

20865 Canada Road Lake Forest
PRELIMINARY WQMP EXHIBIT

SCALE: **AS NOTED**

SHEET No. 1 OF 1

DRAWN BY: CG

CHECKED BY: MH

DRAWING NUMBER

Appendix B

Site Plan

PRELIMINARY

PRELIMINARY GRADING EXHIBIT

HUITT-ZOLLARS
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SCALE: 1" = 30'

30' 15' 0 30' 60'

GRAPHIC SCALE

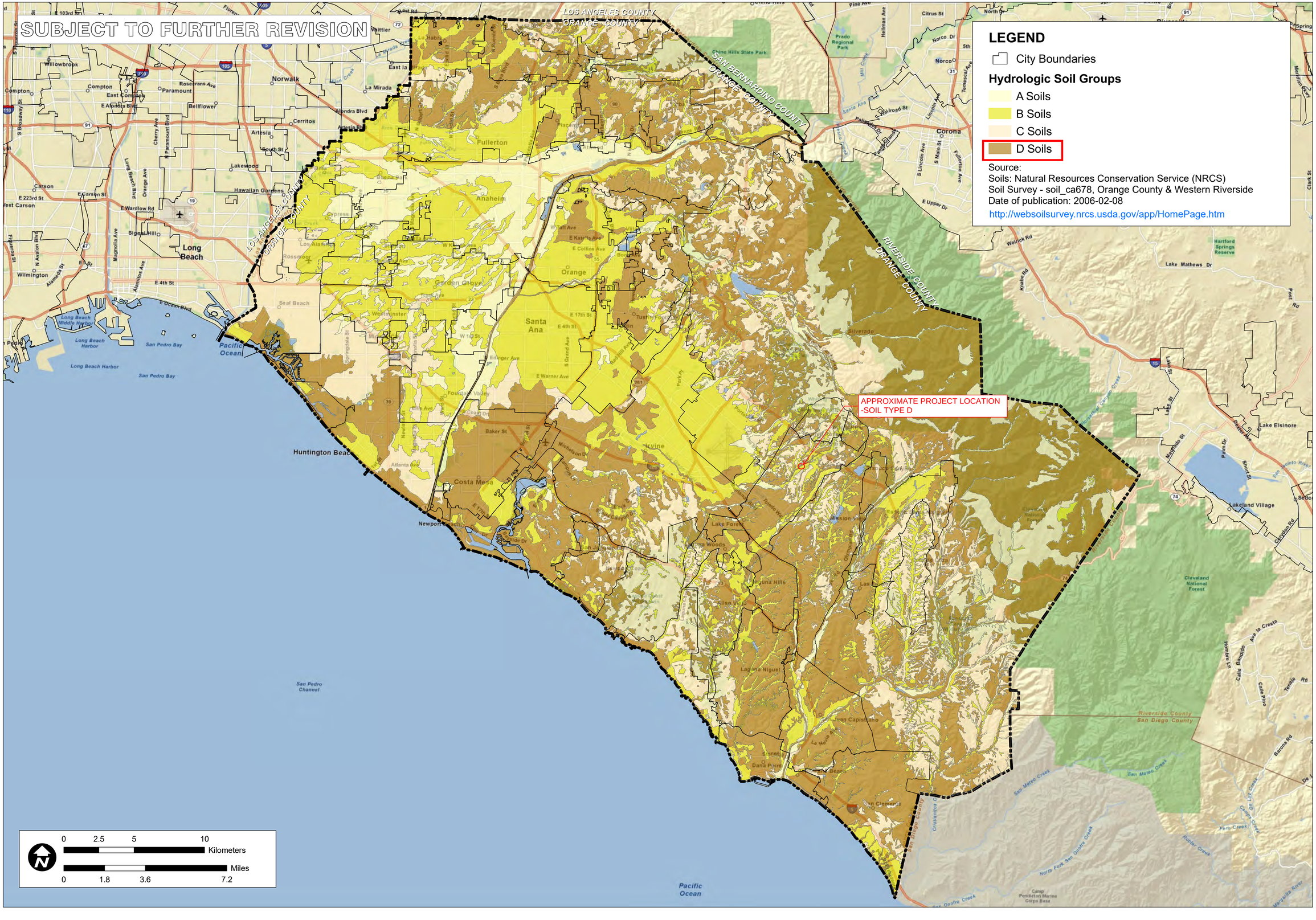
08/23/23

Appendix C

Soils Information

PRELIMINARY

SUBJECT TO FURTHER REVISION



LEGEND

- City Boundaries

Hydrologic Soil Groups

- A Soils
- B Soils
- C Soils
- D Soils

Source:
Soils: Natural Resources Conservation Service (NRCS)
Soil Survey - soil_ca678, Orange County & Western Riverside
Date of publication: 2006-02-08
http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm

0 2.5 5 10 Kilometers
0 1.8 3.6 7.2 Miles

P:\95226E\6-GIS\Mxds\Reports\InfiltrationFeasability_20110215\95226E_FigureXVI-2a_HydroSoils_20110215.mxd

TITLE
NRCS HYDROLOGIC SOILS GROUPS

JOB
ORANGE COUNTY INFILTRATION STUDY
ORANGE CO. CA

SCALE	1" = 1.8 miles
DESIGNED	TH
DRAWING	TH
CHECKED	BMP
DATE	02/09/11
JOB NO.	95226-E

PACE
Advanced Water Engineering

FIGURE
XVI-2a

May 28, 2019 Project No. 19035-01

Mr. Jeremy Krout
EPD Solutions, Inc.
2030 Main Street, Suite 1200
Irvine, CA 92614

Subject: ***Preliminary Geotechnical Evaluation and Design Recommendations for Proposed Great Scott Tree Service Development, 20865 Canada Road, Lake Forest, California***

In accordance with your request and authorization, LGC Geotechnical, Inc. has performed a preliminary geotechnical evaluation for the proposed Great Scott Tree Service Development located at 20865 Canada Road in the City of Lake Forest, California. The purpose of our study was to evaluate the existing onsite geotechnical conditions and to provide preliminary geotechnical recommendations relative to the proposed development.

Should you have any questions regarding this report, please do not hesitate to contact our office. We appreciate this opportunity to be of service.

Respectfully Submitted,

LGC Geotechnical, Inc.

Ryan Douglas, RCE 84840
Project Engineer

REGISTERED PROFESSIONAL ENGINEER
RYAN L. DOUGLAS
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CIVIL
STATE OF CALIFORNIA

Katie Maes, CEG 2216
Project Geologist

PROFESSIONAL GEOLOGIST
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STATE OF CALIFORNIA

RLD/KTM/ala

Distribution: (4) Addressee (3 wet-signed copies and 1 electronic copy)
(4) Great Scott Tree Service, Inc. (electronic copy)
Attn: Mr. Steve Guzowski

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1.0 INTRODUCTION

1.1 Purpose and Scope of Services

This report presents the results of our preliminary geotechnical evaluation for the proposed development located at 20865 Canada Road in the City of Lake Forest, California. Refer to the Site Location Map (Figure 1).

The purpose of our study was to provide a preliminary geotechnical evaluation relative to the proposed development. As part of our scope of work, we have: 1) reviewed available geotechnical background information including in-house regional geologic maps and published geotechnical literature pertinent to the site (Appendix A); 2) performed a limited subsurface geotechnical evaluation of the site consisting of the excavation of three small-diameter borings ranging in depth from approximately 5 to 50 feet below existing ground surface; 3) performed one field infiltration test; 4) performed laboratory testing of select soil samples obtained during our subsurface evaluation; and 5) prepared this geotechnical summary report presenting our preliminary findings, conclusions and recommendations for the development of the proposed project.

1.2 Existing Conditions

The approximately 6.4-acre irregular-shaped site is bound to the north by commercial/industrial developments, to the east by Dimension Drive, to the south by Linear Lane and two existing industrial buildings and to the west by Serrano Creek. Serrano Creek meanders from east to west through the site and is primarily located in the northern region of the site. The site's current use is primarily a residence/farm and vehicular storage yard. The central and western portion of the site contain a residential structure, barn, livestock stables, a horse corral/arena, unpaved and paved roads and miscellaneous debris. The eastern portion of the site contains a manmade lot currently used for vehicular storage. Entry to the site is from either Linear Lane or Canada Road. Vegetation across the site consists of grass, brush, bushes and areas of dense tree growth.

Based on review of historic aerials, it appears the barn structure was constructed some time before the year 1938 and the residential structure was constructed sometime between the years 1946 and 1952.

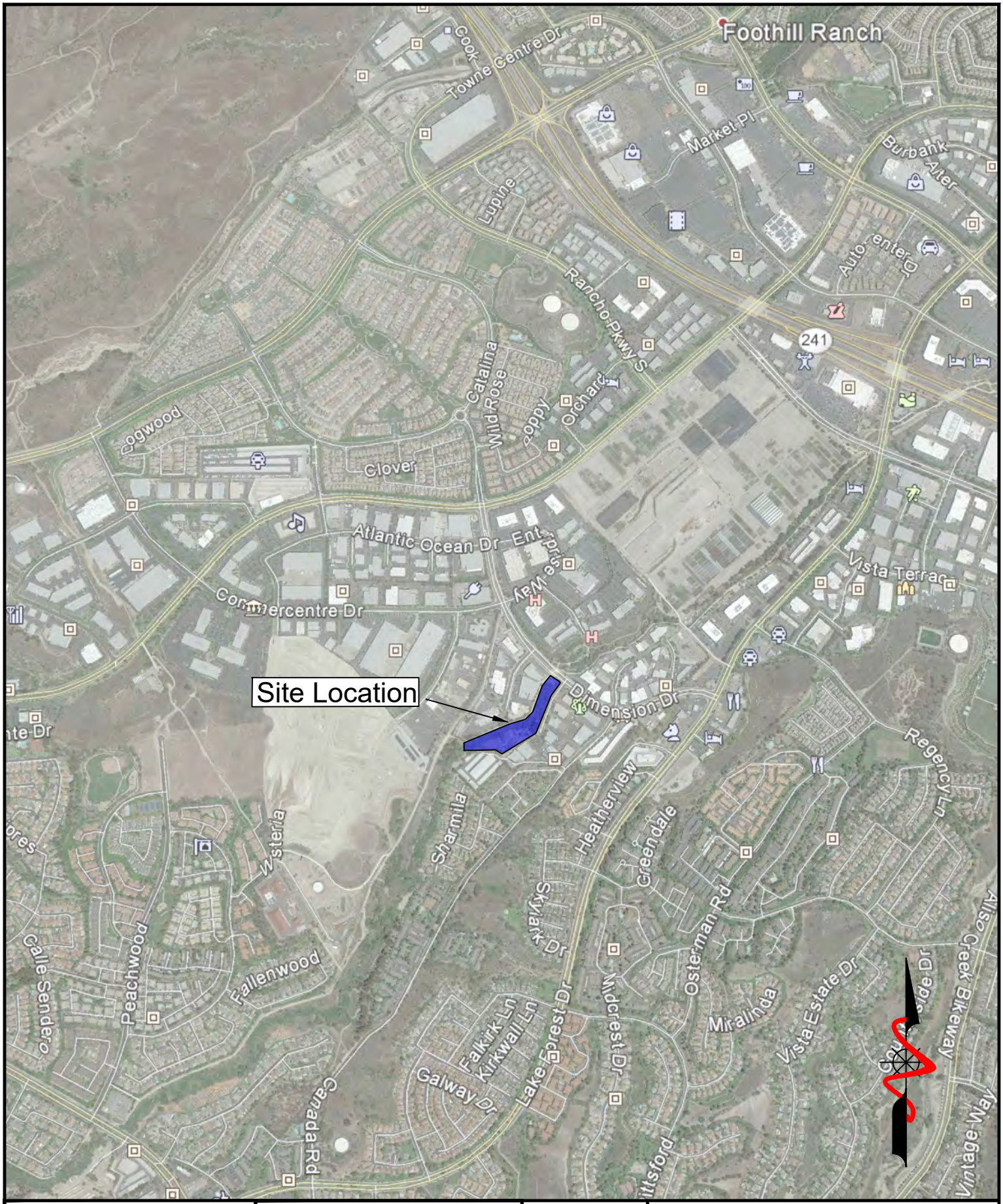
1.3 Project Description

Based on the conceptual site plan (Herdman, 2018), the proposed improvements include the construction of a restroom building addition, a modular office building, dump truck and boom truck parking areas, vehicular parking areas, a concrete pad for chip drying, freestanding block walls and a water quality basin/feature. The proposed development is located on the southern side of the existing Serrano Creek alignment. Design cuts and fills (not including required remedial grading) are anticipated to be on the order of 2 to 4 feet. The proposed temporary modular structures are anticipated to be relatively light with maximum column and wall loads of approximately 10 kips and 2 kips per linear foot, respectively. Please note no structural loads

were provided to us at the time of this report.

Some of the existing structures including the barn (storage building) and residence (office) are anticipated to remain in-place and keep the same building footprint that currently exists.

The recommendations given in this report are based upon the estimated structural loading, grading and layout information above. We understand that the project plans are currently being developed at this time; LGC Geotechnical should be provided with updated project plans and any changes to structural loads when they become available, in order to either confirm or modify the recommendations provided herein.



PROJECT NAME	Great Scott - Lake Forest
PROJECT NO.	19035-01
ENG. / GEOL.	RLD / KTM
SCALE	Not to Scale
DATE	May 2019

LGC Geotechnical, Inc.

FIGURE 1
Site Location Map

1.4 Subsurface Geotechnical Evaluation

LGC Geotechnical performed a limited subsurface geotechnical evaluation of the site consisting of the excavation of three hollow-stem auger borings to evaluate onsite geotechnical conditions.

Three hollow-stem borings (HS-1, HS-2 & I-1) were drilled to depths ranging from approximately 5 to 50 feet below existing grade. An LGC Geotechnical staff engineer observed the drilling operations, logged the borings, and collected soil samples for laboratory testing. The borings were excavated by Calpac Drilling under subcontract to LGC Geotechnical using a truck-mounted drill rig equipped with 8-inch-diameter hollow-stem augers. Driven soil samples were collected by means of the Standard Penetration Test (SPT) and Modified California Drive (MCD) sampler generally obtained at 2.5 to 5-foot vertical increments. The MCD is a split-barrel sampler with a tapered cutting tip and lined with a series of 1-inch-tall brass rings. The SPT sampler (1.4-inch ID) and MCD sampler (2.4-inch ID, 3.0-inch OD) were driven using a 140-pound automatic hammer falling 30 inches to advance the sampler a total depth of 18 inches. The raw blow counts for each 6-inch increment of penetration were recorded on the boring logs. Bulk samples of the near-surface soils were also collected and logged at select borings for laboratory testing. At the completion of drilling, the borings were backfilled with the native soil cuttings and tamped. Some settlement of the backfill soils may occur over time.

Infiltration testing was performed within one of the borings (I-1) to a depth of 5 feet below existing grade. An LGC Geotechnical staff engineer installed standpipe, backfilled the boring with crushed rock and pre-soaked the infiltration hole prior to testing. Infiltration testing was performed per the County of Orange testing guidelines. The location was subsequently backfilled with native soils at the completion of testing.

The approximate locations of our subsurface explorations are provided on the Geotechnical Exploration Location Map (Figure 2). The boring logs are provided in Appendix B.

1.5 Laboratory Testing

Representative bulk and driven (relatively undisturbed) samples were obtained for laboratory testing during our field evaluation. Laboratory testing included in-situ moisture content and in-situ dry density, Atterberg Limits, fines content, expansion index, consolidation, R-value and corrosion (sulfate, chloride, pH and minimum resistivity).

The following is a summary of the laboratory test results:

- Dry density of the samples collected ranged from approximately 91 pounds per cubic foot (pcf) to 117 pcf, with an average of 106 pcf. Field moisture contents ranged from approximately 1 to 26 percent, with an average of 13 percent.
- Four fines content tests were performed and indicated a fines content (passing No. 200 sieve) ranging from approximately 6 to 37 percent. Based on the Unified Soils Classification System (USCS), the tested samples would be classified as “coarse-grained.”
- One Atterberg Limit (liquid limit and plastic limit) test was performed. Results indicated a Plasticity Index (PI) value of 17.
- One consolidation test was performed. The load versus deformation plot is provided in

Appendix C.

- Expansion potential testing indicated an expansion index value of 8, corresponding to "Very Low" expansion potential.
- One R-value test was performed on a bulk sample collected and resulted in an R-Value of 66.
- Corrosion testing indicated soluble sulfate contents of approximately 0.02 percent, a chloride content of 103 parts per million (ppm), pH of 8.2, and a minimum resistivity of 857 ohm-centimeters.

A summary of the laboratory test results is presented in Appendix C. The moisture and dry density results are presented on the boring logs in Appendix B.

2.0 GEOTECHNICAL CONDITIONS

2.1 Geologic Conditions

The subject site is located within the foothills of the Santa Ana Mountains, part of the Peninsular Ranges Geomorphic Province. The region consists of dissected foothills bordering the Los Angeles Basin to the northwest and the granite-core Santa Ana Mountains to the east. The Southern California Batholith forms the core of the Santa Ana Mountains, which is overlain by a thick sequence of sedimentary units, which comprise the foothills including the subject site. Late Miocene to Early Pliocene bedrock materials of the Oso Member of the Capistrano Formation that underlie the subject site at depth are primarily composed of sandstone and silty sandstone (USGS, 2004).

The site is specifically located within the Serrano Creek drainage course and the area just southeast of the active drainage. The southwest-flowing creek has deposited variable alluvial materials as observed during our subsurface investigation.

2.2 Generalized Subsurface Conditions

The subsurface evaluation performed at the subject site indicated that site soils consist of variable alluvium ranging from very moist to wet, moderate to dark brown clayey sand and sand, to an alluvial deposit consisting of light gray, relatively dry, medium to coarse sand with few pebbles. The material is labelled "younger alluvium" on boring logs. Bedrock of the Capistrano Formation, Oso Member was encountered at depth below the alluvium, consisting of light yellowish brown, silty sandstone, moist, very dense, observed to the maximum explored depth of approximately 50 feet below existing grade.

It should be noted that the borings are only representative of the location and time where/when they are performed and varying subsurface conditions may exist outside of the performed location. In addition, subsurface conditions can change over time. The soil descriptions provided above should not be construed to mean that the subsurface profile is uniform and that soil is homogeneous within the project area. For details on the stratigraphy at the exploration locations, refer to Appendix B.

2.3 Groundwater

Groundwater was encountered in our boring HS-1 at a depth of approximately 15 feet below existing grade. Historic high groundwater is estimated to be about 10 feet below existing grade (CDMG, 2000).

Seasonal fluctuations of groundwater elevations should be expected over time. In general, groundwater levels fluctuate with the seasons and local zones of perched groundwater may be present due to local seepage caused by irrigation and/or recent precipitation. Local perched groundwater conditions or surface seepage may develop once site development is completed.

2.4 Field Infiltration Testing

One field percolation test was performed in the area of the proposed infiltration trench and the location is depicted on Figure 2 – Geotechnical Exploration Location Map. Test well installation consisted of placing a 3-inch diameter perforated PVC pipe in the excavated borehole and backfilling the annulus with crushed rock including the placement of approximately 2 inches of crushed rock at the bottom of the borehole. The infiltration test well was presoaked the day of installation and testing took place within 24 hours of presoaking. During the pre-test the water level was observed to drop less than 6 inches in 25 minutes for two consecutive readings. Therefore, the test procedure for fine-grained soils or "slow test" was followed. Test well installation and the estimation of infiltration rates were accomplished in general accordance with the guidelines set forth by the County of Orange (2013). In general, three-dimensional flow out of the test well (*percolation*), as observed in the field, is mathematically reduced to one-dimensional flow out of the bottom of the test well (*infiltration*). Infiltration tests are performed using relatively clean water, free of particulates, silt, etc. The results of our recent field infiltration testing are presented in Appendix D and summarized below.

TABLE 1

Summary of Field Infiltration Testing

Infiltration Test Identification	Approx. Depth Below Existing Grade (ft)	Observed Infiltration Rate* (in./hr.)	Measured Infiltration Rate** (in./hr.)
I-1	5	0.7	0.35

*Observed Infiltration Rates Do Not Include Factor of Safety.

**Measured Infiltration Rates Include a Factor of Safety of 2 in Order to Evaluate Feasibility.

The tested infiltration rates provided in this report are considered a general representation of the infiltration rates at the location of the proposed infiltration trench. Please note, the testing of infiltration rates is highly dependent upon the materials encountered at the point of testing (i.e. location and depth of testing). Varying subsurface conditions may exist outside of the test location which could alter the calculated infiltration rate. Please refer to Section 4.6 for subsurface water infiltration recommendations.

2.5 Seismic Design Criteria

The site seismic characteristics were evaluated per the guidelines set forth in Chapter 16, Section 1613 of the 2016 California Building Code (CBC). Since the site contains soils that are susceptible to liquefaction (refer to above Section "Liquefaction and Dynamic Settlement"), ASCE 7 which has been adopted by the CBC requires that site soils be assigned Site Class "F" and a site-specific response spectrum be performed. However, in accordance with Section 20.3.1 of ASCE 7, if the fundamental periods of vibration of the planned structure are equal to or less than 0.5 second, a site-specific response spectrum is not required and ASCE 7/2016 CBC site class and seismic parameters may be used in lieu of a site-specific response spectrum. **It should be noted that the seismic parameters provided herein are not applicable for any structure having a fundamental period of vibration greater than 0.5 second.**

Representative site coordinates of latitude 33.6606 degrees north and longitude -117.6751 degrees west were utilized in our analyses. The maximum considered earthquake (MCE) spectral response accelerations (S_{MS} and S_{M1}) and adjusted design spectral response acceleration parameters (S_{DS} and S_{D1}) for Site Class D are provided in Table 2 below.

TABLE 2

Seismic Design Parameters for Structures with a Period of Vibration ≤ 0.5 Second

Selected Parameters from 2016 CBC, Section 1613 - Earthquake Loads	Seismic Design Values
Site Class per Chapter 20 of ASCE 7	D*
Risk-Targeted Spectral Acceleration for Short Periods (S_S)**	1.453g
Risk-Targeted Spectral Accelerations for 1-Second Periods (S_1)**	0.540g
Site Coefficient F_a per Table 1613.3.3(1)	1.0
Site Coefficient F_v per Table 1613.3.3(2)	1.5
Site Modified Spectral Acceleration for Short Periods (S_{MS}) for Site Class D [Note: $S_{MS} = F_aS_S$]	1.453g
Site Modified Spectral Acceleration for 1-Second Periods (S_{M1}) for Site Class D [Note: $S_{M1} = F_vS_1$]	0.811g
Design Spectral Acceleration for Short Periods (S_{DS}) for Site Class D [Note: $S_{DS} = (^2/_3)S_{MS}$]	0.968g
Design Spectral Acceleration for 1-Second Periods (S_{D1}) for Site Class D [Note: $S_{D1} = (^2/_3)S_{M1}$]	0.540g
Mapped Risk Coefficient at 0.2 sec Spectral Response Period, C_{RS} (per ASCE 7)	1.020
Mapped Risk Coefficient at 1 sec Spectral Response Period, C_{R1} (per ASCE 7)	1.052

* Site is Class F, seismic parameters provided herein are only applicable for structure period ≤ 0.5 second, refer to discussion above.

** From SEAOC, 2019

Section 1803.5.12 of the 2016 CBC (per Section 11.8.3 of ASCE 7) states that the maximum considered earthquake geometric mean (MCE_G) Peak Ground Acceleration (PGA) should be used for liquefaction potential. The PGA_M for the site is equal to 0.533g (SEAOC, 2019).

A deaggregation of the PGA based on a 2,475-year average return period indicates that an earthquake magnitude of 6.9 at a distance of approximately 5.4 km from the site would contribute the most to this ground motion (USGS, 2008).

2.6 Faulting

The subject site is not located within a State of California Earthquake Fault Zone (Alquist-Priolo) and no faults were identified on the site during our site evaluation (CGS, 2018). The possibility of damage due to ground rupture is considered low since no active faults are known to cross the site. The closest known active faults are associated with the San Joaquin Hills Fault, located approximately 3.1 miles from the site; the Elsinore Fault Zone, approximately 12.6 miles northeast of the site; and the Newport Inglewood Fault Zone, approximately 12.7 miles southwest of the site.

Secondary effects of seismic shaking resulting from large earthquakes on the major faults in the Southern California region, which may affect the site, include ground lurching and shallow ground rupture, soil liquefaction, and dynamic settlement. These secondary effects of seismic shaking are a possibility throughout the Southern California region and are dependent on the distance between the site and causative fault and the onsite geology. A discussion of these secondary effects is provided in the following sections.

2.6.1 Liquefaction and Dynamic Settlement

Liquefaction is a seismic phenomenon in which loose, saturated, granular soils behave similarly to a fluid when subject to high-intensity ground shaking. Liquefaction occurs when three general conditions coexist: 1) shallow groundwater; 2) low density non-cohesive (granular) soils; and 3) high-intensity ground motion. Studies indicate that saturated, loose near-surface cohesionless soils exhibit the highest liquefaction potential, while dry, dense, cohesionless soils and cohesive soils exhibit low to negligible liquefaction potential. In general, cohesive soils are not considered susceptible to liquefaction, depending on their plasticity and moisture content (Bray & Sancio, 2006). Effects of liquefaction on level ground include settlement, sand boils, and bearing capacity failures below structures. Dynamic settlement of dry loose sands can occur as the sand particles tend to settle and densify as a result of a seismic event.

Based on our review of the State of California Seismic Hazard Zone for liquefaction potential (CDMG, 2001), the site is located within a liquefaction hazard zone. In general, site soils are medium dense to dense and not susceptible to liquefaction. However, isolated loose sand layers are present and considered susceptible to liquefaction. The recent encountered in-situ groundwater depth of 15 feet below existing grade and historic high groundwater depth of 10 feet below existing grade were both used in the liquefaction analysis. The liquefaction evaluation was performed using data from boring HS-1. Liquefaction potential was evaluated using the procedures outlined by Special Publication 117A (SCEC, 1999 & CGS, 2008) and based on the seismic criteria of the 2016 California Building Code (CBC) and historic high groundwater depth. Liquefaction induced settlement was estimated using the PGA_M per the 2016 CBC and a moment magnitude of 6.9 (USGS, 2008).

Results indicate total seismic settlement on the order of 2-inches or less. Differential seismic settlement can be estimated as half of the total estimated settlement over a horizontal span of about 40 feet (i.e., 1-inch over a horizontal span of 40 feet). Seismically induced settlements were estimated by the procedure outlined by Tokimatsu and Seed (1987). Liquefaction calculations are provided in Appendix E.

2.6.2 Lateral Spreading

Lateral spreading is a type of liquefaction-induced ground failure associated with the lateral displacement of surficial blocks of sediment resulting from liquefaction in a subsurface layer. Once liquefaction transforms the subsurface layer into a fluid mass, gravity plus the earthquake inertial forces may cause the mass to move downslope towards a free face (such as a river channel or an embankment). Lateral spreading may cause large horizontal displacements and such movement typically damages pipelines, utilities, bridges, and structures.

Based on site liquefaction potential, lateral spreading and consequently zones of instability (horizontal displacements) near the banks of the adjacent creek are possible during the design basis earthquake ground motion. A corrected $(N_1)_{60}$ blow count of less than 15 is typically used for screening of potential lateral spreading (Youd, Hansen, Bartlett, 2002). Based on the obtained data, the soils within the lateral zone of the creek generally have corrected $(N_1)_{60}$ values of at least 15. Based on the obtained apparent density (i.e., blow counts) obtained from our field evaluation the potential for lateral spreading is generally considered low.

2.7 Expansion Potential

Based on the results of our recent laboratory testing, site soils are anticipated to have a "Very Low" expansion potential. Final expansion potential of site soils should be determined at the completion of grading. Results of expansion testing at finish grades will be utilized to confirm final foundation design.

3.0 CONCLUSIONS

Based on the results of our geotechnical evaluation, it is our opinion that the proposed development is feasible from a geotechnical standpoint, provided the following conclusions and recommendations are implemented.

The following is a summary of the primary geotechnical factors that may affect future development of the site:

- Groundwater was encountered during our subsurface evaluation at a depth of approximately 15 feet below existing ground surface. Historic high groundwater is estimated to be about 10 feet below existing grade (CDMG, 2000).
- The subject site is not located within a State of California Earthquake Fault Zone (Alquist-Priolo). The main seismic hazard that may affect the site is ground shaking from one of the active regional faults. The subject site will likely experience strong seismic ground shaking during its design life.
- Site soils are considered susceptible to liquefaction. The site is located in a State of California Seismic Hazard Zone for liquefaction. Total dynamic settlement is estimated to be on the order of 2-inches or less. Differential dynamic settlement can be estimated at half of the total settlement over a horizontal span of 40 feet for design of foundations.
- Based on the results of preliminary laboratory testing, site soils are anticipated to have "Very Low" expansion potential. Final design expansion potential must be determined at the completion of grading.
- From a geotechnical perspective, the existing onsite soils are suitable material for use as general fill (not retaining wall backfill), provided that they are relatively free from oversized material (larger than 8 inches in maximum dimension), construction debris, and significant organic material.
- Some portions of the onsite soils have high fines content and are not suitable for backfill of site retaining walls. Therefore, import and/or select grading and stockpiling of onsite sandy soils meeting project recommendations may be required.
- Excavations into the existing site soils should be feasible with heavy construction equipment in good working order.

4.0 PRELIMINARY RECOMMENDATIONS

The following recommendations are to be considered preliminary and should be confirmed upon completion of grading and earthwork operations. In addition, they should be considered minimal from a geotechnical viewpoint, as there may be more restrictive requirements from the architect, structural engineer, building codes, governing agencies, or the owner.

It should be noted that the following geotechnical recommendations are intended to provide sufficient information to develop the site in general accordance with the 2016 CBC requirements. With regard to the potential occurrence of potentially catastrophic geotechnical hazards such as fault rupture, earthquake-induced landslides, liquefaction, etc. the following geotechnical recommendations should provide adequate protection for the proposed development to the extent required to reduce seismic risk to an "acceptable level." The "acceptable level" of risk is defined by the California Code of Regulations as "that level that provides reasonable protection of the public safety, though it does not necessarily ensure continued structural integrity and functionality of the project" [Section 3721(a)]. Therefore, repair and remedial work of the proposed improvements may be required after a significant seismic event. With regards to the potential for less significant geologic hazards to the proposed development, the recommendations contained herein are intended as a reasonable protection against the potential damaging effects of geotechnical phenomena such as expansive soils, fill settlement, groundwater seepage, etc. It should be understood, however, that although our recommendations are intended to maintain the structural integrity of the proposed development and structures given the site geotechnical conditions, they cannot preclude the potential for some cosmetic distress or nuisance issues to develop as a result of the site geotechnical conditions.

The geotechnical recommendations contained herein must be confirmed to be suitable or modified based on the actual as-graded conditions.

4.1 Site Earthwork

We anticipate that earthwork at the site will consist of demolition of the existing site improvements, required earthwork removals, subgrade preparation, precise grading and construction of the proposed new improvements including the modular buildings, parking areas, subsurface utilities, water quality facilities, etc.

We recommend that earthwork be performed in accordance with the following recommendations, future grading plan review report(s), the 2016 CBC/City of Lake Forest grading requirements, and the General Earthwork and Grading Specifications included in Appendix F. In case of conflict, the following recommendations shall supersede those included in Appendix F. The following recommendations should be considered preliminary and may be revised based upon future evaluation and review of the project plans and/or based on the actual conditions encountered during site grading/construction.

4.1.1 Site Preparation

Prior to grading of areas to receive structural fill or engineered improvements, the areas should be cleared of existing building structures, asphalt, surface obstructions, and

demolition debris. Vegetation and debris should be removed and properly disposed of off-site. Holes resulting from the removal of buried obstructions, which extend below proposed finish grades, should be replaced with suitable compacted fill material. Any abandoned sewer or storm drain lines should be completely removed and replaced with properly placed compacted fill. Deeper demolition may be required in order to remove existing foundations. We recommend the trenches associated with demolition which extend below the remedial grading depth be backfilled and properly compacted prior to the demolition contractor leaving the site.

If cesspools or septic systems are encountered during earthwork, they should be removed in their entirety. The resulting excavation should be backfilled with properly compacted fill soils. As an alternative, cesspools can be backfilled with lean sand-cement slurry. Any encountered wells should be properly abandoned in accordance with regulatory requirements. At the conclusion of the clearing operations, a representative of LGC Geotechnical should observe and accept the site prior to further grading.

4.1.2 Removal and Recompaction Depths and Limits

In order to provide a relatively uniform bearing condition for the planned building structures and improvements, we recommend the site soils be removed and recompacted.

Buildings: We recommend that soils within the proposed building addition areas and modular building pads be removed and recompacted to a minimum depth of 4 feet below existing grade or 3 feet beneath the base of the foundations, whichever is deeper. Where adequate space is available, the base of removal and recompaction bottoms should extend laterally a minimum distance equal to the depth of removal and recompaction below finish grade or at a minimum distance of 4 feet beyond the edges of the proposed building foundations, whichever is larger.

Minor Site Structures: For minor site structures such as free-standing, screen walls, trash enclosures, etc., removal and recompaction should extend at least 3 feet beneath the existing grade or 2 feet beneath the base of foundations, whichever is deeper. In general, the envelope for removal and recompaction should extend laterally a minimum distance of 3 feet beyond the edges of the proposed improvements mentioned above, where space permits.

Pavement and Hardscape: Within pavement areas, removal and recompaction should extend to a depth of at least 1 foot below the existing grade or 1 foot beneath the finished subgrade (i.e., beneath planned aggregate base/asphalt concrete or gravel). Within hardscape areas, removal and recompaction should extend to a depth of at least 1 foot below the existing grade or 1 foot beneath the finished subgrade (i.e., beneath planned concrete).

Local conditions may be encountered during excavation that could require deep remedial grading beyond the above noted minimum in order to obtain an acceptable subgrade. The actual depths and lateral extents of grading will be determined by the geotechnical consultant, based on subsurface conditions encountered during grading. Removal and

recompaction areas should be accurately staked in the field by the Project Surveyor.

4.1.3 Temporary Excavations

Temporary excavations should be performed in accordance with project plans, specifications, and all Occupational Safety and Health Administration (OSHA) requirements. Excavations should be laid back or shored in accordance with OSHA requirements before personnel or equipment are allowed to enter. Based on our field investigation, the majority of site soils are anticipated to be OSHA Type "B" soils (refer to the attached boring logs). Sandy soils are present and should be considered susceptible to caving. Raveling of the sandy soils should be anticipated for temporary slopes. Flatter slope inclinations should be considered if raveling cannot be tolerated. The exposed slope surface may be kept surficially moist (but not saturated) during construction to reduce (not eliminate) potential sloughing. Soil conditions should be regularly evaluated during construction to verify conditions are as anticipated. The contractor shall be responsible for providing the "competent person" required by OSHA standards to evaluate soil conditions. Close coordination with the geotechnical consultant should be maintained to facilitate construction while providing safe excavations. Excavation safety is the sole responsibility of the contractor.

Surcharge loads (vehicular traffic, soil stockpiles, construction equipment, etc.) should be set back from the perimeter of excavations a minimum distance equivalent to a 1:1 projection from the bottom of the excavation or 5 feet, whichever is greater, unless the cut is properly shored and designed for the applicable surcharge load. Once an excavation has been initiated, it should be backfilled as soon as practical. Prolonged exposure of temporary excavations may result in some localized instability. Excavations should be planned so that they are not initiated without sufficient time to shore/fill them prior to weekends, holidays, or forecasted rain.

It should be noted that any excavation that extends below a 1:1 (horizontal to vertical) projection of an existing foundation will remove existing support of the structure foundation. If requested, temporary shoring parameters will be provided.

4.1.4 Removal Bottoms and Subgrade Preparation

In general, removal bottoms and areas to receive compacted fill should be scarified to a minimum depth of 6 inches, brought to a near-optimum moisture condition (generally within optimum and 2 percent above optimum moisture content), and re-compacted per project recommendations.

Removal bottoms and areas to receive fill should be observed and accepted by the geotechnical consultant prior to subsequent fill placement. Soil subgrade for planned footings and improvements (e.g., slabs, etc.) should be firm and competent.

4.1.5 Material for Fill

From a geotechnical perspective, the onsite soils are generally considered suitable for use as general compacted fill, provided they are screened of significant organic materials, construction debris and oversized material (8 inches in greatest dimension).

From a geotechnical viewpoint, any required import soils for general fill (i.e., non-retaining wall backfill) should consist of soils of "Very Low" expansion potential (expansion index 20 or less based on American Society for Testing and Materials [ASTM] D 4829), and free of significant organic materials, construction debris and any material greater than 3 inches in maximum dimension. Import for any required retaining wall backfill should meet the criteria outlined in the following paragraph. Source samples should be provided to the geotechnical consultant for laboratory testing a minimum of four working days prior to any planned importation.

Retaining wall backfill should consist of imported or onsite free draining, clean granular (sandy) soils with a maximum of 35 percent fines (passing the No. 200 sieve) per ASTM Test Method D1140 (or ASTM D6913/D422) and a "Very Low" expansion potential (EI of 20 or less per ASTM D4829). Soils should also be screened of significant organic materials, construction debris, and any material greater than 3 inches in maximum dimension. The site contains soils that are not suitable for retaining wall backfill due to their fines content; therefore, select grading and stockpiling and/or import of soils meeting the criteria outlined above will be required by the contractor for obtaining suitable retaining wall backfill soil. These preliminary findings should be confirmed during grading.

Aggregate base (crushed aggregate base or crushed miscellaneous base) should conform to the requirements of Section 200-2 of the most recent version of the Standard Specifications for Public Works Construction ("Greenbook") for untreated base materials (except processed miscellaneous base) and/or City of Lake Forest requirements.

The placement of inert demolition materials in compacted fill is acceptable from a geotechnical viewpoint provided the demolition material is broken up into pieces not larger than typically used for aggregate base (approximately 1-inch in maximum dimension) and well blended into fill soils with essentially no resulting voids. Demolition material placed in fills must be free of construction debris (wood, organics, etc.) and reinforcing steel. If asphalt concrete fragments will be incorporated into the demolition materials, approval from an environmental viewpoint may be required and is not the purview of the geotechnical consultant. From our previous experience, we recommend that asphalt concrete fragments be limited to fill areas within planned parking and drive aisle areas (i.e., not within building pad areas).

4.1.6 Placement and Compaction of Fills

Material to be placed as fill should be brought to near-optimum moisture content (generally within optimum and 2 percent above optimum moisture content) and recompacted to at least 90 percent relative compaction (per ASTM D1557). Moisture conditioning of site soils will be required in order to achieve adequate compaction. Drying and or mixing of very moist soils will be required prior to reusing the materials in

compacted fills. Soils are also present that will require additional moisture in order to achieve the required compaction.

The optimum lift thickness to produce a uniformly compacted fill will depend on the type and size of compaction equipment used. In general, fill should be placed in uniform lifts not exceeding 8 inches in compacted thickness. Each lift should be thoroughly compacted and accepted prior to subsequent lifts. Generally, placement and compaction of fill should be performed in accordance with local grading ordinances and with observation and testing performed by the geotechnical consultant. Oversized material as previously defined should be removed from site fills.

During backfill of excavations, the fill should be properly benched into firm and competent soils of temporary backcut slopes as it is placed in lifts.

Aggregate base material should be compacted to at least 95 percent relative compaction at or slightly above optimum moisture content per ASTM D1557. Subgrade below aggregate base should be compacted to at least 90 percent relative compaction per ASTM D1557 at near-optimum moisture content (generally within optimum and 2 percent above optimum moisture content).

4.1.7 Trench and Retaining Wall Backfill and Compaction

The onsite soils may generally be suitable as trench backfill, provided the soils are screened of rocks, construction debris, other material greater than 6 inches in diameter and significant organic matter. If trenches are shallow or the use of conventional equipment may result in damage to the utilities, sand having a sand equivalent (SE) of 30 or greater (per California Test Method [CTM] 217) may be used to bed and shade the pipes. Based on our field evaluation, onsite soils will not meet this sand equivalent requirement. Sand backfill within the pipe bedding zone may be densified by jetting or flooding and then tamping to ensure adequate compaction. Subsequent trench backfill should be compacted in uniform lifts (as outlined above in section "Placement and Compaction of Fills") by mechanical means to at least 90 percent relative compaction (per ASTM D1557).

Utility trenches running parallel to footings should not be excavated within a 1:1 (horizontal to vertical) downward projection from adjacent footings ("footing influence zone") to avoid potential undermining. Depending on the utility line and structural loading of the footing, utility trenches running perpendicular to footings may require special provisions such as sand-cement slurry backfill of the utility trench in this zone or flexible sleeves through the footings. These conditions should be evaluated on a case-by-case basis.

Retaining wall backfill should consist of sandy soils as outlined in preceding Section 4.1.5. The limits of select sandy backfill should extend at minimum ½ the height of the retaining wall or the width of the heel (if applicable), whichever is greater (Figure 3). Retaining wall backfill soils should be compacted in relatively uniform thin lifts to at least 90 percent relative compaction (per ASTM D1557). Jetting or flooding of retaining wall backfill materials should not be permitted.

In backfill areas where mechanical compaction of soil backfill is impractical due to space constraints, typically sand-cement slurry may be substituted for compacted backfill. The slurry should contain about one sack of cement per cubic yard. When set, such a mix typically has the consistency of compacted soil. Sand cement slurry placed near the surface within landscape areas should be evaluated for potential impacts on planned improvements.

A representative from LGC Geotechnical should observe, probe, and test the backfill to verify compliance with the project recommendations.

4.2 Preliminary Foundation Recommendations

The proposed building additions and modular structures may be supported on a conventional slab and spread footings or a mat slab, provided earthwork is performed in accordance with the recommendations presented in this report. All footings should be supported on properly compacted fill. Please note that the following foundation recommendations are preliminary and must be confirmed by LGC Geotechnical at the completion of grading.

Preliminary foundation recommendations are provided in the following sections. The foundation design must be performed by the structural engineer based on the following geotechnical parameters and minimum values provided.

4.2.1 Slab Design and Construction

We recommend building additions be founded on a conventional slab with a minimum thickness of 4 inches. We recommend the prefabricated modular buildings (office structures, etc.) be founded on a mat slab a minimum thickness of 6 inches. Conventional slabs and mat slabs are to be supported on compacted fill soils properly prepared in accordance with the recommendations provided in this report. Minimum slab reinforcement should be determined by the structural engineer based on the imposed loading, crack control, etc.

It is recommended that subgrade soils below mat slabs be moisture conditioned in order to maintain the recommended moisture content up to the time of concrete placement. The recommended moisture content of the mat slab subgrade soils should be approximately 0 to 4 percent above optimum moisture content to a minimum depth of 12 inches. The moisture content of the mat slab subgrade should be verified by the geotechnical engineer within 1 to 2 days prior to concrete placement. In addition, this moisture content should be maintained around the immediate perimeter of the mat slabs during construction.

4.2.2 Slab Underlayment Guidelines

The following is for informational purposes only since slab underlayment (e.g., moisture retarder, sand or gravel layers for concrete curing and/or capillary break) is unrelated to the geotechnical performance of the foundation and thereby not the purview of the geotechnical consultant. Post-construction moisture migration should be expected below the foundation. The foundation engineer should determine whether the use of a capillary break (sand or gravel layer), in conjunction with the vapor retarder, is necessary or required by code. Sand layer thickness and location (above and/or below vapor retarder) should also be determined by the foundation engineer/architect.

4.3 Soil Bearing and Lateral Resistance

Provided our earthwork recommendations are implemented, an allowable soil bearing pressure of 2,000 pounds per square foot (psf) may be used for the design of footings having a minimum width of 12 inches and minimum embedment of 12 inches below lowest adjacent ground surface. These allowable bearing pressures are applicable for level (ground slope equal to or flatter than 5H:1V) conditions only. Bearing values indicated are for total dead loads and frequently applied live loads and may be increased by ⅓ for short duration loading (i.e., wind or seismic loads).

In utilizing the above-mentioned allowable bearing capacity and provided our earthwork recommendations are implemented, foundation settlement due to structural loads is anticipated to be ½-inch or less. Differential settlement may be taken as half of the total settlement (i.e., ¼-inch over a horizontal span of 40 feet).

Resistance to lateral loads can be provided by friction acting at the base of foundations and by passive earth pressure. For concrete/soil frictional resistance, an allowable coefficient of friction of 0.3 may be assumed with dead-load forces. For slabs constructed over a moisture retarder, the allowable friction coefficient should be provided by the manufacturer. An allowable passive lateral earth pressure of 225 psf per foot of depth (or pcf) to a maximum of 2,250 psf may be used for lateral resistance. Allowable passive pressure may be increased to 300 pcf to a maximum of 3,000 psf for short duration seismic or wind loading. These passive pressures are applicable for level (ground slope equal to or flatter than 5H:1V) conditions only. For a 2:1 (horizontal to vertical) downward sloping condition, a reduced allowable passive lateral earth pressure of 100 pcf to a maximum of 1,000 psf may be used. We recommend that the upper foot of passive resistance be neglected if finished grade will not be covered with concrete or asphalt. Frictional resistance and passive pressure may be used in combination without reduction. The provided allowable passive pressures are based on a factor of safety of 1.5 and 1.1 for static and seismic loading conditions, respectively. The structural designer should incorporate appropriate factors of safety and/or load factors in their design.

4.4 Lateral Earth Pressures for Retaining Walls

The following may be used for design of site retaining walls. Lateral earth pressures are provided as equivalent fluid unit weights, in psf per foot of depth (or pcf). These values do not contain an appreciable factor of safety, so the retaining wall designer should apply the applicable factors of safety and/or load factors during design. A soil unit weight of 120 pcf may be assumed for

calculating the actual weight of soil over the wall footing.

The following lateral earth pressures are presented in Table 3 for approved import or onsite free draining, clean granular (sandy) soils with a maximum of 35 percent fines (passing the No. 200 sieve per ASTM D-421/422) and a "Very Low" expansion potential (EI of 20 or less per ASTM D4829). Portions of the onsite soils are not suitable for retaining wall backfill due to their fines content. Therefore, select grading and stockpiling and/or import of soils meeting the criteria outlined above will be required by the contractor for obtaining suitable retaining wall backfill soil. The wall designer should clearly indicate on the retaining wall plans the required select sandy soil backfill criteria. These preliminary findings should be confirmed during grading.

TABLE 3

Lateral Earth Pressures – Approved Sandy Soils

Conditions	**Equivalent Fluid Unit Weight (pcf)**	**Equivalent Fluid Unit Weight (pcf)**
	Level Backfill	**2:1 Sloped Backfill**
	Approved Sandy Soils	**Approved Sandy Soils**
Active	35	55
At-Rest	55	70

If the wall can yield enough to mobilize the full shear strength of the soil, it can be designed for "active" pressure. If the wall cannot yield under the applied load, the earth pressure will be higher. This would include 90-degree corners of retaining walls. Such walls should be designed for "at-rest." The equivalent fluid pressure values assume free-draining conditions and a drainage system will be installed and maintained to prevent the build-up of hydrostatic pressures. If conditions other than those assumed above are anticipated, the equivalent fluid pressure values should be provided on an individual-case basis by the geotechnical engineer.

Retaining wall structures should be provided with appropriate drainage and appropriately waterproofed. To reduce, but not eliminate, saturation of near-surface (upper approximate 1-foot) soils in front of the retaining walls, the perforated subdrain pipe should be located as low as possible behind the retaining wall. The outlet pipe should be sloped to drain to a suitable outlet. In general, we do not recommend retaining wall outlet pipes be connected to area drains. If subdrains are connected to area drains, special care should be taken to maintain these drains. Typical conventional retaining wall drainage is shown on Figure 3. It should be noted that the recommended subdrain does not provide protection against seepage through the face of the wall and/or efflorescence. Waterproofing and outlet systems are not the purview of the geotechnical consultant.

Surcharge loading effects from any adjacent structures should be evaluated by the retaining wall designer. In general, structural loads within a 1:1 (horizontal: vertical) upward projection from the bottom of the proposed retaining wall footing will surcharge the proposed retaining wall. In addition to the recommended earth pressure, retaining walls adjacent to streets should

be designed to resist a uniform lateral pressure of 85 pounds per square foot (psf) due to normal street vehicle traffic, if applicable. Uniform lateral surcharges may be estimated using the applicable coefficient of lateral earth pressure using a rectangular distribution. A factor of 0.45 and 0.3 may be used for at-rest and active conditions, respectively. The retaining wall designer should contact the geotechnical consultant for any required geotechnical input in estimating surcharge loads.

If required, the retaining wall designer may use a seismic lateral earth pressure increment of 10 pcf for a level backfill condition. This increment should be applied in addition to the provided static lateral earth pressure using a triangular distribution with the resultant acting at H/3 in relation to the base of the retaining structure (where H is the retained height). Per Section 1803.5.12 of the 2016 CBC, the seismic lateral earth pressure is applicable to structures assigned to Seismic Design Category D through F for retaining wall structures supporting more than 6 feet of backfill height. The provided seismic lateral earth pressure should not be used for retaining walls exceeding 10 feet in height. If a retaining wall greater than 10 feet in height is proposed or a retaining wall with a sloping backfill condition, the retaining wall designer should contact the geotechnical engineer for specific seismic lateral earth pressure increments based on the configuration of the planned retaining wall structures. This seismic lateral earth pressure is estimated using the procedure outlined by the Structural Engineers Association of California (Lew, et al, 2010).

Soil bearing and lateral resistance (friction coefficient and passive resistance) are provided in Section 4.3 (Soil Bearing and Lateral Resistance). Earthwork considerations (temporary backcuts, backfill, compaction, etc.) for retaining walls are provided in Section 4.1 (Site Earthwork) and the subsequent earthwork related sub-sections.

4.5 Soil Corrosivity

Although not corrosion engineers (LGC Geotechnical is not a corrosion consultant), several governing agencies in Southern California require the geotechnical consultant to determine the corrosion potential of soils to buried concrete and metal facilities. We therefore present the results of our testing with regard to corrosion for the use of the client and other consultants, as they determine necessary.

Corrosion testing of a near-surface bulk sample indicated a soluble sulfate content less than approximately 0.02 percent, a chloride content of 103 parts per million (ppm), pH of 8.2, and a minimum resistivity of 857 ohm-centimeters. Based on Caltrans Corrosion Guidelines (Caltrans, 2015), soils are considered corrosive to structural elements if the pH is 5.5 or less, or the chloride concentration is 500 ppm or greater, or the sulfate concentration is 2,000 ppm (0.2 percent) or greater. Based on the preliminary test results, soils are not considered corrosive using Caltrans criteria.

Based on laboratory sulfate test results, the near surface soils are designated to a class “S0” per ACI 318, Table 19.3.1.1 with respect to sulfates. Concrete in direct contact with the onsite soils can be designed according to ACI 318, Table 19.3.2.1 using the “S0” sulfate classification.

Laboratory testing may need to be performed at the completion of grading by the project corrosion engineer to further evaluate the as-graded soil corrosivity characteristics.

Accordingly, revision of the corrosion potential may be needed, should future test results differ substantially from the conditions reported herein. The client and/or other members of the development team should consider this during the design and planning phase of the project and formulate an appropriate course of action.

4.6 Control of Surface Water and Drainage Control

From a geotechnical perspective, we recommend that compacted finished grade soils adjacent to the proposed warehouse structures be sloped away from the proposed structures towards an approved drainage device or unobstructed swale. Drainage swales, wherever feasible, should not be constructed within 5 feet of buildings. Where lot and building geometry necessitates that the drainage swales be routed closer than 5 feet to structural foundations, we recommend the use of area drains together with drainage swales. Drainage swales used in conjunction with area drains should be designed by the project civil engineer so that a properly constructed and maintained system will prevent ponding within 5 feet of the foundation. Code compliance of grades is not the purview of the geotechnical consultant.

Planters with open bottoms adjacent to buildings should be avoided. Planters should not be designed adjacent to buildings unless provisions for drainage, such as catch basins, liners, and/or area drains, are made. Overwatering must be avoided.

4.7 Subsurface Water Infiltration

Recent regulatory changes in some jurisdictions have recommended that low flow runoff be infiltrated rather than discharged via conventional storm drainage systems. In general, the vast majority of geotechnical distress issues are directly related to improper drainage. In general, distress in the form of movement of improvements could occur as a result of soil saturation and loss of soil support, expansion, internal soil erosion, collapse and/or settlement. Infiltrated water may enter underground utility pipe zones and migrate along the pipe backfill, potentially impacting other improvements located far away from the point of infiltration.

Geotechnical stability and integrity of the project site is reliant upon appropriate handling of surface water. Due to the low infiltration rate, shallow groundwater and site liquefaction potential, we strongly recommend against the intentional infiltration of storm water.

4.8 Preliminary Asphalt Concrete Pavement Sections

The following provisional minimum asphalt concrete (AC) street sections are provided in Table4 for Traffic Indices (TI) of 5.5, 6.0 and 6.5 to be utilized in the design of the auto and truck parking/circulation areas. These sections are based on an assumed R-value of 50. These recommendations must be confirmed with R-value testing of representative near-surface soils at the completion of grading and after underground utilities have been installed and backfilled. Final pavement sections should be confirmed by the project civil engineer based upon the final design Traffic Index. If requested, LGC Geotechnical will provide sections for alternate TI values.

TABLE 4

Preliminary Asphalt Concrete Pavement Section Options

Assumed Traffic Index	5.5	6.0	6.5
R -Value Subgrade	50	50	50
AC Thickness	4.0 inches	4.0 inches	4.0 inches
Aggregate Base Thickness	4.0 inches	4.0 inches	4.5 inches

The pavement section thicknesses provided above are considered minimum thicknesses. Increasing the thickness of any or all of the above layers will reduce the likelihood of the pavement experiencing distress during its service life. The above recommendations are based on the assumption that proper maintenance and irrigation of the areas adjacent to the roadway will occur throughout the design life of the pavement. Failure to maintain a proper maintenance and/or irrigation program may jeopardize the integrity of the pavement.

Earthwork recommendations regarding aggregate base and subgrade are provided in the previous Section "Site Earthwork" and the related sub-sections of this report.

4.9 Preliminary Gravel Parking Area Recommendations

It is our understanding that the equipment parking areas will consist of compacted gravel (1-inch to 1 ½-inch) over compacted subgrade and asphalt concrete paving is not desired. A minimum of 4 inches of compacted gravel over compacted subgrade is recommended.

The thickness shown is a minimum thickness. Increasing the thickness of the above will reduce the likelihood of the equipment parking area experiencing distress during its service life. The above recommendations are based on the assumption that proper maintenance and irrigation of the areas adjacent to the equipment parking areas will occur through the design life of the pavement. Failure to maintain a proper maintenance and/or irrigation program may jeopardize the integrity of the equipment parking areas.

Earthwork recommendations regarding aggregate base and subgrade are provided in the previous Section "Site Earthwork" and the related sub-sections of this report.

4.10 Nonstructural Concrete Flatwork

Nonstructural concrete flatwork (such as walkways, patio slabs, etc.) has a potential for cracking due to changes in soil volume related to soil-moisture fluctuations. To reduce the potential for excessive cracking and lifting, concrete may be designed in accordance with the minimum guidelines outlined in Table 5. These guidelines will reduce the potential for irregular cracking and promote cracking along construction joints, but will not eliminate all cracking or lifting. Thickening the concrete and/or adding additional reinforcement will further reduce cosmetic distress.

TABLE 5

Preliminary Geotechnical Parameters for Nonstructural Concrete Flatwork Placed on Very Low to Low Expansion Potential Subgrade

	Sidewalks	**Private Drives**	**Patios/ Entryways**	**City Sidewalk Curb and Gutters**
Minimum Thickness (in.)	4 (nominal)	4 (full)	4 (full)	City/Agency Standard
Presoaking	Wet down prior to placing	Wet down prior to placing	Wet down prior to placing	City/Agency Standard
Reinforcement	—	No. 3 at 24 inches on centers	No. 3 at 24 inches on centers	City/Agency Standard
Thickened Edge (in.)	—	8 x 8	—	City/Agency Standard
Crack Control Joints	Saw cut or deep open tool joint to a minimum of $^1/_3$ the concrete thickness	Saw cut or deep open tool joint to a minimum of $^1/_3$ the concrete thickness	Saw cut or deep open tool joint to a minimum of $^1/_3$ the concrete thickness	City/Agency Standard
Maximum Joint Spacing	5 feet	10 feet or quarter cut whichever is closer	6 feet	City/Agency Standard
Aggregate Base Thickness (in.)	—	—	—	City/Agency Standard

4.11 Geotechnical Plan Review

When available, project plans (grading, foundation, retaining wall, etc.) should be reviewed by this office prior to construction to verify that our geotechnical recommendations have been incorporated. Additional field work and/or modified geotechnical recommendations may be necessary.

4.12 Geotechnical Observation and Testing During Construction

The recommendations provided in this report are based on limited subsurface observations and geotechnical analysis. The interpolated subsurface conditions should be checked in the field during construction by a representative of LGC Geotechnical. Geotechnical observation and testing is required per Section 1705 of the 2016 California Building Code (CBC).

Geotechnical observation and/or testing should be performed by LGC Geotechnical at the following stages:

- During grading (removal and recompaction bottoms, fill placement, etc.);
- During retaining wall backfill and compaction;
- During utility trench backfill and compaction;
- After moisture conditioning building pads and other concrete-flatwork subgrades, and prior to placement of aggregate base or concrete;
- Preparation of pavement subgrade and placement of aggregate base;
- After building and wall footing excavation and prior to placing steel reinforcement and/or concrete; and
- When any unusual soil conditions are encountered during any construction operation subsequent to issuance of this report.

5.0 LIMITATIONS

Our services were performed using the degree of care and skill ordinarily exercised, under similar circumstances, by reputable soils engineers and geologists practicing in this or similar localities. No other warranty, expressed or implied, is made as to the conclusions and professional advice included in this report.

This report is based on data obtained from limited observations of the site, which have been extrapolated to characterize the site. While the scope of services performed is considered suitable to adequately characterize the site geotechnical conditions relative to the proposed development, no practical evaluation can completely eliminate uncertainty regarding the anticipated geotechnical conditions in connection with a subject site. Variations may exist and conditions not observed or described in this report may be encountered during grading and construction.

This report is issued with the understanding that it is the responsibility of the owner, or of his/her representative, to ensure that the information and recommendations contained herein are brought to the attention of the other consultants (at a minimum the civil engineer, structural engineer, landscape architect) and incorporated into their plans. The contractor should properly implement the recommendations during construction and notify the owner if they consider any of the recommendations presented herein to be unsafe, or unsuitable.

The findings of this report are valid as of the present date. However, changes in the conditions of a site can and do occur with the passage of time, whether they be due to natural processes or the works of man on this or adjacent properties. The findings, conclusions, and recommendations presented in this report can be relied upon only if LGC Geotechnical has the opportunity to observe the subsurface conditions during grading and construction of the project, in order to confirm that our preliminary findings are representative for the site. This report is intended exclusively for use by the client, any use of or reliance on this report by a third party shall be at such party's sole risk.

In addition, changes in applicable or appropriate standards may occur, whether they result from legislation or the broadening of knowledge. Accordingly, the findings of this report may be invalidated wholly or partially by changes outside our control. Therefore, this report is subject to review and modification.

LEGEND

Proposed Location of Hollow Stem Boring by LGC Geotechnical, with Approximate Proposed Depth in Feet

Proposed Location of Hollow Stem Auger Infiltration Boring by LGC Geotechnical, with Approximate Proposed Depth in Feet

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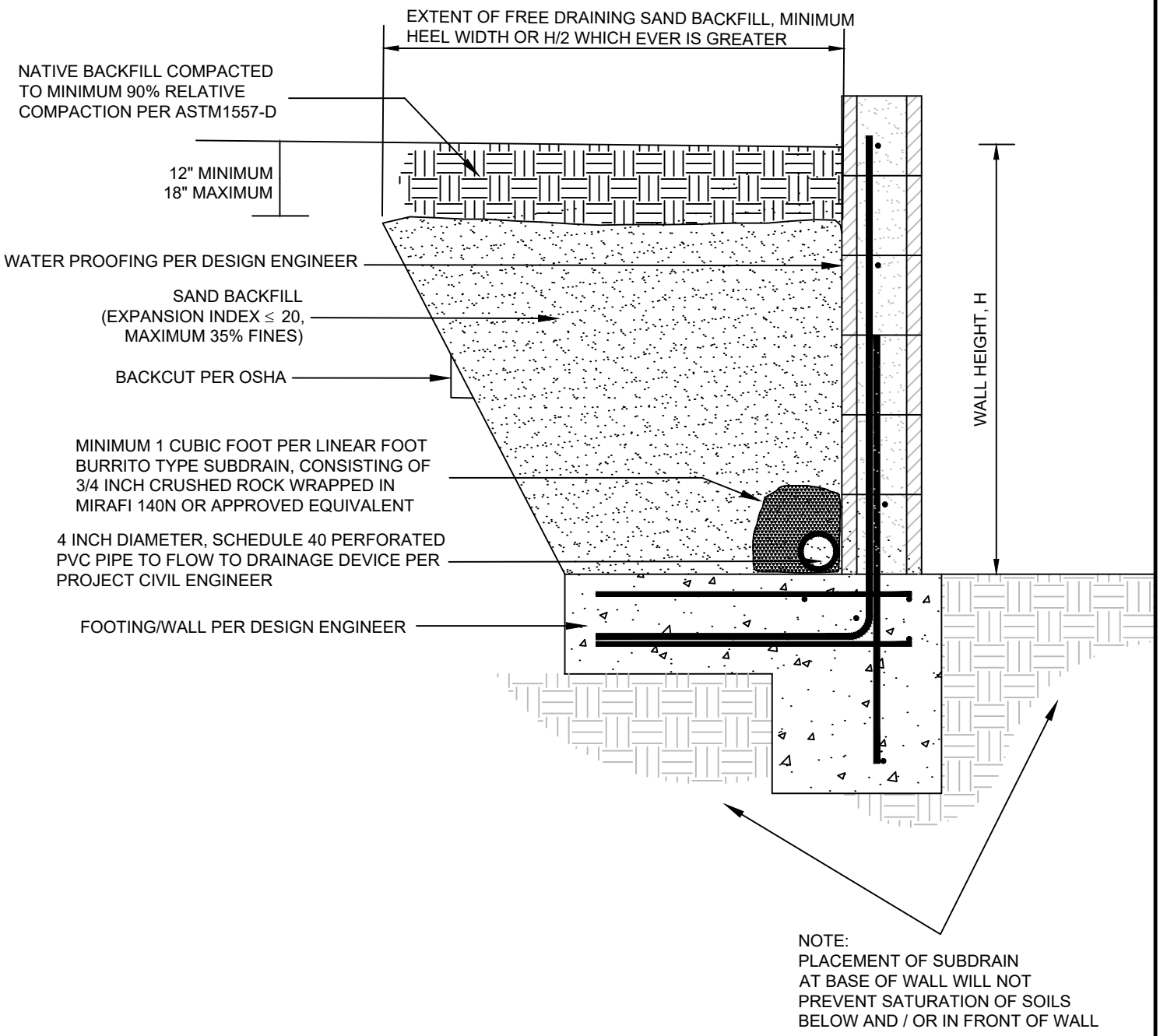
FIGURE 2
Geotechnical Exploration Location Map

PROJECT NAME	*Great Scott - Lake Forest*
PROJECT NO.	*19035-01*
ENG. / GEOL.	*RLD / KTM*
SCALE	*Not to Scale*
DATE	*May 2019*



LGC Geotechnical, Inc.

FIGURE 3
Retaining Wall Detail

PROJECT NAME	Great Scott - Lake Forest
PROJECT NO.	19035-01
ENG.	RLD
SCALE	Not to Scale
DATE	May 2019

Appendix A
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APPENDIX A

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Appendix B
Field Exploration Logs

Geotechnical Boring Log Borehole HS-1

Date: 4/8/2019 | **Drilling Company:** Cal Pac

Project Name: Great Scott - Lake Forest | **Type of Rig:** Track Rig

Project Number: 19035-01 | **Drop:** 30" | **Hole Diameter:** 8"

Elevation of Top of Hole: ~631' MSL | **Drive Weight:** 140 pounds

Hole Location: See Geotechnical Map

Logged By BPP
Sampled By BPP
Checked By RLD

Elevation (ft)	Depth (ft)	Graphic Log	Sample Number	Blow Count	Dry Density (pcf)	Moisture (%)	USCS Symbol	DESCRIPTION	Type of Test
630	0	B-1					SP-SC	**@0' to 30' - Quaternary Alluvium (Qal)** @0' - Silty SAND: dark brown, slightly moist	EI,CR
			R-1	5 6 6	111.8	12.1	SM	@2.5' - Silty SAND: gray, moist, loose	
625	5		R-2	2 3 3	98.2	14.2		@5' - Silty SAND: brown, very moist, loose	
			R-3	2 4 7	112.2	14.6	SC	@7.5' - Clayey SAND: dark olive brown, very moist, loose	CN
620	10		R-4	2 2 3	101.8	21.8		@10' - Clayey SAND: brown, very moist, loose	-#200
615	15	▽	SPT-1	2 2 3		26.2	CL	@15' - Sandy CLAY: brown, wet, medium stiff; groundwater	AL
610	20		R-5	11 12 11	112.7	15.1	SP-SM	@20' - SAND with Silt: light brown, wet, medium dense	-#200
605	25		SPT-2	5 11 12		18.4	SM	@25' - Silty SAND: brown, wet, medium dense	-#200
	30							**@30' to T.D. - Tertiary Capistrano Formation, Oso Member (Tco)**	

LGC Geotechnical, Inc.

THIS SUMMARY APPLIES ONLY AT THE LOCATION OF THIS BORING AND AT THE TIME OF DRILLING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH THE PASSAGE OF TIME. THE DATA PRESENTED IS A SIMPLIFICATION OF THE ACTUAL CONDITIONS ENCOUNTERED. THE DESCRIPTIONS PROVIDED ARE QUALITATIVE FIELD DESCRIPTIONS AND ARE NOT BASED ON QUANTITATIVE ENGINEERING ANALYSIS.

SAMPLE TYPES:

B	BULK SAMPLE
R	RING SAMPLE (CA Modified Sampler)
G	GRAB SAMPLE
SPT	STANDARD PENETRATION TEST SAMPLE
▽	GROUNDWATER TABLE

TEST TYPES:

DS	DIRECT SHEAR
MD	MAXIMUM DENSITY
SA	SIEVE ANALYSIS
S&H	SIEVE AND HYDROMETER
EI	EXPANSION INDEX
CN	CONSOLIDATION
CR	CORROSION
AL	ATTERBERG LIMITS
CO	COLLAPSE/SWELL
RV	R-VALUE
-#200	% PASSING # 200 SIEVE

Last Edited: 4/25/2019

Geotechnical Boring Log Borehole HS-1

Date: 4/8/2019 | **Drilling Company:** Cal Pac

Project Name: Great Scott - Lake Forest | **Type of Rig:** Track Rig

Project Number: 19035-01 | **Drop:** 30" | **Hole Diameter:** 8"

Elevation of Top of Hole: ~631' MSL | **Drive Weight:** 140 pounds

Hole Location: See Geotechnical Map

Logged By BPP
Sampled By BPP
Checked By RLD

Elevation (ft)	Depth (ft)	Graphic Log	Sample Number	Blow Count	Dry Density (pcf)	Moisture (%)	USCS Symbol	DESCRIPTION	Type of Test
600	30		R-6	9 11 22	117.0	14.5	SC	@30' - Clayey SAND with some gravel: gray-brown, wet, medium dense; extremely weathered bedrock	-#200
595	35		SPT-3	3 11 27		17.2	SM	@35' - Silty SAND: yellowish brown, wet, dense	
590	40		R-7	50/2"	105.4	24.8	SC	@40' - Clayey SAND: gray-brown with iron oxide staining, wet, very dense; slightly weathered bedrock	
585	45		SPT-4	50/6"		17.5		@45' - Clayey SAND: gray with iron oxide staining, wet, very dense @47' - Auger Refusal	
580	50							Total Depth = 50' Groundwater Encountered at Approximately 15' Backfilled with Cuttings on 4/8/2019	
575	55								
	60								

LGC Geotechnical, Inc.

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EI	EXPANSION INDEX
CN	CONSOLIDATION
CR	CORROSION
AL	ATTERBERG LIMITS
CO	COLLAPSE/SWELL
RV	R-VALUE
-#200	% PASSING # 200 SIEVE

Geotechnical Boring Log Borehole HS-2

Date: 4/8/2019	**Drilling Company:** Cal Pac
Project Name: Great Scott - Lake Forest	**Type of Rig:** Track Rig
Project Number: 19035-01	**Drop:** 30" **Hole Diameter:** 8"
Elevation of Top of Hole: ~646' MSL	**Drive Weight:** 140 pounds
Hole Location: See Geotechnical Map	Page 1 of 1

Logged By BPP
Sampled By BPP
Checked By N/A

Elevation (ft)	Depth (ft)	Graphic Log	Sample Number	Blow Count	Dry Density (pcf)	Moisture (%)	USCS Symbol	DESCRIPTION	Type of Test
645	0	B-1					SM	**@0' to T.D. - <u>Quaternary Young Alluvium (Qya)</u>** @0' - Silty SAND with Gravel: brown and dry	RV
			R-1	8 8 12	105.6	0.8	SP	@2.5' - SAND: pinkish-brown, dry, medium dense	
640	5		R-2	7 7 9	100.0	2.4		@5' - SAND: light brown, dry, medium dense	
			R-3	7 9 12	103.0	1.1		@7.5' - SAND: yellowish brown, dry, medium dense	
635	10		R-4	7 13 14	91.4	0.7		@10' - SAND: pinkish gray, dry, medium dense	
630	15							Total Depth = 10' Groundwater Not Encountered Backfilled with Cuttings on 4/8/2019	
625	20								
620	25								
	30								

LGC Geotechnical, Inc.

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B	BULK SAMPLE
R	RING SAMPLE (CA Modified Sampler)
G	GRAB SAMPLE
SPT	STANDARD PENETRATION TEST SAMPLE
▽	GROUNDWATER TABLE

TEST TYPES:

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MD	MAXIMUM DENSITY
SA	SIEVE ANALYSIS
S&H	SIEVE AND HYDROMETER
EI	EXPANSION INDEX
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CR	CORROSION
AL	ATTERBERG LIMITS
CO	COLLAPSE/SWELL
RV	R-VALUE
-#200	% PASSING # 200 SIEVE

Last Edited: 4/25/2019

Geotechnical Boring Log Borehole I-1

Date: 4/8/2019 | **Drilling Company:** Cal Pac

Project Name: Great Scott - Lake Forest | **Type of Rig:** Track Rig

Project Number: 19035-01 | **Drop:** 30" | **Hole Diameter:** 8"

Elevation of Top of Hole: ~630' MSL | **Drive Weight:** 140 pounds

Hole Location: See Geotechnical Map

Logged By BPP
Sampled By BPP
Checked By N/A

Elevation (ft)	Depth (ft)	Graphic Log	Sample Number	Blow Count	Dry Density (pcf)	Moisture (%)	USCS Symbol	DESCRIPTION	Type of Test
	0		R-1	2 2 3	110.6	10.2	SM	**@0' to T.D. - <u>Quaternay Alluvium (Qal)</u>** @0' - Silty SAND: brown and moist @2.5' - Silty SAND: gray-brown, wet, very loose	
625	5							Total Depth = 5' Groundwater Not Encountered Backfilled with Cuttings on 4/8/2019	
620	10								
615	15								
610	20								
605	25								
	30								

LGC Geotechnical, Inc.

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CR	CORROSION
AL	ATTERBERG LIMITS
CO	COLLAPSE/SWELL
RV	R-VALUE
-#200	% PASSING # 200 SIEVE

Last Edited: 4/25/2019

Appendix C
Laboratory Test Results

APPENDIX C

Laboratory Test Results

The laboratory testing program was directed towards providing quantitative data relating to the relevant engineering properties of the soils. Samples considered representative of site conditions were tested in general accordance with American Society for Testing and Materials (ASTM) procedure and/or California Test Methods (CTM), where applicable. The following summary is a brief outline of the test type and a table summarizing the test results.

Moisture and Density Determination Tests: Moisture content (ASTM D2216) and dry density determinations (ASTM D2937) were performed on driven samples obtained from the test borings. The results of these tests are presented in the boring logs. Where applicable, only moisture content was determined from SPT or disturbed samples.

Grain Size Distribution/Fines Content: Representative samples were dried, weighed, and soaked in water until individual soil particles were separated (per ASTM D421) and then washed on a No. 200 sieve (ASTM D1140). Where applicable, the portion retained on the No. 200 sieve was dried and then sieved on a U.S. Standard brass sieve set in accordance with ASTM D6913 (sieve) or ASTM D422 (sieve and hydrometer).

Sample Location	Description	% Passing # 200 Sieve
HS-1 @ 10 ft	Clayey Sand	37
HS-1 @ 20 ft	Sand with Silt	6
HS-1 @ 25 ft	Silty Sand	16
HS-1 @ 30 ft	Clayey Sand with some Gravel	37

Atterberg Limits: The liquid and plastic limits ("Atterberg Limits") were determined per ASTM D4318 for engineering classification of fine-grained material and presented in the table below. The USCS soil classification indicated in the table below is based on the portion of sample passing the No. 40 sieve and may not necessarily be representative of the entire sample. The plot is provided in this Appendix.

Sample Location	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	USCS Soil Classification
HS-1 @ 15 ft	35	18	17	CL

Laboratory Test Results

Consolidation: One consolidation test was performed per ASTM D2435. A sample (2.4 inches in diameter and 1 inch in height) was placed in a consolidometer and increasing loads were applied. The sample was allowed to consolidate under "double drainage" and total deformation for each loading step was recorded. The percent consolidation for each load step was recorded as the ratio of the amount of vertical compression to the original sample height. The consolidation pressure curve is provided in this Appendix.

Expansion Index: The expansion potential of a selected representative sample was evaluated by the Expansion Index Test per ASTM D4829.

Sample Location	Expansion Index	Expansion Potential*
HS-1 @ 1-5 ft	8	Very Low

* Per ASTM D4829

R-value Test: R-value test was performed in general accordance with California Test Method 301. The plot is included in the Appendix.

Sample Location	R-value
HS-2 @ 1-5 ft	66

Soluble Sulfates: The soluble sulfate content of a selected sample was determined by standard geochemical methods (CTM 417). The test results are presented in the table below.

Sample Location	Sulfate Content (%)
HS-1 @ 1-5 ft	< 0.02

Chloride Content: Chloride content was tested per CTM 422. The results are presented below.

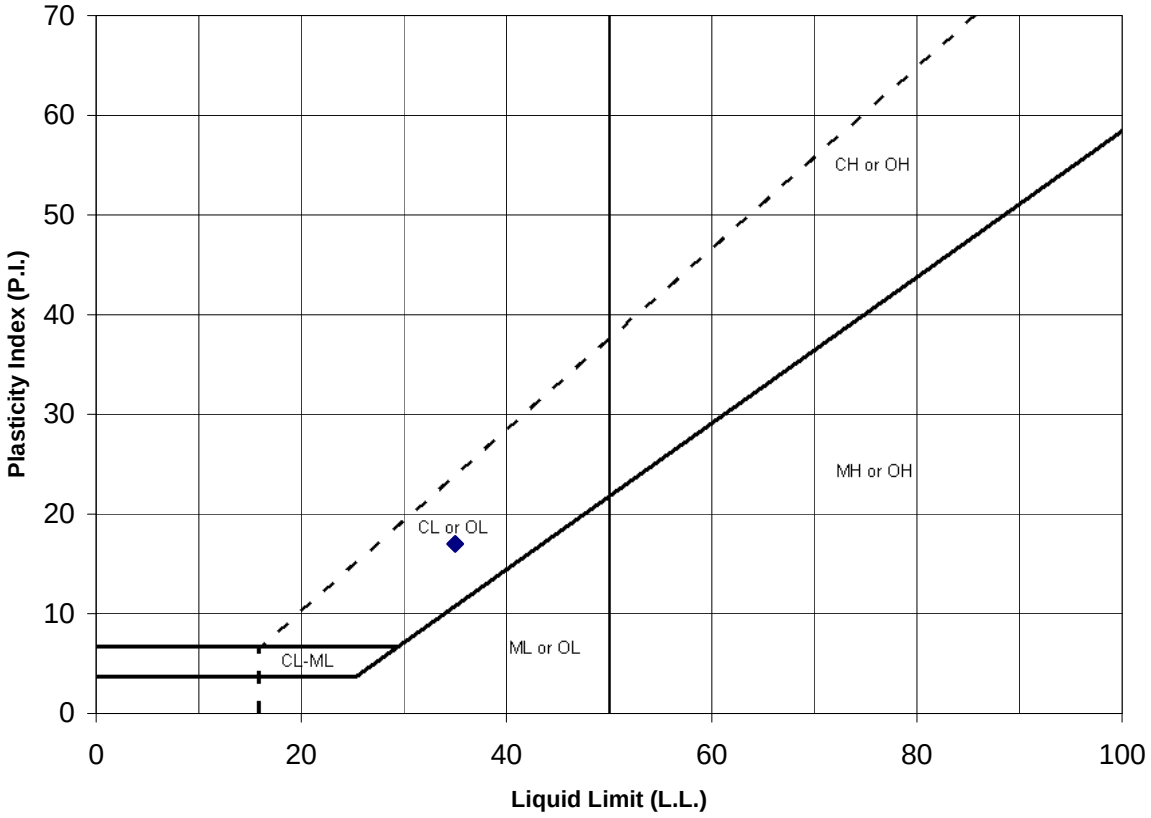
Sample Location	Chloride Content (ppm)
HS-1 @ 1-5 ft	103

Laboratory Test Results

Minimum Resistivity and pH Tests: Minimum resistivity and pH tests were performed in general accordance with CTM 643 and standard geochemical methods. The results are presented in the table below.

Sample Location	pH	Minimum Resistivity (ohms-cm)
HS-1 @ 1-5 ft	8.2	857

PLASTICITY CHART - CLASSIFICATION OF FINE-GRAINED SOILS



Symbol	Location.:	Sample No.:	Depth (ft)	Passing No. 200 Sieve (%)	Liquid Limit (%) LL	Plastic Limit (%) PL	Plasticity Index (%) PI	USCS
◆	HS-1	SPT-1	15	-	35	18	17	CL

LGC Geotechnical, Inc.

ATTERBERG LIMITS
(ASTM D 4318)

Project Number: 19035-01
Date: Apr-19

Great Scott - Lake Forest

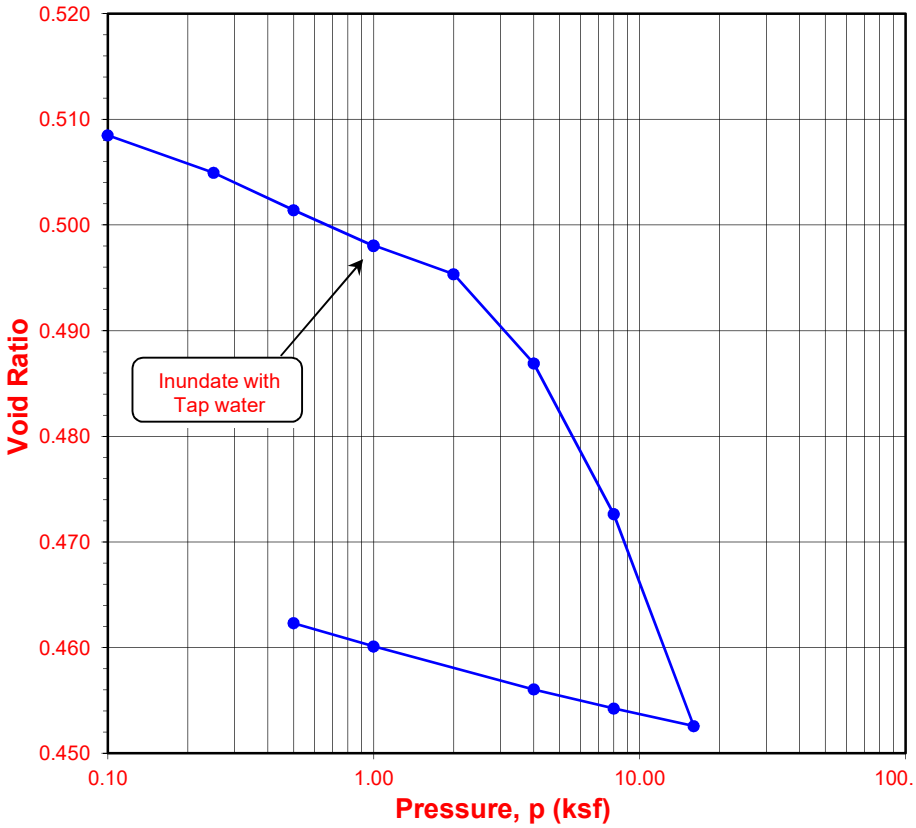
ONE-DIMENSIONAL CONSOLIDATION PROPERTIES of SOILS

ASTM D 2435

Project Name: Lake Forest
Project No.: 19035-01
Boring No.: HS-1
Sample No.: R-3
Soil Identification: Dark olive brown clayey sand (SC)

Tested By: G. Bathala Date: 04/10/19
Checked By: J. Ward Date: 04/24/19
Depth (ft.): 7.5
Sample Type: Ring

Sample Diameter (in.)	2.415
Sample Thickness (in.)	1.000
Wt. of Sample + Ring (g)	199.51
Weight of Ring (g)	45.62
Height after consol. (in.)	0.9688
Before Test	
Wt.Wet Sample+Cont. (g)	208.34
Wt.of Dry Sample+Cont. (g)	190.23
Weight of Container (g)	66.23
Initial Moisture Content (%)	14.6
Initial Dry Density (pcf)	111.7
Initial Saturation (%)	77
Initial Vertical Reading (in.)	0.3164
After Test	
Wt.of Wet Sample+Cont. (g)	269.38
Wt. of Dry Sample+Cont. (g)	250.41
Weight of Container (g)	71.40
Final Moisture Content (%)	14.22
Final Dry Density (pcf)	114.5
Final Saturation (%)	81
Final Vertical Reading (in.)	0.2809
Specific Gravity (assumed)	2.70
Water Density (pcf)	62.43

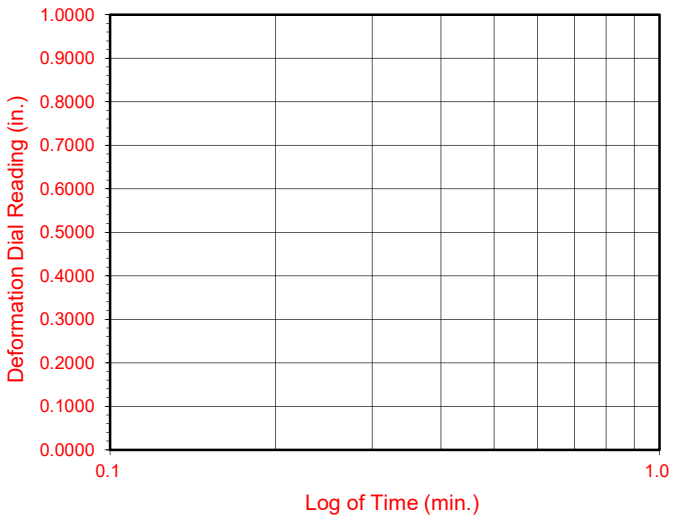


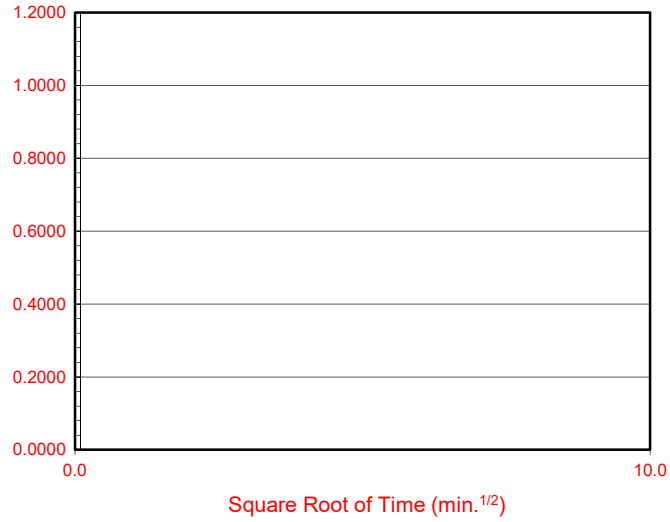
Pressure (p) (ksf)	Final Reading (in.)	Apparent Thickness (in.)	Load Compliance (%)	Deformation % of Sample Thickness	Void Ratio	Corrected Deformation (%)
0.10	0.3158	0.9994	0.00	0.06	0.508	0.06
0.25	0.3128	0.9964	0.07	0.37	0.505	0.30
0.50	0.3098	0.9934	0.13	0.66	0.501	0.53
1.00	0.3068	0.9904	0.21	0.96	0.498	0.75
1.00	0.3068	0.9904	0.21	0.96	0.498	0.75
2.00	0.3038	0.9874	0.33	1.26	0.495	0.93
4.00	0.2969	0.9805	0.46	1.95	0.487	1.49
8.00	0.2857	0.9693	0.64	3.08	0.473	2.44
16.00	0.2702	0.9538	0.86	4.63	0.453	3.77
8.00	0.2721	0.9557	0.78	4.44	0.454	3.66
4.00	0.2743	0.9579	0.68	4.22	0.456	3.54
1.00	0.2788	0.9624	0.50	3.77	0.460	3.27
0.50	0.2809	0.9645	0.43	3.55	0.462	3.12

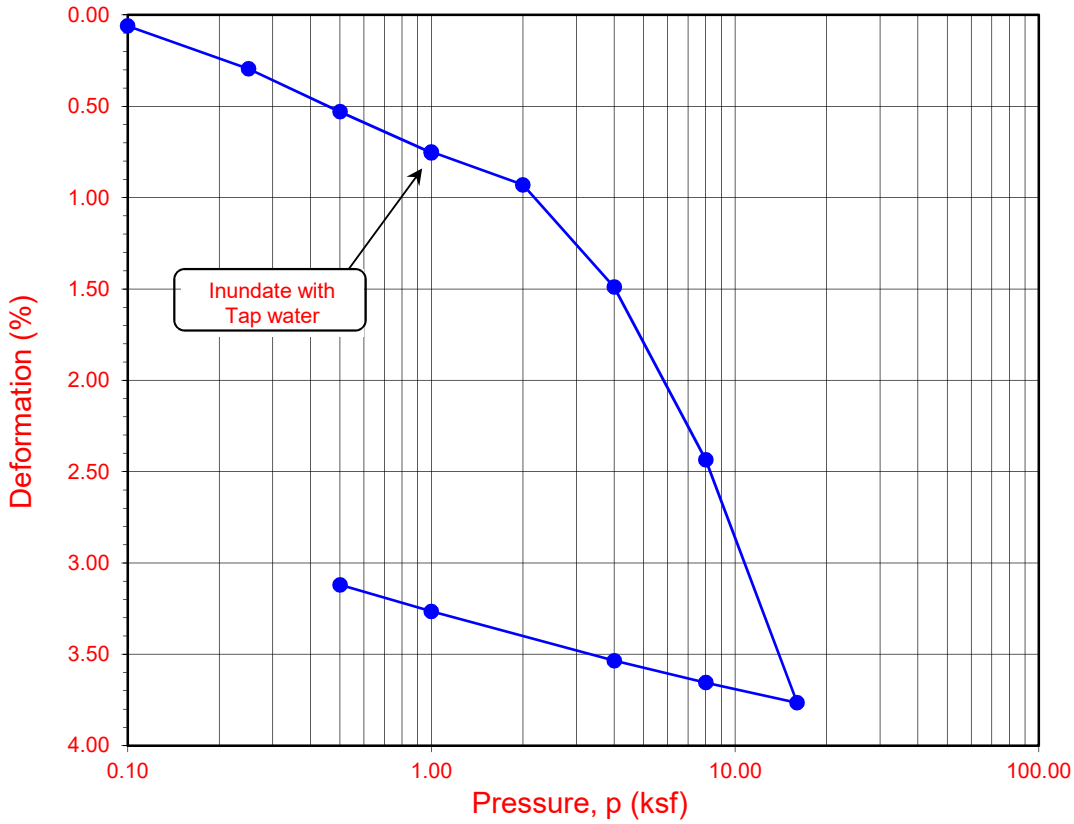
Time Readings

Date	Time	Elapsed Time (min)	Square Root of Time	Dial Rdgs. (in.)

Time Readings







Boring No.	Sample No.	Depth (ft.)	Moisture Content (%)		Dry Density (pcf)		Void Ratio		Degree of Saturation (%)	
			Initial	Final	Initial	Final	Initial	Final	Initial	Final
HS-1	**R-3**	**7.5**	**14.6**	**14.2**	**111.7**	**114.5**	**0.509**	**0.462**	**77**	**81**

Soil Identification: Dark olive brown clayey sand (SC)

ONE-DIMENSIONAL CONSOLIDATION PROPERTIES of SOILS
ASTM D 2435

Project No.: 19035-01

Lake Forest

04-19

R-VALUE TEST RESULTS

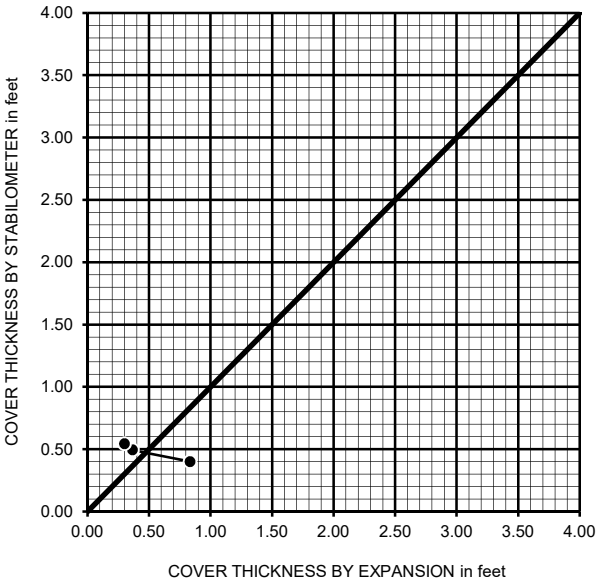
DOT CA Test 301

PROJECT NAME:	Lake Forest	PROJECT NUMBER:	19035-01
BORING NUMBER:	HS-2	DEPTH (FT.):	1-5
SAMPLE NUMBER:	B-1	TECHNICIAN:	S. Felter
SAMPLE DESCRIPTION:	Brown silty sand with Gravel (SM)	DATE COMPLETED:	4/16/2019

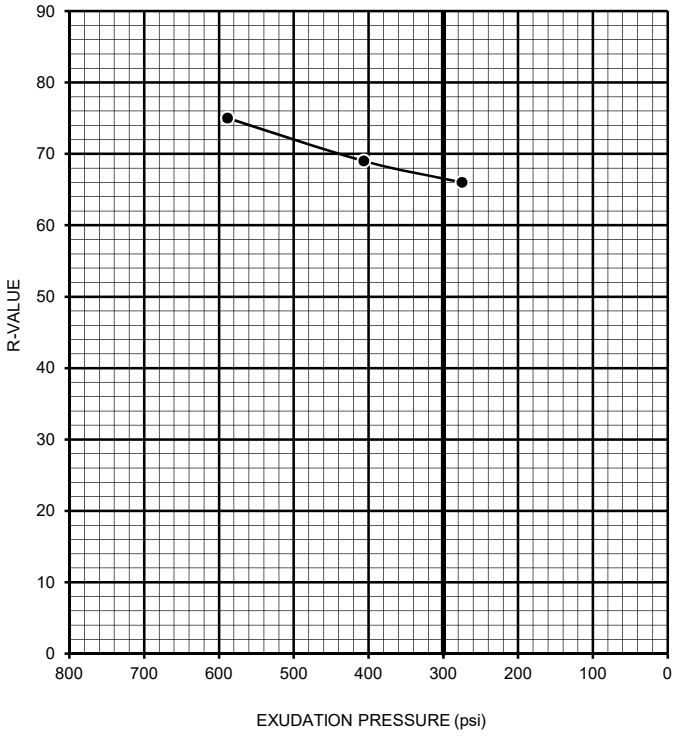
TEST SPECIMEN	a	b	c
MOISTURE AT COMPACTION %	11.0	11.4	11.8
HEIGHT OF SAMPLE, Inches	2.49	2.50	2.59
DRY DENSITY, pcf	118.4	120.3	116.5
COMPACTOR PRESSURE, psi	350	300	250
EXUDATION PRESSURE, psi	588	406	275
EXPANSION, Inches x 10exp-4	25	11	9
STABILITY Ph 2,000 lbs (160 psi)	26	33	38
TURNS DISPLACEMENT	4.26	4.32	4.42
R-VALUE UNCORRECTED	75	69	64
R-VALUE CORRECTED	75	69	66

DESIGN CALCULATION DATA	a	b	c
GRAVEL EQUIVALENT FACTOR	1.0	1.0	1.0
TRAFFIC INDEX	5.0	5.0	5.0
STABILOMETER THICKNESS, ft.	0.40	0.50	0.54
EXPANSION PRESSURE THICKNESS, ft.	0.83	0.37	0.30

EXPANSION PRESSURE CHART



EXUDATION PRESSURE CHART



R-VALUE BY EXPANSION:	70
R-VALUE BY EXUDATION:	66
EQUILIBRIUM R-VALUE:	66

Appendix D
Infiltration Test Data

Infiltration Test Data Sheet

LGC Geotechnical, Inc

131 Calle Iglesia Suite 200, San Clemente, CA 92672 tel. (949) 369-6141

Project Name: Great Scott - Lake Forest

Project Number: 19035-01

Date: 4/4/2019

Boring Number: I-1

Test hole dimensions (if circular)	
Boring Depth (feet)*:	5
Boring Diameter (inches):	8
Pipe Diameter (inches):	2

*measured at time of test

Test pit dimensions (if rectangular)	
Pit Depth (feet):	
Pit Length (feet):	
Pit Breadth (feet):	

Minimum test Head (D_o):

(What the sounder tape should read)

Boring Depth - (5 x Boring Radius) 3.4 ft

(Shallow) The value on the sounder tape should be close to this value during testing for **DEEP** testing fill to 4 feet below top of hole

*Pre-Test (Sandy Soil Criteria)**

Trial No.	Start Time (24:HR)	Stop Time (24:HR)	Time Interval (min)	Initial Depth to Water (feet)	Final Depth to Water (feet)	Total Change in Water Level (feet)	Greater Than or Equal to 0.5 feet (yes/no)
1	8:37	9:02	25.0	2.54	2.92	0.38	No
2	9:02	9:27	25.0	2.60	2.93	0.33	No

*If two consecutive measurements show that six inches of water seeps away in less than 25 minutes, the test shall be run for an additional hour with measurements taken every 10 minutes. Otherwise, pre-soak (fill) overnight, and then obtain at least twelve measurements per hole over at least six hours (approximately 30 minute intervals) with a precision of at least 0.25 inches

Main Test Data

Trial No.	Start Time (24:HR)	Stop Time (24:HR)	Time Interval, Δt (min)	Initial Depth to Water, D_o (feet)	Final Depth to Water, D_f (feet)	Change in Water Level, ΔD (feet)	Calculated Infiltration Rate(in/hr)
1	9:28	9:58	30.0	2.50	2.88	0.38	0.6
2	9:59	10:29	30.0	2.47	2.88	0.41	0.7
3	10:30	11:00	30.0	2.53	2.91	0.38	0.6
4	11:01	11:31	30.0	2.53	2.93	0.4	0.7
5	11:32	12:02	30.0	2.54	2.95	0.41	0.7
6	12:03	12:33	30.0	2.49	2.91	0.42	0.7
7	12:34	13:04	30.0	2.58	3.00	0.42	0.7
8	13:05	13:35	30.0	2.52	2.93	0.41	0.7
9	13:36	14:06	30.0	2.53	2.95	0.42	0.7
10	14:07	14:37	30.0	2.48	2.89	0.41	0.7
11	14:38	15:08	30.0	2.45	2.90	0.45	0.7
12	15:09	15:39	30.0	2.53	2.98	0.45	0.7

Calculated Infiltration Rate (No factors of safety)	**0.7**
Factor of Safety	**2.0**
Calculated Infiltration Rate (With Factor of Safety)	**0.35**

Sketch:

Notes:

Based on Guidelines from: Orange County 05/19/2011

Spreadsheet Revised on: 10/26/2016

LGC Geotechnical, Inc.

Appendix E
Liquefaction Analysis

LIQUEFACTION EVALUATION

Based on *Proceeding of the NCEER Workshop on Evaluation of Liquefaction Resistance of Soils*, Technical Report NCEER-97-0022, December 31, 1997
and *Evaluation of Settlments in Sand due to Earthquake Shaking*, Tokimatsu and Seed, 1987

Seismic Event		**Profile Constants**		**Depth to GWT**		**Project Name**	Great Scott M.V.
Moment Magnitude	6.9	Total Unit Weight (lb/ft^3)	120	During Investigation (ft)	15	**Project Number**	19035-01
Peak Ground Acceleration	0.53 g	Unit Weight of Water (lbs/ft^3	62.4	During Design Event (ft)	10	**Boring**	HS- 1

Determination of Cyclic Resitance Ratio

Sampling Data					During Investigation			Sampling Correction Factors											
		Blow Count		Thickness	Total Stress	Pore Pressure	Effective	Sampler	SPT	Overburden	Energy	Borehole	Rod Length	Sampler Type		Fines			
Depth (ft)	Depth (m)	SPT	Rings	(ft)	Stress (psf)	Pressure (psf)	Stress (psf)	Diameter	N_m	C_N	C_E	C_B	C_R	C_S	$(N_1)_{60}$	Content	$(N_1)_{60cs}$	K_σ	$CRR_{7.5}$
2.5	0.8		12	3.75	420	0	420	0.62	7.44	1.70	1.25	1.00	0.75	1.00	11.86	5	11.9	1.000	0.128
5	1.5		6	2.5	720	0	720	0.62	3.72	1.70	1.25	1.00	0.75	1.00	5.94	25	10.9	1.000	0.118
7.5	2.3		11	3.75	1020	0	1020	0.62	6.82	1.43	1.25	1.00	0.75	1.00	9.15	25	14.5	1.000	0.157
10	3.0		5	2.5	1320	0	1320	0.62	3.10	1.26	1.25	1.00	0.75	1.00	3.66	37	9.4	1.000	0.102
15	4.6	5		5	1920	0	1920	1.00	5.00	1.04	1.25	1.00	0.85	1.10	6.09	50	12.3	1.000	0.133
20	6.1		23	5	2520	312	2208	0.62	14.26	0.97	1.25	1.00	0.95	1.00	16.47	6	16.6	0.986	0.176
25	7.6	23		5	3120	624	2496	1.00	23.00	0.91	1.25	1.00	0.95	1.10	27.48	16	31.7	0.965	SPT >30 NF
30	9.1		33	5	3720	936	2784	0.62	20.46	0.87	1.25	1.00	0.95	1.00	21.04	37	30.2	0.946	SPT >30 NF
35	10.7	38		5	4320	1248	3072	1.00	38.00	0.82	1.25	1.00	1.00	1.10	43.08	15	47.6	0.927	SPT >30 NF
40	12.2		100	5	4920	1560	3360	0.62	62.00	0.79	1.25	1.00	1.00	1.00	61.09	15	66.5	0.910	SPT >30 NF
45	13.7	100		2.5	5520	1872	3648	1.00	100.00	0.76	1.25	1.00	1.00	1.10	104.03	15	111.5	0.893	SPT >30 NF

Determination of Cyclic Stress Ratio

Sampling Data					During Design Event						
		Blow Count			Total Stress	Pore Pressure	Effective				
Depth (ft)	Depth (m)	SPT	Rings	Thickness	Stress (psf)	Pressure (psf)	Stress (psf)	r_d	CSR	MSF	FS
2.5	0.76		12	3.75	300	0	300	0.99615	0.343174	1.238	Above GWT
5	1.52		6	2.5	600	0	600	0.99024	0.341136	1.238	Above GWT
7.5	2.29		11	3.75	900	0	900	0.98456	0.339181	1.238	Above GWT
10	3.05		5	2.5	1200	0	1200	0.97914	0.337314	1.238	0.37
15	4.57	5		5	1800	312	1488	0.96856	0.403631	1.238	Bray-Clay
20	6.10		23	5	2400	624	1776	0.9569	0.445474	1.238	0.49
25	7.62	23		5	3000	936	2064	0.94183	0.471601	1.238	Corr. SPT>30
30	9.14		33	5	3600	1248	2352	0.92058	0.485417	1.238	Corr. SPT>30
35	10.67	38		5	4200	1560	2640	0.89062	0.488119	1.238	Corr. SPT>30
40	12.19		100	5	4800	1872	2928	0.85103	0.480625	1.238	Corr. SPT>30
45	13.72	100		2.5	5400	2184	3216	0.80363	0.464861	1.238	Corr. SPT>30

Appendix F
General Earthwork and Grading Specifications for Rough Grading

General Earthwork and Grading Specifications for Rough Grading

1.0 General

1.1 Intent: These General Earthwork and Grading Specifications are for the grading and earthwork shown on the approved grading plan(s) and/or indicated in the geotechnical report(s). These Specifications are a part of the recommendations contained in the geotechnical report(s). In case of conflict, the specific recommendations in the geotechnical report shall supersede these more general Specifications. Observations of the earthwork by the project Geotechnical Consultant during the course of grading may result in new or revised recommendations that could supersede these specifications or the recommendations in the geotechnical report(s).

1.2 The Geotechnical Consultant of Record: Prior to commencement of work, the owner shall employ a qualified Geotechnical Consultant of Record (Geotechnical Consultant). The Geotechnical Consultant shall be responsible for reviewing the approved geotechnical report(s) and accepting the adequacy of the preliminary geotechnical findings, conclusions, and recommendations prior to the commencement of the grading.

Prior to commencement of grading, the Geotechnical Consultant shall review the "work plan" prepared by the Earthwork Contractor (Contractor) and schedule sufficient personnel to perform the appropriate level of observation, mapping, and compaction testing.

During the grading and earthwork operations, the Geotechnical Consultant shall observe, map, and document the subsurface exposures to verify the geotechnical design assumptions. If the observed conditions are found to be significantly different than the interpreted assumptions during the design phase, the Geotechnical Consultant shall inform the owner, recommend appropriate changes in design to accommodate the observed conditions, and notify the review agency where required.

The Geotechnical Consultant shall observe the moisture-conditioning and processing of the subgrade and fill materials and perform relative compaction testing of fill to confirm that the attained level of compaction is being accomplished as specified. The Geotechnical Consultant shall provide the test results to the owner and the Contractor on a routine and frequent basis.

1.3 The Earthwork Contractor: The Earthwork Contractor (Contractor) shall be qualified, experienced, and knowledgeable in earthwork logistics, preparation and processing of ground to receive fill, moisture-conditioning and processing of fill, and compacting fill. The Contractor shall review and accept the plans, geotechnical report(s), and these Specifications prior to commencement of grading. The Contractor shall be solely responsible for performing the grading in accordance with the project plans and specifications. The Contractor shall prepare and submit to the owner and the Geotechnical Consultant a work plan that indicates the sequence of earthwork grading, the number of "equipment" of work and the estimated quantities of daily earthwork contemplated for the site prior to commencement of grading. The Contractor shall inform the owner and the

Geotechnical Consultant of changes in work schedules and updates to the work plan at least 24 hours in advance of such changes so that appropriate personnel will be available for observation and testing. The Contractor shall not assume that the Geotechnical Consultant is aware of all grading operations.

The Contractor shall have the sole responsibility to provide adequate equipment and methods to accomplish the earthwork in accordance with the applicable grading codes and agency ordinances, these Specifications, and the recommendations in the approved geotechnical report(s) and grading plan(s). If, in the opinion of the Geotechnical Consultant, unsatisfactory conditions, such as unsuitable soil, improper moisture condition, inadequate compaction, insufficient buttress key size, adverse weather, etc., are resulting in a quality of work less than required in these specifications, the Geotechnical Consultant shall reject the work and may recommend to the owner that construction be stopped until the conditions are rectified. It is the contractor's sole responsibility to provide proper fill compaction.

2.0 Preparation of Areas to be Filled

2.1 Clearing and Grubbing: Vegetation, such as brush, grass, roots, and other deleterious material shall be sufficiently removed and properly disposed of in a method acceptable to the owner, governing agencies, and the Geotechnical Consultant.

The Geotechnical Consultant shall evaluate the extent of these removals depending on specific site conditions. Earth fill material shall not contain more than 1 percent of organic materials (by volume). Nesting of the organic materials shall not be allowed.

If potentially hazardous materials are encountered, the Contractor shall stop work in the affected area, and a hazardous material specialist shall be informed immediately for proper evaluation and handling of these materials prior to continuing to work in that area.

As presently defined by the State of California, most refined petroleum products (gasoline, diesel fuel, motor oil, grease, coolant, etc.) have chemical constituents that are considered to be hazardous waste. As such, the indiscriminate dumping or spillage of these fluids onto the ground may constitute a misdemeanor, punishable by fines and/or imprisonment, and shall not be allowed. The contractor is responsible for all hazardous waste relating to his work. The Geotechnical Consultant does not have expertise in this area. If hazardous waste is a concern, then the Client should acquire the services of a qualified environmental assessor.

2.2 Processing: Existing ground that has been declared satisfactory for support of fill by the Geotechnical Consultant shall be scarified to a minimum depth of 6 inches. Existing ground that is not satisfactory shall be overexcavated as specified in the following section. Scarification shall continue until soils are broken down and free of oversize material and the working surface is reasonably uniform, flat, and free of uneven features that would inhibit uniform compaction.

2.3 ***Overexcavation:*** In addition to removals and overexcavations recommended in the approved geotechnical report(s) and the grading plan, soft, loose, dry, saturated, spongy, organic-rich, highly fractured or otherwise unsuitable ground shall be overexcavated to competent ground as evaluated by the Geotechnical Consultant during grading.

2.4 ***Benching:*** Where fills are to be placed on ground with slopes steeper than 5:1 (horizontal to vertical units), the ground shall be stepped or benched. Please see the Standard Details for a graphic illustration. The lowest bench or key shall be a minimum of 15 feet wide and at least 2 feet deep, into competent material as evaluated by the Geotechnical Consultant. Other benches shall be excavated a minimum height of 4 feet into competent material or as otherwise recommended by the Geotechnical Consultant. Fill placed on ground sloping flatter than 5:1 shall also be benched or otherwise overexcavated to provide a flat subgrade for the fill.

2.5 ***Evaluation/Acceptance of Fill Areas:*** All areas to receive fill, including removal and processed areas, key bottoms, and benches, shall be observed, mapped, elevations recorded, and/or tested prior to being accepted by the Geotechnical Consultant as suitable to receive fill. The Contractor shall obtain a written acceptance from the Geotechnical Consultant prior to fill placement. A licensed surveyor shall provide the survey control for determining elevations of processed areas, keys, and benches.

3.0 Fill Material

3.1 ***General:*** Material to be used as fill shall be essentially free of organic matter and other deleterious substances evaluated and accepted by the Geotechnical Consultant prior to placement. Soils of poor quality, such as those with unacceptable gradation, high expansion potential, or low strength shall be placed in areas acceptable to the Geotechnical Consultant or mixed with other soils to achieve satisfactory fill material.

3.2 ***Oversize:*** Oversize material defined as rock, or other irreducible material with a maximum dimension greater than 8 inches, shall not be buried or placed in fill unless location, materials, and placement methods are specifically accepted by the Geotechnical Consultant. Placement operations shall be such that nesting of oversized material does not occur and such that oversize material is completely surrounded by compacted or densified fill. Oversize material shall not be placed within 10 vertical feet of finish grade or within 2 feet of future utilities or underground construction.

3.3 ***Import:*** If importing of fill material is required for grading, proposed import material shall meet the requirements of the geotechnical consultant. The potential import source shall be given to the Geotechnical Consultant at least 48 hours (2 working days) before importing begins so that its suitability can be determined and appropriate tests performed.

4.0 Fill Placement and Compaction

4.1 Fill Layers: Approved fill material shall be placed in areas prepared to receive fill (per Section 3.0) in near-horizontal layers not exceeding 8 inches in loose thickness. The Geotechnical Consultant may accept thicker layers if testing indicates the grading procedures can adequately compact the thicker layers. Each layer shall be spread evenly and mixed thoroughly to attain relative uniformity of material and moisture throughout.

4.2 Fill Moisture Conditioning: Fill soils shall be watered, dried back, blended, and/or mixed, as necessary to attain a relatively uniform moisture content at or slightly over optimum. Maximum density and optimum soil moisture content tests shall be performed in accordance with the American Society of Testing and Materials (ASTM Test Method D1557).

4.3 Compaction of Fill: After each layer has been moisture-conditioned, mixed, and evenly spread, it shall be uniformly compacted to not less than 90 percent of maximum dry density (ASTM Test Method D1557). Compaction equipment shall be adequately sized and be either specifically designed for soil compaction or of proven reliability to efficiently achieve the specified level of compaction with uniformity.

4.4 Compaction of Fill Slopes: In addition to normal compaction procedures specified above, compaction of slopes shall be accomplished by backrolling of slopes with sheepsfoot rollers at increments of 3 to 4 feet in fill elevation, or by other methods producing satisfactory results acceptable to the Geotechnical Consultant. Upon completion of grading, relative compaction of the fill, out to the slope face, shall be at least 90 percent of maximum density per ASTM Test Method D1557.

4.5 Compaction Testing: Field tests for moisture content and relative compaction of the fill soils shall be performed by the Geotechnical Consultant. Location and frequency of tests shall be at the Consultant's discretion based on field conditions encountered. Compaction test locations will not necessarily be selected on a random basis. Test locations shall be selected to verify adequacy of compaction levels in areas that are judged to be prone to inadequate compaction (such as close to slope faces and at the fill/bedrock benches).

4.6 Frequency of Compaction Testing: Tests shall be taken at intervals not exceeding 2 feet in vertical rise and/or 1,000 cubic yards of compacted fill soils embankment. In addition, as a guideline, at least one test shall be taken on slope faces for each 5,000 square feet of slope face and/or each 10 feet of vertical height of slope. The Contractor shall assure that fill construction is such that the testing schedule can be accomplished by the Geotechnical Consultant. The Contractor shall stop or slow down the earthwork construction if these minimum standards are not met.

4.7 Compaction Test Locations: The Geotechnical Consultant shall document the approximate elevation and horizontal coordinates of each test location. The Contractor shall coordinate with the project surveyor to assure that sufficient grade stakes are established so that the Geotechnical Consultant can determine the test locations with sufficient accuracy. At a minimum, two grade stakes within a horizontal distance of 100 feet and vertically less than 5 feet apart from potential test locations shall be provided.

5.0 Subdrain Installation

Subdrain systems shall be installed in accordance with the approved geotechnical report(s), the grading plan, and the Standard Details. The Geotechnical Consultant may recommend additional subdrains and/or changes in subdrain extent, location, grade, or material depending on conditions encountered during grading. All subdrains shall be surveyed by a land surveyor/civil engineer for line and grade after installation and prior to burial. Sufficient time should be allowed by the Contractor for these surveys.

6.0 Excavation

Excavations, as well as over-excavation for remedial purposes, shall be evaluated by the Geotechnical Consultant during grading. Remedial removal depths shown on geotechnical plans are estimates only. The actual extent of removal shall be determined by the Geotechnical Consultant based on the field evaluation of exposed conditions during grading. Where fill-over-cut slopes are to be graded, the cut portion of the slope shall be made, evaluated, and accepted by the Geotechnical Consultant prior to placement of materials for construction of the fill portion of the slope, unless otherwise recommended by the Geotechnical Consultant.

7.0 Trench Backfills

7.1 The Contractor shall follow all OHSA and Cal/OSHA requirements for safety of trench excavations.

7.2 All bedding and backfill of utility trenches shall be done in accordance with the applicable provisions of Standard Specifications of Public Works Construction. Bedding material shall have a Sand Equivalent greater than 30 (SE>30). The bedding shall be placed to 1 foot over the top of the conduit and densified by jetting. Backfill shall be placed and densified to a minimum of 90 percent of maximum from 1 foot above the top of the conduit to the surface.

7.3 The jetting of the bedding around the conduits shall be observed by the Geotechnical Consultant.

7.4 The Geotechnical Consultant shall test the trench backfill for relative compaction. At least one test should be made for every 300 feet of trench and 2 feet of fill.

7.5 Lift thickness of trench backfill shall not exceed those allowed in the Standard Specifications of Public Works Construction unless the Contractor can demonstrate to the Geotechnical Consultant that the fill lift can be compacted to the minimum relative compaction by his alternative equipment and method.

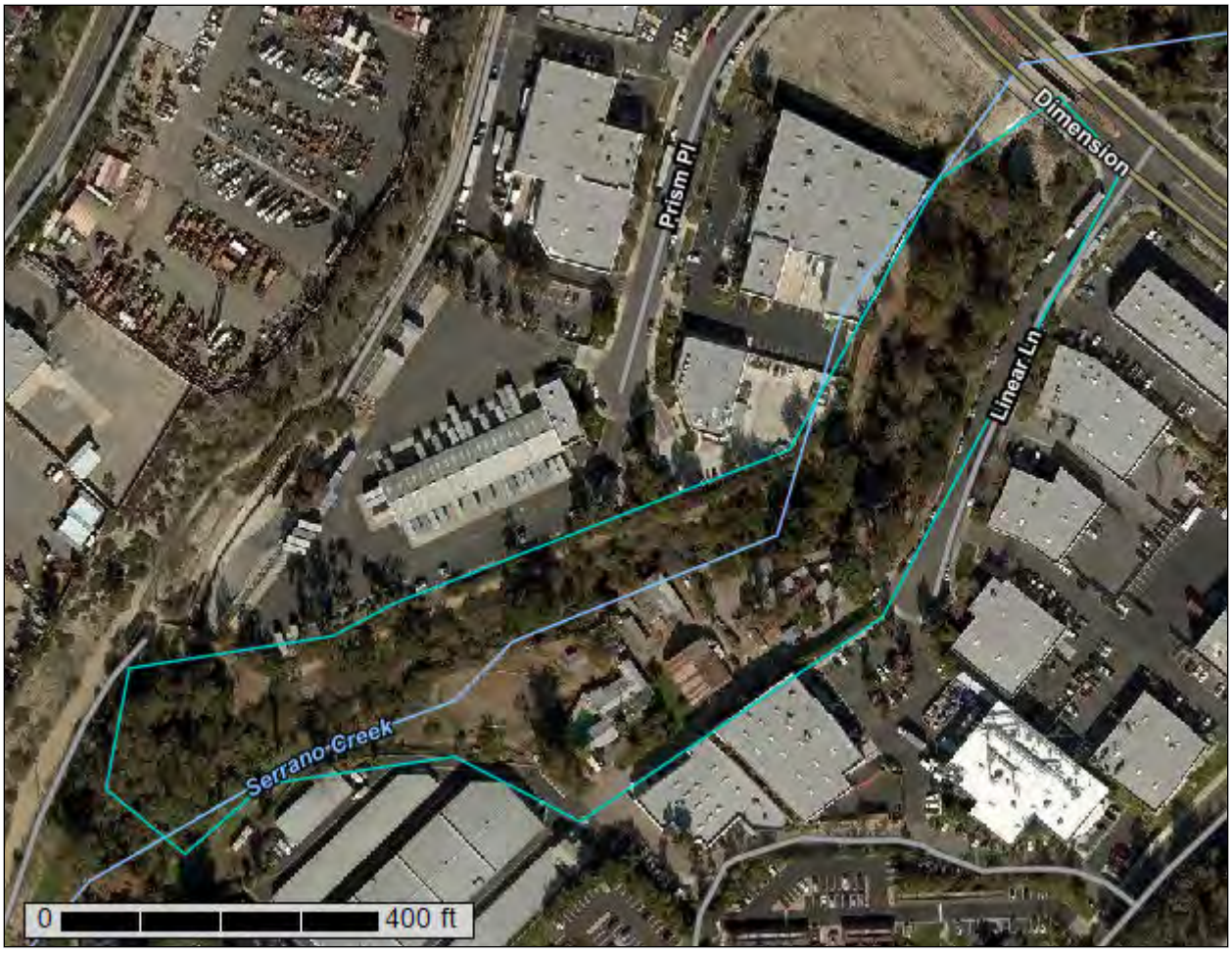
United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Orange County and Part of Riverside County, California



December 6, 2019

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Map Scale: 1:2,460 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 35 70 140 210

Feet
0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Orange County and Part of Riverside County, California
Survey Area Data: Version 13, Sep 16, 2019

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jan 3, 2015—Jan 17, 2015

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND

MAP INFORMATION

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
142	Cieneba sandy loam, 30 to 75 percent slopes, eroded	0.3	3.9%
176	Myford sandy loam, 15 to 30 percent slopes	0.1	1.1%
191	Riverwash	4.6	57.3%
207	Sorrento loam, 2 to 9 percent slopes, warm MAAT, MLRA 19	3.0	37.7%
Totals for Area of Interest		**8.0**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Orange County and Part of Riverside County, California

142—Cieneba sandy loam, 30 to 75 percent slopes, eroded

Map Unit Setting

National map unit symbol: hcml
Elevation: 500 to 4,000 feet
Mean annual precipitation: 12 to 35 inches
Mean annual air temperature: 57 to 64 degrees F
Frost-free period: 200 to 300 days
Farmland classification: Not prime farmland

Map Unit Composition

Cieneba and similar soils: 65 percent
Minor components: 35 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cieneba

Setting

Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave, convex
Across-slope shape: Convex
Parent material: Residuum weathered from granite

Typical profile

H1 - 0 to 7 inches: sandy loam
H2 - 7 to 59 inches: weathered bedrock

Properties and qualities

Slope: 30 to 75 percent
Depth to restrictive feature: 4 to 20 inches to paralithic bedrock
Natural drainage class: Somewhat excessively drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Very low (about 1.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: D
Ecological site: SHALLOW LOAMY (1975) (R019XD060CA)
Hydric soil rating: No

Minor Components

Cieneba, uneroded

Percent of map unit: 10 percent
Hydric soil rating: No

Vista, sandy loam
Percent of map unit: 5 percent
Hydric soil rating: No

San andreas, sandy loam
Percent of map unit: 5 percent
Hydric soil rating: No

Soper, cobbly loam
Percent of map unit: 5 percent
Hydric soil rating: No

Calleguas, clay loam
Percent of map unit: 5 percent
Hydric soil rating: No

Tollhouse
Percent of map unit: 2 percent
Hydric soil rating: No

Rock outcrop
Percent of map unit: 2 percent
Hydric soil rating: No

Blasingame, loam
Percent of map unit: 1 percent
Hydric soil rating: No

176—Myford sandy loam, 15 to 30 percent slopes

Map Unit Setting

National map unit symbol: hcnp
Elevation: 1,500 feet
Mean annual precipitation: 12 to 20 inches
Mean annual air temperature: 63 degrees F
Frost-free period: 270 to 350 days
Farmland classification: Not prime farmland

Map Unit Composition

Myford and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Myford

Setting

Landform: Terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Riser
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from mixed

Typical profile

H1 - 0 to 12 inches: sandy loam
H2 - 12 to 18 inches: sandy clay
H3 - 18 to 28 inches: sandy clay loam
H4 - 28 to 71 inches: sandy clay loam
H5 - 71 to 79 inches: sandy loam

Properties and qualities

Slope: 15 to 30 percent
Depth to restrictive feature: About 12 inches to abrupt textural change
Natural drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 5 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Very low (about 1.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: D
Ecological site: CLAYPAN (1975) (R019XD061CA)
Hydric soil rating: No

Minor Components

Myford, sandy loam, eroded

Percent of map unit: 5 percent
Hydric soil rating: No

Myford, less sloping or steeper

Percent of map unit: 5 percent
Hydric soil rating: No

Cieneba, sandy loam

Percent of map unit: 3 percent
Hydric soil rating: No

Yorba, gravelly sandy loam

Percent of map unit: 2 percent
Hydric soil rating: No

191—Riverwash

Map Unit Composition

Riverwash: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Riverwash

Setting

Landform: Fans
Parent material: Sandy and gravelly alluvium

Typical profile

C1 - 0 to 6 inches: gravelly sand
C2 - 6 to 60 inches: stratified gravelly coarse sand to sandy loam

Properties and qualities

Slope: 0 to 5 percent
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: About 0 to 24 inches
Frequency of flooding: Frequent
Available water storage in profile: Very low (about 2.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8w
Hydric soil rating: Yes

207—Sorrento loam, 2 to 9 percent slopes, warm MAAT, MLRA 19

Map Unit Setting

National map unit symbol: 2tz0c
Elevation: 0 to 1,340 feet
Mean annual precipitation: 12 to 18 inches
Mean annual air temperature: 62 to 66 degrees F
Frost-free period: 320 to 365 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Sorrento and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Sorrento

Setting

Landform: Alluvial fans
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from sedimentary rock

Typical profile

A - 0 to 12 inches: loam
AB - 12 to 37 inches: silty clay loam
Bk - 37 to 62 inches: silty clay loam

2C - 62 to 72 inches: sandy loam

Properties and qualities

Slope: 2 to 9 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 5 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: High (about 11.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: LOAMY (1975) (R019XD029CA)
Hydric soil rating: No

Minor Components

Mocho

Percent of map unit: 7 percent
Landform: Alluvial fans
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Botella

Percent of map unit: 2 percent
Landform: Alluvial fans
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: LOAMY (1975) (R019XD029CA)
Hydric soil rating: No

Pico

Percent of map unit: 2 percent
Landform: Alluvial fans
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Garretson

Percent of map unit: 2 percent
Landform: Alluvial fans

Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Anacapa

Percent of map unit: 2 percent
Landform: Alluvial fans
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

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Appendix D

BMP Design Details

PRELIMINARY

SUBJECT TO FURTHER REVISION

LEGEND

- Orange County Precipitation Stations
- 24 Hour, 85th Percentile Rainfall (Inches)
- 24 Hour, 85th Percentile Rainfall (Inches) - Extrapolated
- City Boundaries

Rainfall Zones

Design Capture Storm Depth (inches)

- 0.65"
- 0.7
- 0.75
- 0.80
- 0.85
- 0.90
- 0.95
- 1.00
- 1.10"

Note: Events defined as 24-hour periods (calendar days) with greater than 0.1 inches of rainfall.
For areas outside of available data coverage, professional judgment shall be applied.

PROJECT LOCATION
DESIGN CAPTURE STORM DEPTH - 0.90 INCHES

LOS ANGELES COUNTY
ORANGE COUNTY
SAN BERNARDINO COUNTY
RIVERSIDE COUNTY
Riverside County
San Diego County

0.65 0.7 0.75 0.8 0.85 0.9 0.95 1 1.05

0 3 6 12 Kilometers
0 1.8 3.6 7.2 Miles

TITLE: RAINFALL ZONES

JOB: ORANGE COUNTY TECHNICAL GUIDANCE DOCUMENT
ORANGE CO. CA

SCALE	1" = 1.8 miles
DESIGNED	TH
DRAWING	TH
CHECKED	BMP
DATE	04/22/10
JOB NO.	9526-E

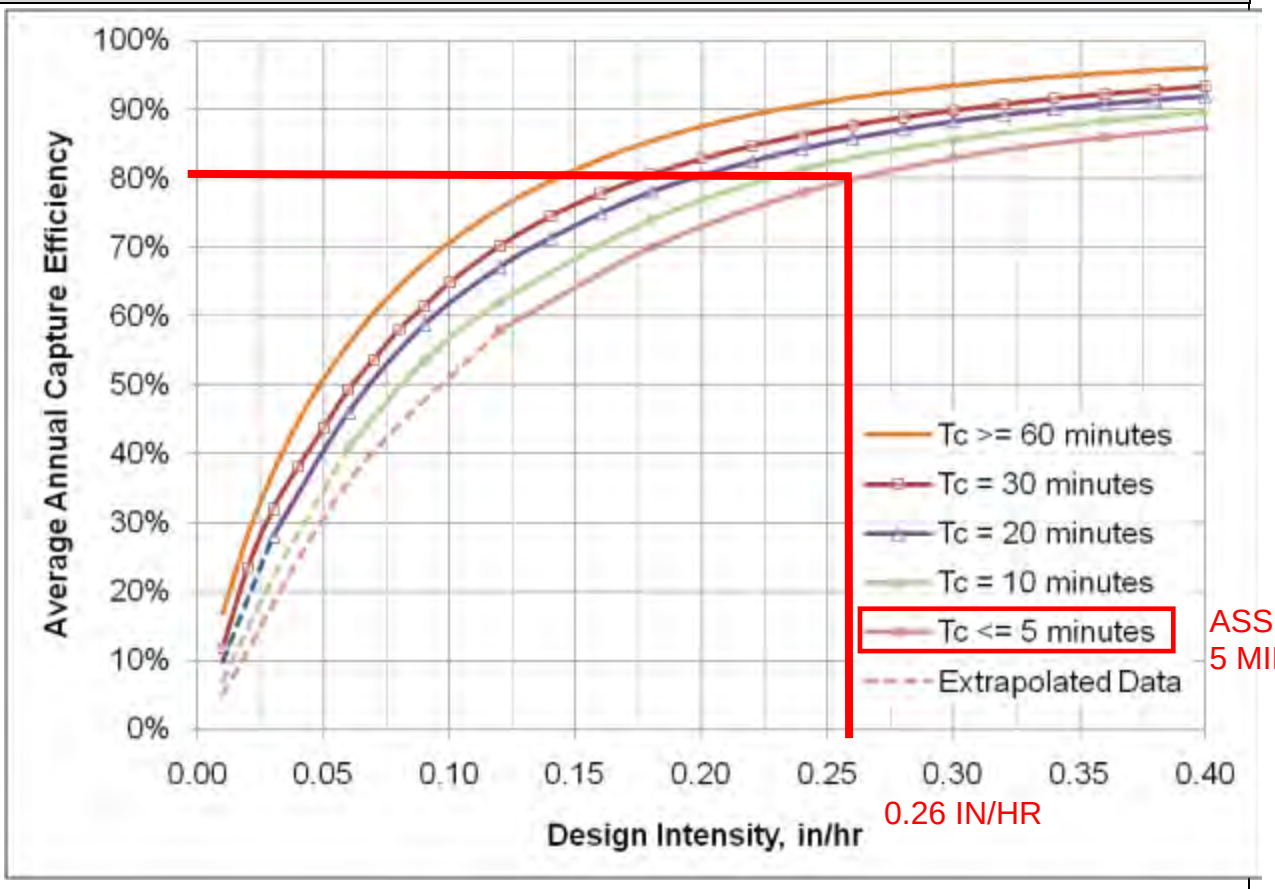
PACE Advanced Water Engineering

FIGURE
XVI-1

P:\9526E\6-GIS\Mxds\Reports\InfiltrationFeasability_20110215\9526E_FigureXVI-1_RainfallZones_20110215.mxd

Worksheet F: Determining Capture Efficiency of a Flow-based BMP based on Treatment Capacity

Graphical Operations



Provide supporting graphical operations.

Design Capture Volume and Flow Rate			
V=C x d x A x 43560 sf/ac x 1/12 in/ft			
C = 0.75 x imp + 0.15			
Q = C x i x A			
	DMA		
	A	**B**	**C**
Design Capture Storm Depth	0.9	0.9	0.9
Drainage Area (SF)	14,353	62,820	9,671
Impervious Area (SF)	8,409	45,020	5,706
Pervious Area (SF)	5,944	17,800	3,965
% Impervious	59%	72%	59%
Eff. Ret. Depth of HSC (in)	0.00	0.00	0.00
Design Infiltration Rate (in/hr)	0.00	0.00	0.00
Design Capture Volume (CF)	**634**	**3,239**	**430**
i (design intensity) (inches/hr)	0.26	0.26	0.26
Design Treatment Flow Rate (CFS)	**0.05**	**0.26**	**0.03**

Vegetated Swale (per OC TGD BIO-2)			
	DMA		
	A	**B**	**C**
swale slope (ft/ft)	0.0100	0.0100	0.0100
Required bottom width, b, (ft)	0.43	2.20	0.29
Provided bottom width (2 ft min) (ft)	2.00	3.00	2.00
Design flow depth, y, (ft)	0.13	0.33	0.10
Design Flow Velocity, V_{WQ}	0.17	0.21	0.15
Required Length, ft	102	128	89
Length Provided (100 ft min), ft	150	180	140

```
************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
          (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
        (c) Copyright 1983-2014 Advanced Engineering Software (aes)
            Ver. 21.0  Release Date: 06/01/2014  License ID 1202

                          Analysis prepared by:

                            Huitt-Zollars, Inc.
                         2603 Main Street, Suite 400
                              Irvine, CA. 92614
                                 949-988-5815

 ************************* DESCRIPTION OF STUDY *************************
* GREAT SCOTT RATIONAL METHOD                                           *
* 2 YEAR EXISTING STORM CONDITION                                       *
* CG                                                                    *
 ************************************************************************

  FILE NAME: GS2E.DAT
  TIME/DATE OF STUDY: 10:18 08/22/2023
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =    2.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  12.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *DATA BANK RAINFALL USED*
  *ANTECEDENT MOISTURE CONDITION (AMC) I ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  ================  ======  ===== ====== ===== =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0313 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *PIPE MAY BE SIZED TO HAVE A FLOW CAPACITY LESS THAN
   UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

************************************************************************
  FLOW PROCESS FROM NODE    400.00 TO NODE    401.00 IS CODE =  21
```

```
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   127.00
  ELEVATION DATA: UPSTREAM(FEET) =    650.00  DOWNSTREAM(FEET) =    644.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    9.025
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.613
  SUBAREA Tc AND LOSS RATE DATA(AMC  I ):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        0.25      0.20     1.000    67    9.03
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.000
  SUBAREA RUNOFF(CFS) =      0.32
  TOTAL AREA(ACRES) =      0.25   PEAK FLOW RATE(CFS) =      0.32

****************************************************************************
  FLOW PROCESS FROM NODE    401.00 TO NODE    104.00 IS CODE =  52
----------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    644.00  DOWNSTREAM(FEET) =    613.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   596.00   CHANNEL SLOPE =  0.0520
  NOTE: CHANNEL FLOW OF 1. CFS WAS ASSUMED IN VELOCITY ESTIMATION
  CHANNEL FLOW THRU SUBAREA(CFS) =       0.32
  FLOW VELOCITY(FEET/SEC) =   3.42 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =   2.90   Tc(MIN.) =   11.93
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    104.00 =     723.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    104.00 TO NODE    104.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =   11.93
  RAINFALL INTENSITY(INCH/HR) =   1.37
  AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20
  AREA-AVERAGED Ap =  1.00
  EFFECTIVE STREAM AREA(ACRES) =       0.25
  TOTAL STREAM AREA(ACRES) =       0.25
  PEAK FLOW RATE(CFS) AT CONFLUENCE =       0.32
```

```
****************************************************************************
  FLOW PROCESS FROM NODE    104.00 TO NODE    104.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>USER SPECIFIED HYDROLOGY INFORMATION AT NODE<<<<<
============================================================================
  USER-SPECIFIED VALUES ARE AS FOLLOWS:
  TC(MIN.) =   10.41   RAINFALL INTENSITY(INCH/HR) =  1.49
  EFFECTIVE AREA(ACRES) =     2.16
  TOTAL AREA(ACRES) =     2.20        PEAK FLOW RATE(CFS) =      2.93
  AREA-AVERAGED Fm(INCH/HR) =   0.02  AREA-AVERAGED Fp(INCH/HR) =   0.20
  AREA-AVERAGED Ap =  0.10
  NOTE: EFFECTIVE AREA IS USED AS THE TOTAL CONTRIBUTING AREA FOR ALL
        CONFLUENCE ANALYSES.

****************************************************************************
  FLOW PROCESS FROM NODE    104.00 TO NODE    104.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =   10.41
  RAINFALL INTENSITY(INCH/HR) =   1.49
  AREA-AVERAGED Fm(INCH/HR) =  0.02
  AREA-AVERAGED Fp(INCH/HR) =  0.20
  AREA-AVERAGED Ap =  0.10
  EFFECTIVE STREAM AREA(ACRES) =       2.16
  TOTAL STREAM AREA(ACRES) =       2.20
  PEAK FLOW RATE(CFS) AT CONFLUENCE =       2.93

  ** CONFLUENCE DATA **
   STREAM       Q      Tc   Intensity   Fp(Fm)     Ap     Ae     HEADWATER
   NUMBER     (CFS)  (MIN.) (INCH/HR) (INCH/HR)         (ACRES)    NODE
      1        0.32   11.93    1.374  0.20( 0.20) 1.00       0.2     400.00
      2        2.93   10.41    1.486  0.20( 0.02) 0.10       2.2     104.00

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
   STREAM       Q      Tc   Intensity   Fp(Fm)     Ap     Ae     HEADWATER
   NUMBER     (CFS)  (MIN.) (INCH/HR) (INCH/HR)         (ACRES)    NODE
      1        3.23   10.41    1.486  0.20( 0.04) 0.18       2.4     104.00
      2        3.02   11.93    1.374  0.20( 0.04) 0.19       2.4     400.00

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =       3.23    Tc(MIN.) =    10.41
  EFFECTIVE AREA(ACRES) =       2.38   AREA-AVERAGED Fm(INCH/HR) =  0.04
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.18
```

```
  TOTAL AREA(ACRES) =        2.5
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    104.00 =     723.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    104.00 TO NODE    504.00 IS CODE =  52
----------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    613.00  DOWNSTREAM(FEET) =    610.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   128.00   CHANNEL SLOPE =  0.0234
  CHANNEL FLOW THRU SUBAREA(CFS) =       3.23
  FLOW VELOCITY(FEET/SEC) =   2.92 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =   0.73   Tc(MIN.) =   11.14
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    504.00 =     851.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    504.00 TO NODE    504.00 IS CODE =  10
----------------------------------------------------------------------------
  >>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 1 <<<<<
============================================================================

****************************************************************************
  FLOW PROCESS FROM NODE    500.00 TO NODE    501.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   246.00
  ELEVATION DATA: UPSTREAM(FEET) =    645.00  DOWNSTREAM(FEET) =    638.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    7.170
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.841
  SUBAREA Tc AND LOSS RATE DATA(AMC  I ):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        0.33      0.20     0.500    57    7.17
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.500
  SUBAREA RUNOFF(CFS) =      0.52
  TOTAL AREA(ACRES) =      0.33   PEAK FLOW RATE(CFS) =      0.52

****************************************************************************
  FLOW PROCESS FROM NODE    501.00 TO NODE    502.00 IS CODE =  52
----------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
```

```
  ELEVATION DATA: UPSTREAM(FEET) =    638.00  DOWNSTREAM(FEET) =    630.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   227.00   CHANNEL SLOPE =  0.0352
  NOTE: CHANNEL FLOW OF 1. CFS WAS ASSUMED IN VELOCITY ESTIMATION
  CHANNEL FLOW THRU SUBAREA(CFS) =       0.52
  FLOW VELOCITY(FEET/SEC) =   2.82 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =   1.34   Tc(MIN.) =    8.51
  LONGEST FLOWPATH FROM NODE    500.00 TO NODE    502.00 =     473.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    502.00 TO NODE    502.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN.) =    8.51
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.668
  SUBAREA LOSS RATE DATA(AMC  I ):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        0.35      0.20     0.500    57
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.500
  SUBAREA AREA(ACRES) =    0.35      SUBAREA RUNOFF(CFS) =    0.49
  EFFECTIVE AREA(ACRES) =      0.68   AREA-AVERAGED Fm(INCH/HR) =  0.10
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.50
  TOTAL AREA(ACRES) =        0.7       PEAK FLOW RATE(CFS) =       0.96

****************************************************************************
  FLOW PROCESS FROM NODE    502.00 TO NODE    503.00 IS CODE =  52
----------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    630.00  DOWNSTREAM(FEET) =    627.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   179.00   CHANNEL SLOPE =  0.0168
  NOTE: CHANNEL FLOW OF 1. CFS WAS ASSUMED IN VELOCITY ESTIMATION
  CHANNEL FLOW THRU SUBAREA(CFS) =       0.96
  FLOW VELOCITY(FEET/SEC) =   1.94 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =   1.54   Tc(MIN.) =   10.05
  LONGEST FLOWPATH FROM NODE    500.00 TO NODE    503.00 =     652.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    503.00 TO NODE    503.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN.) =   10.05
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.516
  SUBAREA LOSS RATE DATA(AMC  I ):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
```

```
     LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "1 DWELLING/ACRE"          D        0.36      0.20     0.800    57
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.800
  SUBAREA AREA(ACRES) =    0.36      SUBAREA RUNOFF(CFS) =    0.44
  EFFECTIVE AREA(ACRES) =      1.04   AREA-AVERAGED Fm(INCH/HR) =  0.12
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.60
  TOTAL AREA(ACRES) =        1.0       PEAK FLOW RATE(CFS) =       1.31

****************************************************************************
  FLOW PROCESS FROM NODE    503.00 TO NODE    504.00 IS CODE =  52
----------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    627.00  DOWNSTREAM(FEET) =    610.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   107.00   CHANNEL SLOPE =  0.1589
  NOTE: CHANNEL SLOPE OF .1 WAS ASSUMED IN VELOCITY ESTIMATION
  CHANNEL FLOW THRU SUBAREA(CFS) =       1.31
  FLOW VELOCITY(FEET/SEC) =   4.99 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =   0.36   Tc(MIN.) =   10.41
  LONGEST FLOWPATH FROM NODE    500.00 TO NODE    504.00 =     759.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    504.00 TO NODE    504.00 IS CODE =  11
----------------------------------------------------------------------------
  >>>>>CONFLUENCE MEMORY BANK # 1 WITH THE MAIN-STREAM MEMORY<<<<<
============================================================================

  ** MAIN STREAM CONFLUENCE DATA **
   STREAM       Q      Tc   Intensity   Fp(Fm)     Ap     Ae     HEADWATER
   NUMBER     (CFS)  (MIN.) (INCH/HR) (INCH/HR)         (ACRES)    NODE
      1        1.31   10.41    1.486  0.20( 0.12) 0.60       1.0     500.00
  LONGEST FLOWPATH FROM NODE    500.00 TO NODE    504.00 =     759.00 FEET.

  ** MEMORY BANK #  1 CONFLUENCE DATA **
   STREAM       Q      Tc   Intensity   Fp(Fm)     Ap     Ae     HEADWATER
   NUMBER     (CFS)  (MIN.) (INCH/HR) (INCH/HR)         (ACRES)    NODE
      1        3.23   11.14    1.429  0.20( 0.04) 0.18       2.4     104.00
      2        3.02   12.67    1.328  0.20( 0.04) 0.19       2.4     400.00
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    504.00 =     851.00 FEET.

  ** PEAK FLOW RATE TABLE **
   STREAM       Q      Tc   Intensity   Fp(Fm)     Ap     Ae     HEADWATER
   NUMBER     (CFS)  (MIN.) (INCH/HR) (INCH/HR)         (ACRES)    NODE
      1        4.45   10.41    1.486  0.20( 0.06) 0.32       3.3     500.00
      2        4.49   11.14    1.429  0.20( 0.06) 0.31       3.4     104.00
      3        4.18   12.67    1.328  0.20( 0.06) 0.32       3.5     400.00
    TOTAL AREA(ACRES) =         3.5
```

```
  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =        4.49  Tc(MIN.) =   11.140
  EFFECTIVE AREA(ACRES) =      3.42  AREA-AVERAGED Fm(INCH/HR) =  0.06
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.31
  TOTAL AREA(ACRES) =        3.5
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    504.00 =     851.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    504.00 TO NODE    504.00 IS CODE =  12
----------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
============================================================================

****************************************************************************
  FLOW PROCESS FROM NODE    504.00 TO NODE    603.00 IS CODE =  52
----------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    610.00  DOWNSTREAM(FEET) =    608.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    76.00   CHANNEL SLOPE =  0.0263
  CHANNEL FLOW THRU SUBAREA(CFS) =       4.49
  FLOW VELOCITY(FEET/SEC) =   3.34 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =   0.38   Tc(MIN.) =   11.52
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    603.00 =     927.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    603.00 TO NODE    603.00 IS CODE =  10
----------------------------------------------------------------------------
  >>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 1 <<<<<
============================================================================

****************************************************************************
  FLOW PROCESS FROM NODE    600.00 TO NODE    601.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   310.00
  ELEVATION DATA: UPSTREAM(FEET) =    643.00  DOWNSTREAM(FEET) =    635.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    7.422
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.805
  SUBAREA Tc AND LOSS RATE DATA(AMC  I ):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  CONDOMINIUMS               D        0.33      0.20     0.350    57    7.42
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
```

```
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.350
  SUBAREA RUNOFF(CFS) =      0.52
  TOTAL AREA(ACRES) =      0.33   PEAK FLOW RATE(CFS) =      0.52

****************************************************************************
  FLOW PROCESS FROM NODE    601.00 TO NODE    602.00 IS CODE =  52
----------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    635.00  DOWNSTREAM(FEET) =    629.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   166.00   CHANNEL SLOPE =  0.0361
  NOTE: CHANNEL FLOW OF 1. CFS WAS ASSUMED IN VELOCITY ESTIMATION
  CHANNEL FLOW THRU SUBAREA(CFS) =       0.52
  FLOW VELOCITY(FEET/SEC) =   2.85 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =   0.97   Tc(MIN.) =    8.39
  LONGEST FLOWPATH FROM NODE    600.00 TO NODE    602.00 =     476.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    602.00 TO NODE    602.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN.) =    8.39
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.682
  SUBAREA LOSS RATE DATA(AMC  I ):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        0.38      0.20     0.500    57
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.500
  SUBAREA AREA(ACRES) =    0.38      SUBAREA RUNOFF(CFS) =    0.54
  EFFECTIVE AREA(ACRES) =      0.71   AREA-AVERAGED Fm(INCH/HR) =  0.09
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.43
  TOTAL AREA(ACRES) =        0.7       PEAK FLOW RATE(CFS) =       1.02

****************************************************************************
  FLOW PROCESS FROM NODE    602.00 TO NODE    603.00 IS CODE =  52
----------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    629.00  DOWNSTREAM(FEET) =    608.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   280.00   CHANNEL SLOPE =  0.0750
  CHANNEL FLOW THRU SUBAREA(CFS) =       1.02
  FLOW VELOCITY(FEET/SEC) =   4.12 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =   1.13   Tc(MIN.) =    9.52
  LONGEST FLOWPATH FROM NODE    600.00 TO NODE    603.00 =     756.00 FEET.
```

```
****************************************************************************
  FLOW PROCESS FROM NODE    603.00 TO NODE    603.00 IS CODE =  11
----------------------------------------------------------------------------
  >>>>>CONFLUENCE MEMORY BANK # 1 WITH THE MAIN-STREAM MEMORY<<<<<
============================================================================

  ** MAIN STREAM CONFLUENCE DATA **
   STREAM       Q      Tc   Intensity   Fp(Fm)     Ap     Ae     HEADWATER
   NUMBER     (CFS)  (MIN.) (INCH/HR) (INCH/HR)         (ACRES)    NODE
      1        1.02    9.52    1.564  0.20( 0.09) 0.43       0.7     600.00
  LONGEST FLOWPATH FROM NODE    600.00 TO NODE    603.00 =     756.00 FEET.

  ** MEMORY BANK #  1 CONFLUENCE DATA **
   STREAM       Q      Tc   Intensity   Fp(Fm)     Ap     Ae     HEADWATER
   NUMBER     (CFS)  (MIN.) (INCH/HR) (INCH/HR)         (ACRES)    NODE
      1        4.45   10.79    1.456  0.20( 0.06) 0.32       3.3     500.00
      2        4.49   11.52    1.402  0.20( 0.06) 0.31       3.4     104.00
      3        4.18   13.06    1.305  0.20( 0.06) 0.32       3.5     400.00
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    603.00 =     927.00 FEET.

  ** PEAK FLOW RATE TABLE **
   STREAM       Q      Tc   Intensity   Fp(Fm)     Ap     Ae     HEADWATER
   NUMBER     (CFS)  (MIN.) (INCH/HR) (INCH/HR)         (ACRES)    NODE
      1        5.25    9.52    1.564  0.20( 0.07) 0.34       3.6     600.00
      2        5.40   10.79    1.456  0.20( 0.07) 0.34       4.0     500.00
      3        5.39   11.52    1.402  0.20( 0.07) 0.33       4.1     104.00
      4        5.02   13.06    1.305  0.20( 0.07) 0.34       4.2     400.00
    TOTAL AREA(ACRES) =         4.2

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =        5.40  Tc(MIN.) =   10.787
  EFFECTIVE AREA(ACRES) =      3.97  AREA-AVERAGED Fm(INCH/HR) =  0.07
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.34
  TOTAL AREA(ACRES) =        4.2
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    603.00 =     927.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    603.00 TO NODE    603.00 IS CODE =  12
----------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
============================================================================
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =        4.2  TC(MIN.) =     10.79
  EFFECTIVE AREA(ACRES) =      3.97  AREA-AVERAGED Fm(INCH/HR)=  0.07
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap = 0.337
  PEAK FLOW RATE(CFS)   =       5.40

  ** PEAK FLOW RATE TABLE **
   STREAM       Q      Tc   Intensity   Fp(Fm)     Ap     Ae     HEADWATER
```

NUMBER	(CFS)	(MIN.)	(INCH/HR)	(INCH/HR)	(ACRES)	NODE
1	5.25	9.52	1.564	0.20(0.07) 0.34	3.6	600.00
2	5.40	10.79	1.456	0.20(0.07) 0.34	4.0	500.00
3	5.39	11.52	1.402	0.20(0.07) 0.33	4.1	104.00
4	5.02	13.06	1.305	0.20(0.07) 0.34	4.2	400.00

END OF RATIONAL METHOD ANALYSIS

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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                          Analysis prepared by:

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 ************************* DESCRIPTION OF STUDY *************************
* GREAT SCOTT OFFSITE RATIONAL METHOD                                    *
* 2 YEAR EXISTING CONDITION                                              *
* 8/16/2023 CG                                                           *
 ************************************************************************

  FILE NAME: GSOFF2.DAT
  TIME/DATE OF STUDY: 10:06 08/22/2023
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =    2.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  12.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *DATA BANK RAINFALL USED*
  *ANTECEDENT MOISTURE CONDITION (AMC) I ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  ================  ======  ===== ====== ===== =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *PIPE MAY BE SIZED TO HAVE A FLOW CAPACITY LESS THAN
   UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

**************************************************************************
  FLOW PROCESS FROM NODE    100.00 TO NODE    101.00 IS CODE =  21
```

```
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   182.00
  ELEVATION DATA: UPSTREAM(FEET) =    645.00  DOWNSTREAM(FEET) =    640.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    5.002
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  2.263
  SUBAREA Tc AND LOSS RATE DATA(AMC  I ):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  COMMERCIAL                 D        0.46      0.20     0.100    57    5.00
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.100
  SUBAREA RUNOFF(CFS) =      0.93
  TOTAL AREA(ACRES) =      0.46   PEAK FLOW RATE(CFS) =      0.93

****************************************************************************
  FLOW PROCESS FROM NODE    101.00 TO NODE    102.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  1 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) =  640.00  DOWNSTREAM ELEVATION(FEET) =  631.00
  STREET LENGTH(FEET) =   699.00   CURB HEIGHT(INCHES) =  8.0
  STREET HALFWIDTH(FEET) = 30.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  20.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.018
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.018

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  1
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       2.10
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.32
    HALFSTREET FLOOD WIDTH(FEET) =    8.78
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    2.38
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    0.76
  STREET FLOW TRAVEL TIME(MIN.) =   4.90   Tc(MIN.) =    9.91
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.529
  SUBAREA LOSS RATE DATA(AMC  I ):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                 D        1.70      0.20     0.100    57
```

```
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.100
  SUBAREA AREA(ACRES) =    1.70      SUBAREA RUNOFF(CFS) =    2.31
  EFFECTIVE AREA(ACRES) =      2.16    AREA-AVERAGED Fm(INCH/HR) =  0.02
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.10
  TOTAL AREA(ACRES) =        2.2        PEAK FLOW RATE(CFS) =       2.93

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.35   HALFSTREET FLOOD WIDTH(FEET) =  10.35
  FLOW VELOCITY(FEET/SEC.) =  2.55   DEPTH*VELOCITY(FT*FT/SEC.) =   0.89
  LONGEST FLOWPATH FROM NODE    100.00 TO NODE    102.00 =     881.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    102.00 TO NODE    103.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   625.00  DOWNSTREAM(FEET) =   624.00
  FLOW LENGTH(FEET) =    20.00   MANNING'S N =  0.013
  ESTIMATED PIPE DIAMETER(INCH) INCREASED TO 12.000
  DEPTH OF FLOW IN  12.0 INCH PIPE IS   5.2 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   9.02
  ESTIMATED PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       2.93
  PIPE TRAVEL TIME(MIN.) =   0.04    Tc(MIN.) =    9.94
  LONGEST FLOWPATH FROM NODE    100.00 TO NODE    103.00 =     901.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    103.00 TO NODE    104.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   624.00  DOWNSTREAM(FEET) =   615.00
  FLOW LENGTH(FEET) =   230.23   MANNING'S N =  0.013
  ESTIMATED PIPE DIAMETER(INCH) INCREASED TO 12.000
  DEPTH OF FLOW IN  12.0 INCH PIPE IS   5.6 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   8.23
  ESTIMATED PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       2.93
  PIPE TRAVEL TIME(MIN.) =   0.47    Tc(MIN.) =   10.41
  LONGEST FLOWPATH FROM NODE    100.00 TO NODE    104.00 =    1131.23 FEET.
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =        2.2  TC(MIN.) =     10.41
  EFFECTIVE AREA(ACRES) =      2.16  AREA-AVERAGED Fm(INCH/HR)=  0.02
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap = 0.100
  PEAK FLOW RATE(CFS)   =       2.93
============================================================================
```

==========

END OF RATIONAL METHOD ANALYSIS

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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                           Analysis prepared by:

                             Huitt-Zollars, Inc.
                          2603 Main Street, Suite 400
                               Irvine, CA. 92614
                                  949-988-5815

 ************************* DESCRIPTION OF STUDY *************************
* Great Scott- Lake Forest Proposed Hydrology                            *
* RATIONAL METHOD 2-YR STORM EVENT                                       *
* CG                                                                     *
 ************************************************************************

  FILE NAME: GS2P.DAT
  TIME/DATE OF STUDY: 10:18 08/22/2023
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =    2.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  12.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *DATA BANK RAINFALL USED*
  *ANTECEDENT MOISTURE CONDITION (AMC) I ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  ================  ======  ===== ====== ===== =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0313 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

**************************************************************************
  FLOW PROCESS FROM NODE    400.00 TO NODE    401.00 IS CODE =  21
```

```
------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
========================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   155.00
  ELEVATION DATA: UPSTREAM(FEET) =    651.00  DOWNSTREAM(FEET) =    642.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    6.974
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.870
  SUBAREA Tc AND LOSS RATE DATA(AMC  I ):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  NATURAL POOR COVER
  "BARREN"                    D        0.23      0.20     1.000    83    6.97
  URBAN FAIR COVER
  "TURF"                      D        0.01      0.20     1.000    66    9.38
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.000
  SUBAREA RUNOFF(CFS) =      0.36
  TOTAL AREA(ACRES) =      0.24   PEAK FLOW RATE(CFS) =      0.36

************************************************************************
  FLOW PROCESS FROM NODE    401.00 TO NODE    402.00 IS CODE =  31
------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   637.00  DOWNSTREAM(FEET) =   636.00
  FLOW LENGTH(FEET) =    47.00   MANNING'S N =  0.013
  ESTIMATED PIPE DIAMETER(INCH) INCREASED TO 12.000
  DEPTH OF FLOW IN  12.0 INCH PIPE IS   2.2 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   3.66
  ESTIMATED PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       0.36
  PIPE TRAVEL TIME(MIN.) =   0.21    Tc(MIN.) =    7.19
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    402.00 =     202.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE    402.00 TO NODE    403.00 IS CODE =  31
------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   636.00  DOWNSTREAM(FEET) =   624.00
  FLOW LENGTH(FEET) =   463.00   MANNING'S N =  0.013
  ESTIMATED PIPE DIAMETER(INCH) INCREASED TO 12.000
  DEPTH OF FLOW IN  12.0 INCH PIPE IS   2.1 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   3.92
  ESTIMATED PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
```

```
  PIPE-FLOW(CFS) =       0.36
  PIPE TRAVEL TIME(MIN.) =   1.97    Tc(MIN.) =    9.16
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    403.00 =     665.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    403.00 TO NODE    403.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN.) =    9.16
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.599
  SUBAREA LOSS RATE DATA(AMC  I ):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                 D        0.18      0.20     0.100    57
  URBAN FAIR COVER
  "TURF"                     D        0.09      0.20     1.000    66
  NATURAL POOR COVER
  "BARREN"                   D        0.86      0.20     1.000    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.857
  SUBAREA AREA(ACRES) =    1.13      SUBAREA RUNOFF(CFS) =    1.45
  EFFECTIVE AREA(ACRES) =      1.37   AREA-AVERAGED Fm(INCH/HR) =  0.18
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.88
  TOTAL AREA(ACRES) =        1.4       PEAK FLOW RATE(CFS) =       1.75

****************************************************************************
  FLOW PROCESS FROM NODE    403.00 TO NODE    404.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   624.00  DOWNSTREAM(FEET) =   623.00
  FLOW LENGTH(FEET) =    70.00   MANNING'S N =  0.013
  ESTIMATED PIPE DIAMETER(INCH) INCREASED TO 12.000
  DEPTH OF FLOW IN  12.0 INCH PIPE IS   5.5 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   4.96
  ESTIMATED PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       1.75
  PIPE TRAVEL TIME(MIN.) =   0.24    Tc(MIN.) =    9.39
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    404.00 =     735.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    404.00 TO NODE    405.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   623.00  DOWNSTREAM(FEET) =   614.00
  FLOW LENGTH(FEET) =    49.00   MANNING'S N =  0.013
```

```
  ESTIMATED PIPE DIAMETER(INCH) INCREASED TO 12.000
  DEPTH OF FLOW IN  12.0 INCH PIPE IS   2.8 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  12.45
  ESTIMATED PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       1.75
  PIPE TRAVEL TIME(MIN.) =   0.07    Tc(MIN.) =    9.46
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    405.00 =     784.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    405.00 TO NODE    405.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN.) =    9.46
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.570
  SUBAREA LOSS RATE DATA(AMC  I ):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  URBAN FAIR COVER
  "TURF"                      D        0.01      0.20     1.000    66
  NATURAL POOR COVER
  "BARREN"                    D        0.62      0.20     1.000    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.000
  SUBAREA AREA(ACRES) =    0.63      SUBAREA RUNOFF(CFS) =    0.78
  EFFECTIVE AREA(ACRES) =      2.00   AREA-AVERAGED Fm(INCH/HR) =  0.18
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.92
  TOTAL AREA(ACRES) =        2.0       PEAK FLOW RATE(CFS) =       2.50

****************************************************************************
  FLOW PROCESS FROM NODE    405.00 TO NODE    405.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =    9.46
  RAINFALL INTENSITY(INCH/HR) =   1.57
  AREA-AVERAGED Fm(INCH/HR) =  0.18
  AREA-AVERAGED Fp(INCH/HR) =  0.20
  AREA-AVERAGED Ap =  0.92
  EFFECTIVE STREAM AREA(ACRES) =       2.00
  TOTAL STREAM AREA(ACRES) =       2.00
  PEAK FLOW RATE(CFS) AT CONFLUENCE =       2.50

****************************************************************************
  FLOW PROCESS FROM NODE    405.00 TO NODE    405.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>USER SPECIFIED HYDROLOGY INFORMATION AT NODE<<<<<
============================================================================
```

```
  USER-SPECIFIED VALUES ARE AS FOLLOWS:
  TC(MIN.) =   10.41   RAINFALL INTENSITY(INCH/HR) =  1.49
  EFFECTIVE AREA(ACRES) =     2.16
  TOTAL AREA(ACRES) =     2.20        PEAK FLOW RATE(CFS) =      2.93
  AREA-AVERAGED Fm(INCH/HR) =   0.02  AREA-AVERAGED Fp(INCH/HR) =   0.20
  AREA-AVERAGED Ap =  0.10
  NOTE: EFFECTIVE AREA IS USED AS THE TOTAL CONTRIBUTING AREA FOR ALL
        CONFLUENCE ANALYSES.

****************************************************************************
  FLOW PROCESS FROM NODE    405.00 TO NODE    405.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =   10.41
  RAINFALL INTENSITY(INCH/HR) =   1.49
  AREA-AVERAGED Fm(INCH/HR) =  0.02
  AREA-AVERAGED Fp(INCH/HR) =  0.20
  AREA-AVERAGED Ap =  0.10
  EFFECTIVE STREAM AREA(ACRES) =       2.16
  TOTAL STREAM AREA(ACRES) =       2.20
  PEAK FLOW RATE(CFS) AT CONFLUENCE =       2.93

  ** CONFLUENCE DATA **
   STREAM       Q      Tc   Intensity   Fp(Fm)     Ap     Ae     HEADWATER
   NUMBER     (CFS)  (MIN.) (INCH/HR) (INCH/HR)         (ACRES)    NODE
      1        2.50    9.46    1.570  0.20( 0.18) 0.92       2.0     400.00
      2        2.93   10.41    1.486  0.20( 0.02) 0.10       2.2     405.00

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
   STREAM       Q      Tc   Intensity   Fp(Fm)     Ap     Ae     HEADWATER
   NUMBER     (CFS)  (MIN.) (INCH/HR) (INCH/HR)         (ACRES)    NODE
      1        5.31    9.46    1.570  0.20( 0.10) 0.51       4.0     400.00
      2        5.27   10.41    1.486  0.20( 0.10) 0.49       4.2     405.00

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =       5.31    Tc(MIN.) =     9.46
  EFFECTIVE AREA(ACRES) =       3.96   AREA-AVERAGED Fm(INCH/HR) =  0.10
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.51
  TOTAL AREA(ACRES) =        4.2
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    405.00 =     784.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    405.00 TO NODE    104.00 IS CODE =  31
```

```
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   614.00  DOWNSTREAM(FEET) =   613.00
  FLOW LENGTH(FEET) =   114.00   MANNING'S N =  0.013
  DEPTH OF FLOW IN  15.0 INCH PIPE IS  11.4 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   5.31
  ESTIMATED PIPE DIAMETER(INCH) =  15.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       5.31
  PIPE TRAVEL TIME(MIN.) =   0.36    Tc(MIN.) =    9.82
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    104.00 =     898.00 FEET.
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =        4.2  TC(MIN.) =      9.82
  EFFECTIVE AREA(ACRES) =      3.96  AREA-AVERAGED Fm(INCH/HR)=  0.10
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap = 0.513
  PEAK FLOW RATE(CFS)   =       5.31

  ** PEAK FLOW RATE TABLE **
   STREAM       Q      Tc   Intensity   Fp(Fm)     Ap     Ae     HEADWATER
   NUMBER     (CFS)  (MIN.) (INCH/HR) (INCH/HR)         (ACRES)    NODE
      1        5.31    9.82    1.537  0.20( 0.10) 0.51       4.0     400.00
      2        5.27   10.77    1.457  0.20( 0.10) 0.49       4.2     405.00
============================================================================
============================================================================
  END OF RATIONAL METHOD ANALYSIS
```

```
**************************************************************************

             F L O O D    R O U T I N G    A N A L Y S I S
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                           Analysis prepared by:

                             Huitt-Zollars, Inc.
                          2603 Main Street, Suite 400
                               Irvine, CA. 92614
                                  949-988-5815

 ************************* DESCRIPTION OF STUDY *************************
* GREAT SCOTT                                                           *
* 2 YR STORM EX.                                                        *
* CGULLIXSON REV HHTUN                                                  *
 ************************************************************************

  FILE NAME: GSFR2E.DAT
  TIME/DATE OF STUDY: 10:21 08/23/2023

   The Small Area Unit Hydrograph Procedures in Section J
   of the Hydrology Manual provides estimates of runoff
   hydrograph and runoff volume for watersheds whose time of
   concentration is less than 25 minutes. The PROGRAM User
   should check the applicability of using the small area unit
   hydrograph procedures, and follow the guidelines in
   Sections J and K.5 in complex watershed modeling.


**************************************************************************
  FLOW PROCESS FROM NODE    400.00 TO NODE    603.00 IS CODE = 1.2
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (SMALL AREA UNIT-HYDROGRAPH ANALYSIS) <<<<<
==========================================================================

  (SMALL AREA UNIT-HYDROGRAPH ADDED TO STREAM #1)

    RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
    TOTAL CATCHMENT AREA(ACRES) =    2.00
    SOIL-LOSS RATE, Fm,(INCH/HR) =  0.118
    LOW LOSS FRACTION = 0.522
    TIME OF CONCENTRATION(MIN.) = 10.79
    SMALL AREA PEAK Q COMPUTED USING PEAK FLOW RATE FORMULA
    ORANGE COUNTY "VALLEY" RAINFALL VALUES ARE USED:
    RETURN FREQUENCY(YEARS) =   2
       5-MINUTE POINT RAINFALL VALUE(INCHES) =  0.19
```

```
      30-MINUTE POINT RAINFALL VALUE(INCHES) =  0.40
       1-HOUR   POINT RAINFALL VALUE(INCHES) =  0.53
       3-HOUR   POINT RAINFALL VALUE(INCHES) =  0.89
       6-HOUR   POINT RAINFALL VALUE(INCHES) =  1.22
      24-HOUR   POINT RAINFALL VALUE(INCHES) =  2.05

--------------------------------------------------------------------------------
    TOTAL CATCHMENT   RUNOFF  VOLUME(ACRE-FEET) =     0.17
    TOTAL CATCHMENT SOIL-LOSS VOLUME(ACRE-FEET) =     0.17

--------------------------------------------------------------------------------
♠
================================================================================

                      2 4 - H O U R    S T O R M
                   R U N O F F    H Y D R O G R A P H

================================================================================
               HYDROGRAPH IN  ONE-MINUTE UNIT INTERVALS(CFS)
        (Notes: Time indicated is at END of Each Unit Intervals.
                Peak 5-minute rainfall intensity is modeled as
                a constant value for entire 5-minute period.)
--------------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.        0.6       1.2       1.8       2.4
--------------------------------------------------------------------------------
   0.017      0.0000      0.00  Q        .         .         .         .
   0.033      0.0000      0.00  Q        .         .         .         .
   0.050      0.0000      0.01  Q        .         .         .         .
   0.067      0.0000      0.01  Q        .         .         .         .
   0.083      0.0000      0.01  Q        .         .         .         .
   0.100      0.0001      0.01  Q        .         .         .         .
   0.117      0.0001      0.02  Q        .         .         .         .
   0.133      0.0001      0.02  Q        .         .         .         .
   0.150      0.0001      0.02  Q        .         .         .         .
   0.167      0.0002      0.02  Q        .         .         .         .
   0.183      0.0002      0.03  Q        .         .         .         .
   0.200      0.0003      0.03  Q        .         .         .         .
   0.217      0.0003      0.03  Q        .         .         .         .
   0.233      0.0003      0.03  Q        .         .         .         .
   0.250      0.0004      0.03  Q        .         .         .         .
   0.267      0.0004      0.03  Q        .         .         .         .
   0.283      0.0004      0.03  Q        .         .         .         .
   0.300      0.0005      0.03  Q        .         .         .         .
   0.317      0.0005      0.03  Q        .         .         .         .
   0.333      0.0006      0.03  Q        .         .         .         .
   0.350      0.0006      0.03  Q        .         .         .         .
   0.367      0.0006      0.03  Q        .         .         .         .
   0.383      0.0007      0.03  Q        .         .         .         .
   0.400      0.0007      0.03  Q        .         .         .         .
   0.417      0.0008      0.03  Q        .         .         .         .
```

0.433	0.0008	0.03	Q	.	.	.	.
0.450	0.0008	0.03	Q	.	.	.	.
0.467	0.0009	0.03	Q	.	.	.	.
0.483	0.0009	0.03	Q	.	.	.	.
0.500	0.0009	0.03	Q	.	.	.	.
0.517	0.0010	0.03	Q	.	.	.	.
0.533	0.0010	0.03	Q	.	.	.	.
0.550	0.0011	0.03	Q	.	.	.	.
0.567	0.0011	0.03	Q	.	.	.	.
0.583	0.0011	0.03	Q	.	.	.	.
0.600	0.0012	0.03	Q	.	.	.	.
0.617	0.0012	0.03	Q	.	.	.	.
0.633	0.0013	0.03	Q	.	.	.	.
0.650	0.0013	0.03	Q	.	.	.	.
0.667	0.0013	0.03	Q	.	.	.	.
0.683	0.0014	0.03	Q	.	.	.	.
0.700	0.0014	0.03	Q	.	.	.	.
0.717	0.0014	0.03	Q	.	.	.	.
0.733	0.0015	0.03	Q	.	.	.	.
0.750	0.0015	0.03	Q	.	.	.	.
0.767	0.0016	0.03	Q	.	.	.	.
0.783	0.0016	0.03	Q	.	.	.	.
0.800	0.0016	0.03	Q	.	.	.	.
0.817	0.0017	0.03	Q	.	.	.	.
0.833	0.0017	0.03	Q	.	.	.	.
0.850	0.0018	0.03	Q	.	.	.	.
0.867	0.0018	0.03	Q	.	.	.	.
0.883	0.0018	0.03	Q	.	.	.	.
0.900	0.0019	0.03	Q	.	.	.	.
0.917	0.0019	0.03	Q	.	.	.	.
0.933	0.0020	0.03	Q	.	.	.	.
0.950	0.0020	0.03	Q	.	.	.	.
0.967	0.0020	0.03	Q	.	.	.	.
0.983	0.0021	0.03	Q	.	.	.	.
1.000	0.0021	0.03	Q	.	.	.	.
1.017	0.0021	0.03	Q	.	.	.	.
1.033	0.0022	0.03	Q	.	.	.	.
1.050	0.0022	0.03	Q	.	.	.	.
1.067	0.0023	0.03	Q	.	.	.	.
1.083	0.0023	0.03	Q	.	.	.	.
1.100	0.0023	0.03	Q	.	.	.	.
1.117	0.0024	0.03	Q	.	.	.	.
1.133	0.0024	0.03	Q	.	.	.	.
1.150	0.0025	0.03	Q	.	.	.	.
1.167	0.0025	0.03	Q	.	.	.	.
1.183	0.0025	0.03	Q	.	.	.	.
1.200	0.0026	0.03	Q	.	.	.	.
1.217	0.0026	0.03	Q	.	.	.	.
1.233	0.0027	0.03	Q	.	.	.	.
1.250	0.0027	0.03	Q	.	.	.	.

1.267	0.0027	0.03	Q	.	.	.	.
1.283	0.0028	0.03	Q	.	.	.	.
1.300	0.0028	0.03	Q	.	.	.	.
1.317	0.0029	0.03	Q	.	.	.	.
1.333	0.0029	0.03	Q	.	.	.	.
1.350	0.0029	0.03	Q	.	.	.	.
1.367	0.0030	0.03	Q	.	.	.	.
1.383	0.0030	0.03	Q	.	.	.	.
1.400	0.0031	0.03	Q	.	.	.	.
1.417	0.0031	0.03	Q	.	.	.	.
1.433	0.0031	0.03	Q	.	.	.	.
1.450	0.0032	0.03	Q	.	.	.	.
1.467	0.0032	0.03	Q	.	.	.	.
1.483	0.0033	0.03	Q	.	.	.	.
1.500	0.0033	0.03	Q	.	.	.	.
1.517	0.0033	0.03	Q	.	.	.	.
1.533	0.0034	0.03	Q	.	.	.	.
1.550	0.0034	0.03	Q	.	.	.	.
1.567	0.0035	0.03	Q	.	.	.	.
1.583	0.0035	0.03	Q	.	.	.	.
1.600	0.0035	0.03	Q	.	.	.	.
1.617	0.0036	0.03	Q	.	.	.	.
1.633	0.0036	0.03	Q	.	.	.	.
1.650	0.0037	0.03	Q	.	.	.	.
1.667	0.0037	0.03	Q	.	.	.	.
1.683	0.0037	0.03	Q	.	.	.	.
1.700	0.0038	0.03	Q	.	.	.	.
1.717	0.0038	0.03	Q	.	.	.	.
1.733	0.0039	0.03	Q	.	.	.	.
1.750	0.0039	0.03	Q	.	.	.	.
1.767	0.0039	0.03	Q	.	.	.	.
1.783	0.0040	0.03	Q	.	.	.	.
1.800	0.0040	0.03	Q	.	.	.	.
1.817	0.0041	0.03	Q	.	.	.	.
1.833	0.0041	0.03	Q	.	.	.	.
1.850	0.0041	0.03	Q	.	.	.	.
1.867	0.0042	0.03	Q	.	.	.	.
1.883	0.0042	0.03	Q	.	.	.	.
1.900	0.0043	0.03	QV	.	.	.	.
1.917	0.0043	0.03	QV	.	.	.	.
1.933	0.0043	0.03	QV	.	.	.	.
1.950	0.0044	0.03	QV	.	.	.	.
1.967	0.0044	0.03	QV	.	.	.	.
1.983	0.0045	0.03	QV	.	.	.	.
2.000	0.0045	0.03	QV	.	.	.	.
2.017	0.0046	0.03	QV	.	.	.	.
2.033	0.0046	0.03	QV	.	.	.	.
2.050	0.0046	0.03	QV	.	.	.	.
2.067	0.0047	0.03	QV	.	.	.	.
2.083	0.0047	0.03	QV	.	.	.	.

2.100	0.0048	0.03	QV	.	.	.	.
2.117	0.0048	0.03	QV	.	.	.	.
2.133	0.0048	0.03	QV	.	.	.	.
2.150	0.0049	0.03	QV	.	.	.	.
2.167	0.0049	0.03	QV	.	.	.	.
2.183	0.0050	0.03	QV	.	.	.	.
2.200	0.0050	0.03	QV	.	.	.	.
2.217	0.0050	0.03	QV	.	.	.	.
2.233	0.0051	0.03	QV	.	.	.	.
2.250	0.0051	0.03	QV	.	.	.	.
2.267	0.0052	0.03	QV	.	.	.	.
2.283	0.0052	0.03	QV	.	.	.	.
2.300	0.0053	0.03	QV	.	.	.	.
2.317	0.0053	0.03	QV	.	.	.	.
2.333	0.0053	0.03	QV	.	.	.	.
2.350	0.0054	0.03	QV	.	.	.	.
2.367	0.0054	0.03	QV	.	.	.	.
2.383	0.0055	0.03	QV	.	.	.	.
2.400	0.0055	0.03	QV	.	.	.	.
2.417	0.0055	0.03	QV	.	.	.	.
2.433	0.0056	0.03	QV	.	.	.	.
2.450	0.0056	0.03	QV	.	.	.	.
2.467	0.0057	0.03	QV	.	.	.	.
2.483	0.0057	0.03	QV	.	.	.	.
2.500	0.0058	0.03	QV	.	.	.	.
2.517	0.0058	0.03	QV	.	.	.	.
2.533	0.0058	0.03	QV	.	.	.	.
2.550	0.0059	0.03	QV	.	.	.	.
2.567	0.0059	0.03	QV	.	.	.	.
2.583	0.0060	0.03	QV	.	.	.	.
2.600	0.0060	0.03	QV	.	.	.	.
2.617	0.0060	0.03	QV	.	.	.	.
2.633	0.0061	0.03	QV	.	.	.	.
2.650	0.0061	0.03	QV	.	.	.	.
2.667	0.0062	0.03	QV	.	.	.	.
2.683	0.0062	0.03	QV	.	.	.	.
2.700	0.0063	0.03	QV	.	.	.	.
2.717	0.0063	0.03	QV	.	.	.	.
2.733	0.0063	0.03	QV	.	.	.	.
2.750	0.0064	0.03	QV	.	.	.	.
2.767	0.0064	0.03	QV	.	.	.	.
2.783	0.0065	0.03	QV	.	.	.	.
2.800	0.0065	0.03	QV	.	.	.	.
2.817	0.0066	0.03	QV	.	.	.	.
2.833	0.0066	0.03	QV	.	.	.	.
2.850	0.0066	0.03	QV	.	.	.	.
2.867	0.0067	0.03	QV	.	.	.	.
2.883	0.0067	0.03	QV	.	.	.	.
2.900	0.0068	0.03	QV	.	.	.	.
2.917	0.0068	0.03	QV	.	.	.	.

2.933	0.0069	0.03	QV	.	.	.	.
2.950	0.0069	0.03	QV	.	.	.	.
2.967	0.0069	0.03	QV	.	.	.	.
2.983	0.0070	0.03	QV	.	.	.	.
3.000	0.0070	0.03	QV	.	.	.	.
3.017	0.0071	0.03	QV	.	.	.	.
3.033	0.0071	0.03	QV	.	.	.	.
3.050	0.0072	0.03	QV	.	.	.	.
3.067	0.0072	0.03	QV	.	.	.	.
3.083	0.0072	0.03	QV	.	.	.	.
3.100	0.0073	0.03	QV	.	.	.	.
3.117	0.0073	0.03	QV	.	.	.	.
3.133	0.0074	0.03	QV	.	.	.	.
3.150	0.0074	0.03	QV	.	.	.	.
3.167	0.0075	0.03	QV	.	.	.	.
3.183	0.0075	0.03	QV	.	.	.	.
3.200	0.0075	0.03	QV	.	.	.	.
3.217	0.0076	0.03	QV	.	.	.	.
3.233	0.0076	0.03	QV	.	.	.	.
3.250	0.0077	0.03	QV	.	.	.	.
3.267	0.0077	0.03	QV	.	.	.	.
3.283	0.0078	0.03	QV	.	.	.	.
3.300	0.0078	0.03	QV	.	.	.	.
3.317	0.0078	0.03	QV	.	.	.	.
3.333	0.0079	0.03	QV	.	.	.	.
3.350	0.0079	0.03	QV	.	.	.	.
3.367	0.0080	0.03	QV	.	.	.	.
3.383	0.0080	0.03	QV	.	.	.	.
3.400	0.0081	0.03	QV	.	.	.	.
3.417	0.0081	0.03	QV	.	.	.	.
3.433	0.0081	0.03	QV	.	.	.	.
3.450	0.0082	0.03	QV	.	.	.	.
3.467	0.0082	0.03	QV	.	.	.	.
3.483	0.0083	0.03	QV	.	.	.	.
3.500	0.0083	0.03	QV	.	.	.	.
3.517	0.0084	0.03	QV	.	.	.	.
3.533	0.0084	0.03	QV	.	.	.	.
3.550	0.0085	0.03	QV	.	.	.	.
3.567	0.0085	0.03	Q V	.	.	.	.
3.583	0.0085	0.03	Q V	.	.	.	.
3.600	0.0086	0.03	Q V	.	.	.	.
3.617	0.0086	0.03	Q V	.	.	.	.
3.633	0.0087	0.03	Q V	.	.	.	.
3.650	0.0087	0.03	Q V	.	.	.	.
3.667	0.0088	0.03	Q V	.	.	.	.
3.683	0.0088	0.03	Q V	.	.	.	.
3.700	0.0089	0.03	Q V	.	.	.	.
3.717	0.0089	0.03	Q V	.	.	.	.
3.733	0.0089	0.03	Q V	.	.	.	.
3.750	0.0090	0.03	Q V	.	.	.	.

3.767	0.0090	0.03	Q V	.	.	.	.
3.783	0.0091	0.03	Q V	.	.	.	.
3.800	0.0091	0.03	Q V	.	.	.	.
3.817	0.0092	0.03	Q V	.	.	.	.
3.833	0.0092	0.03	Q V	.	.	.	.
3.850	0.0093	0.03	Q V	.	.	.	.
3.867	0.0093	0.03	Q V	.	.	.	.
3.883	0.0093	0.03	Q V	.	.	.	.
3.900	0.0094	0.03	Q V	.	.	.	.
3.917	0.0094	0.03	Q V	.	.	.	.
3.933	0.0095	0.03	Q V	.	.	.	.
3.950	0.0095	0.03	Q V	.	.	.	.
3.967	0.0096	0.03	Q V	.	.	.	.
3.983	0.0096	0.03	Q V	.	.	.	.
4.000	0.0097	0.03	Q V	.	.	.	.
4.017	0.0097	0.03	Q V	.	.	.	.
4.033	0.0097	0.03	Q V	.	.	.	.
4.050	0.0098	0.03	Q V	.	.	.	.
4.067	0.0098	0.03	Q V	.	.	.	.
4.083	0.0099	0.03	Q V	.	.	.	.
4.100	0.0099	0.03	Q V	.	.	.	.
4.117	0.0100	0.03	Q V	.	.	.	.
4.133	0.0100	0.03	Q V	.	.	.	.
4.150	0.0101	0.03	Q V	.	.	.	.
4.167	0.0101	0.03	Q V	.	.	.	.
4.183	0.0102	0.03	Q V	.	.	.	.
4.200	0.0102	0.03	Q V	.	.	.	.
4.217	0.0102	0.03	Q V	.	.	.	.
4.233	0.0103	0.03	Q V	.	.	.	.
4.250	0.0103	0.03	Q V	.	.	.	.
4.267	0.0104	0.03	Q V	.	.	.	.
4.283	0.0104	0.03	Q V	.	.	.	.
4.300	0.0105	0.03	Q V	.	.	.	.
4.317	0.0105	0.03	Q V	.	.	.	.
4.333	0.0106	0.03	Q V	.	.	.	.
4.350	0.0106	0.03	Q V	.	.	.	.
4.367	0.0107	0.03	Q V	.	.	.	.
4.383	0.0107	0.03	Q V	.	.	.	.
4.400	0.0108	0.03	Q V	.	.	.	.
4.417	0.0108	0.03	Q V	.	.	.	.
4.433	0.0108	0.03	Q V	.	.	.	.
4.450	0.0109	0.03	Q V	.	.	.	.
4.467	0.0109	0.03	Q V	.	.	.	.
4.483	0.0110	0.03	Q V	.	.	.	.
4.500	0.0110	0.03	Q V	.	.	.	.
4.517	0.0111	0.03	Q V	.	.	.	.
4.533	0.0111	0.03	Q V	.	.	.	.
4.550	0.0112	0.03	Q V	.	.	.	.
4.567	0.0112	0.03	Q V	.	.	.	.
4.583	0.0113	0.03	Q V	.	.	.	.

4.600	0.0113	0.03	Q	V	.	.	.	.
4.617	0.0114	0.03	Q	V	.	.	.	.
4.633	0.0114	0.03	Q	V	.	.	.	.
4.650	0.0114	0.03	Q	V	.	.	.	.
4.667	0.0115	0.03	Q	V	.	.	.	.
4.683	0.0115	0.03	Q	V	.	.	.	.
4.700	0.0116	0.03	Q	V	.	.	.	.
4.717	0.0116	0.03	Q	V	.	.	.	.
4.733	0.0117	0.03	Q	V	.	.	.	.
4.750	0.0117	0.03	Q	V	.	.	.	.
4.767	0.0118	0.03	Q	V	.	.	.	.
4.783	0.0118	0.03	Q	V	.	.	.	.
4.800	0.0119	0.03	Q	V	.	.	.	.
4.817	0.0119	0.03	Q	V	.	.	.	.
4.833	0.0120	0.03	Q	V	.	.	.	.
4.850	0.0120	0.03	Q	V	.	.	.	.
4.867	0.0121	0.03	Q	V	.	.	.	.
4.883	0.0121	0.03	Q	V	.	.	.	.
4.900	0.0121	0.03	Q	V	.	.	.	.
4.917	0.0122	0.03	Q	V	.	.	.	.
4.933	0.0122	0.03	Q	V	.	.	.	.
4.950	0.0123	0.03	Q	V	.	.	.	.
4.967	0.0123	0.03	Q	V	.	.	.	.
4.983	0.0124	0.03	Q	V	.	.	.	.
5.000	0.0124	0.03	Q	V	.	.	.	.
5.017	0.0125	0.03	Q	V	.	.	.	.
5.033	0.0125	0.03	Q	V	.	.	.	.
5.050	0.0126	0.03	Q	V	.	.	.	.
5.067	0.0126	0.03	Q	V	.	.	.	.
5.083	0.0127	0.03	Q	V	.	.	.	.
5.100	0.0127	0.03	Q	V	.	.	.	.
5.117	0.0128	0.03	Q	V	.	.	.	.
5.133	0.0128	0.03	Q	V	.	.	.	.
5.150	0.0129	0.03	Q	V	.	.	.	.
5.167	0.0129	0.03	Q	V	.	.	.	.
5.183	0.0130	0.03	Q	V	.	.	.	.
5.200	0.0130	0.03	Q	V	.	.	.	.
5.217	0.0131	0.03	Q	V	.	.	.	.
5.233	0.0131	0.03	Q	V	.	.	.	.
5.250	0.0132	0.03	Q	V	.	.	.	.
5.267	0.0132	0.03	Q	V	.	.	.	.
5.283	0.0132	0.04	Q	V	.	.	.	.
5.300	0.0133	0.04	Q	V	.	.	.	.
5.317	0.0133	0.04	Q	V	.	.	.	.
5.333	0.0134	0.04	Q	V	.	.	.	.
5.350	0.0134	0.04	Q	V	.	.	.	.
5.367	0.0135	0.04	Q	V	.	.	.	.
5.383	0.0135	0.04	Q	V	.	.	.	.
5.400	0.0136	0.04	Q	V	.	.	.	.
5.417	0.0136	0.04	Q	V	.	.	.	.

5.433	0.0137	0.04	Q	V	.	.	.	.
5.450	0.0137	0.04	Q	V	.	.	.	.
5.467	0.0138	0.04	Q	V	.	.	.	.
5.483	0.0138	0.04	Q	V	.	.	.	.
5.500	0.0139	0.04	Q	V	.	.	.	.
5.517	0.0139	0.04	Q	V	.	.	.	.
5.533	0.0140	0.04	Q	V	.	.	.	.
5.550	0.0140	0.04	Q	V	.	.	.	.
5.567	0.0141	0.04	Q	V	.	.	.	.
5.583	0.0141	0.04	Q	V	.	.	.	.
5.600	0.0142	0.04	Q	V	.	.	.	.
5.617	0.0142	0.04	Q	V	.	.	.	.
5.633	0.0143	0.04	Q	V	.	.	.	.
5.650	0.0143	0.04	Q	V	.	.	.	.
5.667	0.0144	0.04	Q	V	.	.	.	.
5.683	0.0144	0.04	Q	V	.	.	.	.
5.700	0.0145	0.04	Q	V	.	.	.	.
5.717	0.0145	0.04	Q	V	.	.	.	.
5.733	0.0146	0.04	Q	V	.	.	.	.
5.750	0.0146	0.04	Q	V	.	.	.	.
5.767	0.0147	0.04	Q	V	.	.	.	.
5.783	0.0147	0.04	Q	V	.	.	.	.
5.800	0.0148	0.04	Q	V	.	.	.	.
5.817	0.0148	0.04	Q	V	.	.	.	.
5.833	0.0149	0.04	Q	V	.	.	.	.
5.850	0.0149	0.04	Q	V	.	.	.	.
5.867	0.0150	0.04	Q	V	.	.	.	.
5.883	0.0150	0.04	Q	V	.	.	.	.
5.900	0.0151	0.04	Q	V	.	.	.	.
5.917	0.0151	0.04	Q	V	.	.	.	.
5.933	0.0152	0.04	Q	V	.	.	.	.
5.950	0.0152	0.04	Q	V	.	.	.	.
5.967	0.0153	0.04	Q	V	.	.	.	.
5.983	0.0153	0.04	Q	V	.	.	.	.
6.000	0.0154	0.04	Q	V	.	.	.	.
6.017	0.0154	0.04	Q	V	.	.	.	.
6.033	0.0155	0.04	Q	V	.	.	.	.
6.050	0.0155	0.04	Q	V	.	.	.	.
6.067	0.0156	0.04	Q	V	.	.	.	.
6.083	0.0156	0.04	Q	V	.	.	.	.
6.100	0.0157	0.04	Q	V	.	.	.	.
6.117	0.0157	0.04	Q	V	.	.	.	.
6.133	0.0158	0.04	Q	V	.	.	.	.
6.150	0.0158	0.04	Q	V	.	.	.	.
6.167	0.0159	0.04	Q	V	.	.	.	.
6.183	0.0159	0.04	Q	V	.	.	.	.
6.200	0.0160	0.04	Q	V	.	.	.	.
6.217	0.0160	0.04	Q	V	.	.	.	.
6.233	0.0161	0.04	Q	V	.	.	.	.
6.250	0.0161	0.04	Q	V	.	.	.	.

6.267	0.0162	0.04	Q	V	.	.	.	.
6.283	0.0162	0.04	Q	V	.	.	.	.
6.300	0.0163	0.04	Q	V	.	.	.	.
6.317	0.0163	0.04	Q	V	.	.	.	.
6.333	0.0164	0.04	Q	V	.	.	.	.
6.350	0.0164	0.04	Q	V	.	.	.	.
6.367	0.0165	0.04	Q	V	.	.	.	.
6.383	0.0165	0.04	Q	V	.	.	.	.
6.400	0.0166	0.04	Q	V	.	.	.	.
6.417	0.0166	0.04	Q	V	.	.	.	.
6.433	0.0167	0.04	Q	V	.	.	.	.
6.450	0.0167	0.04	Q	V	.	.	.	.
6.467	0.0168	0.04	Q	V	.	.	.	.
6.483	0.0169	0.04	Q	V	.	.	.	.
6.500	0.0169	0.04	Q	V	.	.	.	.
6.517	0.0170	0.04	Q	V	.	.	.	.
6.533	0.0170	0.04	Q	V	.	.	.	.
6.550	0.0171	0.04	Q	V	.	.	.	.
6.567	0.0171	0.04	Q	V	.	.	.	.
6.583	0.0172	0.04	Q	V	.	.	.	.
6.600	0.0172	0.04	Q	V	.	.	.	.
6.617	0.0173	0.04	Q	V	.	.	.	.
6.633	0.0173	0.04	Q	V	.	.	.	.
6.650	0.0174	0.04	Q	V	.	.	.	.
6.667	0.0174	0.04	Q	V	.	.	.	.
6.683	0.0175	0.04	Q	V	.	.	.	.
6.700	0.0175	0.04	Q	V	.	.	.	.
6.717	0.0176	0.04	Q	V	.	.	.	.
6.733	0.0176	0.04	Q	V	.	.	.	.
6.750	0.0177	0.04	Q	V	.	.	.	.
6.767	0.0177	0.04	Q	V	.	.	.	.
6.783	0.0178	0.04	Q	V	.	.	.	.
6.800	0.0178	0.04	Q	V	.	.	.	.
6.817	0.0179	0.04	Q	V	.	.	.	.
6.833	0.0180	0.04	Q	V	.	.	.	.
6.850	0.0180	0.04	Q	V	.	.	.	.
6.867	0.0181	0.04	Q	V	.	.	.	.
6.883	0.0181	0.04	Q	V	.	.	.	.
6.900	0.0182	0.04	Q	V	.	.	.	.
6.917	0.0182	0.04	Q	V	.	.	.	.
6.933	0.0183	0.04	Q	V	.	.	.	.
6.950	0.0183	0.04	Q	V	.	.	.	.
6.967	0.0184	0.04	Q	V	.	.	.	.
6.983	0.0184	0.04	Q	V	.	.	.	.
7.000	0.0185	0.04	Q	V	.	.	.	.
7.017	0.0185	0.04	Q	V	.	.	.	.
7.033	0.0186	0.04	Q	V	.	.	.	.
7.050	0.0187	0.04	Q	V	.	.	.	.
7.067	0.0187	0.04	Q	V	.	.	.	.
7.083	0.0188	0.04	Q	V	.	.	.	.

7.100	0.0188	0.04	Q	V	.	.	.	.
7.117	0.0189	0.04	Q	V	.	.	.	.
7.133	0.0189	0.04	Q	V	.	.	.	.
7.150	0.0190	0.04	Q	V	.	.	.	.
7.167	0.0190	0.04	Q	V	.	.	.	.
7.183	0.0191	0.04	Q	V	.	.	.	.
7.200	0.0191	0.04	Q	V	.	.	.	.
7.217	0.0192	0.04	Q	V	.	.	.	.
7.233	0.0192	0.04	Q	V	.	.	.	.
7.250	0.0193	0.04	Q	V	.	.	.	.
7.267	0.0194	0.04	Q	V	.	.	.	.
7.283	0.0194	0.04	Q	V	.	.	.	.
7.300	0.0195	0.04	Q	V	.	.	.	.
7.317	0.0195	0.04	Q	V	.	.	.	.
7.333	0.0196	0.04	Q	V	.	.	.	.
7.350	0.0196	0.04	Q	V	.	.	.	.
7.367	0.0197	0.04	Q	V	.	.	.	.
7.383	0.0197	0.04	Q	V	.	.	.	.
7.400	0.0198	0.04	Q	V	.	.	.	.
7.417	0.0199	0.04	Q	V	.	.	.	.
7.433	0.0199	0.04	Q	V	.	.	.	.
7.450	0.0200	0.04	Q	V	.	.	.	.
7.467	0.0200	0.04	Q	V	.	.	.	.
7.483	0.0201	0.04	Q	V	.	.	.	.
7.500	0.0201	0.04	Q	V	.	.	.	.
7.517	0.0202	0.04	Q	V	.	.	.	.
7.533	0.0202	0.04	Q	V	.	.	.	.
7.550	0.0203	0.04	Q	V	.	.	.	.
7.567	0.0204	0.04	Q	V	.	.	.	.
7.583	0.0204	0.04	Q	V	.	.	.	.
7.600	0.0205	0.04	Q	V	.	.	.	.
7.617	0.0205	0.04	Q	V	.	.	.	.
7.633	0.0206	0.04	Q	V	.	.	.	.
7.650	0.0206	0.04	Q	V	.	.	.	.
7.667	0.0207	0.04	Q	V	.	.	.	.
7.683	0.0207	0.04	Q	V	.	.	.	.
7.700	0.0208	0.04	Q	V	.	.	.	.
7.717	0.0209	0.04	Q	V	.	.	.	.
7.733	0.0209	0.04	Q	V	.	.	.	.
7.750	0.0210	0.04	Q	V	.	.	.	.
7.767	0.0210	0.04	Q	V	.	.	.	.
7.783	0.0211	0.04	Q	V	.	.	.	.
7.800	0.0211	0.04	Q	V	.	.	.	.
7.817	0.0212	0.04	Q	V	.	.	.	.
7.833	0.0213	0.04	Q	V	.	.	.	.
7.850	0.0213	0.04	Q	V	.	.	.	.
7.867	0.0214	0.04	Q	V	.	.	.	.
7.883	0.0214	0.04	Q	V	.	.	.	.
7.900	0.0215	0.04	Q	V	.	.	.	.
7.917	0.0215	0.04	Q	V	.	.	.	.

7.933	0.0216	0.04	Q	V	.	.	.	.
7.950	0.0217	0.04	Q	V	.	.	.	.
7.967	0.0217	0.04	Q	V	.	.	.	.
7.983	0.0218	0.04	Q	V	.	.	.	.
8.000	0.0218	0.04	Q	V	.	.	.	.
8.017	0.0219	0.04	Q	V	.	.	.	.
8.033	0.0219	0.04	Q	V	.	.	.	.
8.050	0.0220	0.04	Q	V	.	.	.	.
8.067	0.0221	0.04	Q	V	.	.	.	.
8.083	0.0221	0.04	Q	V	.	.	.	.
8.100	0.0222	0.04	Q	V	.	.	.	.
8.117	0.0222	0.04	Q	V	.	.	.	.
8.133	0.0223	0.04	Q	V	.	.	.	.
8.150	0.0224	0.04	Q	V	.	.	.	.
8.167	0.0224	0.04	Q	V	.	.	.	.
8.183	0.0225	0.04	Q	V	.	.	.	.
8.200	0.0225	0.04	Q	V	.	.	.	.
8.217	0.0226	0.04	Q	V	.	.	.	.
8.233	0.0226	0.04	Q	V	.	.	.	.
8.250	0.0227	0.04	Q	V	.	.	.	.
8.267	0.0228	0.04	Q	V	.	.	.	.
8.283	0.0228	0.04	Q	V	.	.	.	.
8.300	0.0229	0.04	Q	V	.	.	.	.
8.317	0.0229	0.04	Q	V	.	.	.	.
8.333	0.0230	0.04	Q	V	.	.	.	.
8.350	0.0231	0.04	Q	V	.	.	.	.
8.367	0.0231	0.04	Q	V	.	.	.	.
8.383	0.0232	0.04	Q	V	.	.	.	.
8.400	0.0232	0.04	Q	V	.	.	.	.
8.417	0.0233	0.04	Q	V	.	.	.	.
8.433	0.0234	0.04	Q	V	.	.	.	.
8.450	0.0234	0.04	Q	V	.	.	.	.
8.467	0.0235	0.04	Q	V	.	.	.	.
8.483	0.0235	0.04	Q	V	.	.	.	.
8.500	0.0236	0.04	Q	V	.	.	.	.
8.517	0.0237	0.04	Q	V	.	.	.	.
8.533	0.0237	0.04	Q	V	.	.	.	.
8.550	0.0238	0.04	Q	V	.	.	.	.
8.567	0.0238	0.04	Q	V	.	.	.	.
8.583	0.0239	0.04	Q	V	.	.	.	.
8.600	0.0240	0.04	Q	V	.	.	.	.
8.617	0.0240	0.04	Q	V	.	.	.	.
8.633	0.0241	0.04	Q	V	.	.	.	.
8.650	0.0241	0.04	Q	V	.	.	.	.
8.667	0.0242	0.04	Q	V	.	.	.	.
8.683	0.0243	0.04	Q	V	.	.	.	.
8.700	0.0243	0.04	Q	V	.	.	.	.
8.717	0.0244	0.04	Q	V	.	.	.	.
8.733	0.0245	0.04	Q	V	.	.	.	.
8.750	0.0245	0.04	Q	V	.	.	.	.

8.767	0.0246	0.04	Q	V	.	.	.	.
8.783	0.0246	0.04	Q	V	.	.	.	.
8.800	0.0247	0.04	Q	V	.	.	.	.
8.817	0.0248	0.04	Q	V	.	.	.	.
8.833	0.0248	0.04	Q	V	.	.	.	.
8.850	0.0249	0.04	Q	V	.	.	.	.
8.867	0.0249	0.04	Q	V	.	.	.	.
8.883	0.0250	0.05	Q	V	.	.	.	.
8.900	0.0251	0.05	Q	V	.	.	.	.
8.917	0.0251	0.05	Q	V	.	.	.	.
8.933	0.0252	0.05	Q	V	.	.	.	.
8.950	0.0253	0.05	Q	V	.	.	.	.
8.967	0.0253	0.05	Q	V	.	.	.	.
8.983	0.0254	0.05	Q	V	.	.	.	.
9.000	0.0254	0.05	Q	V	.	.	.	.
9.017	0.0255	0.05	Q	V	.	.	.	.
9.033	0.0256	0.05	Q	V	.	.	.	.
9.050	0.0256	0.05	Q	V	.	.	.	.
9.067	0.0257	0.05	Q	V	.	.	.	.
9.083	0.0258	0.05	Q	V	.	.	.	.
9.100	0.0258	0.05	Q	V	.	.	.	.
9.117	0.0259	0.05	Q	V	.	.	.	.
9.133	0.0259	0.05	Q	V	.	.	.	.
9.150	0.0260	0.05	Q	V	.	.	.	.
9.167	0.0261	0.05	Q	V	.	.	.	.
9.183	0.0261	0.05	Q	V	.	.	.	.
9.200	0.0262	0.05	Q	V	.	.	.	.
9.217	0.0263	0.05	Q	V	.	.	.	.
9.233	0.0263	0.05	Q	V	.	.	.	.
9.250	0.0264	0.05	Q	V	.	.	.	.
9.267	0.0265	0.05	Q	V	.	.	.	.
9.283	0.0265	0.05	Q	V	.	.	.	.
9.300	0.0266	0.05	Q	V	.	.	.	.
9.317	0.0267	0.05	Q	V	.	.	.	.
9.333	0.0267	0.05	Q	V	.	.	.	.
9.350	0.0268	0.05	Q	V	.	.	.	.
9.367	0.0268	0.05	Q	V	.	.	.	.
9.383	0.0269	0.05	Q	V	.	.	.	.
9.400	0.0270	0.05	Q	V	.	.	.	.
9.417	0.0270	0.05	Q	V	.	.	.	.
9.433	0.0271	0.05	Q	V	.	.	.	.
9.450	0.0272	0.05	Q	V	.	.	.	.
9.467	0.0272	0.05	Q	V	.	.	.	.
9.483	0.0273	0.05	Q	V	.	.	.	.
9.500	0.0274	0.05	Q	V	.	.	.	.
9.517	0.0274	0.05	Q	V	.	.	.	.
9.533	0.0275	0.05	Q	V	.	.	.	.
9.550	0.0276	0.05	Q	V	.	.	.	.
9.567	0.0276	0.05	Q	V	.	.	.	.
9.583	0.0277	0.05	Q	V	.	.	.	.

9.600	0.0278	0.05	Q	V	.	.	.	.
9.617	0.0278	0.05	Q	V	.	.	.	.
9.633	0.0279	0.05	Q	V	.	.	.	.
9.650	0.0280	0.05	Q	V	.	.	.	.
9.667	0.0280	0.05	Q	V	.	.	.	.
9.683	0.0281	0.05	Q	V	.	.	.	.
9.700	0.0282	0.05	Q	V	.	.	.	.
9.717	0.0282	0.05	Q	V	.	.	.	.
9.733	0.0283	0.05	Q	V	.	.	.	.
9.750	0.0284	0.05	Q	V	.	.	.	.
9.767	0.0284	0.05	Q	V	.	.	.	.
9.783	0.0285	0.05	Q	V	.	.	.	.
9.800	0.0286	0.05	Q	V	.	.	.	.
9.817	0.0286	0.05	Q	V	.	.	.	.
9.833	0.0287	0.05	Q	V	.	.	.	.
9.850	0.0288	0.05	Q	V	.	.	.	.
9.867	0.0288	0.05	Q	V	.	.	.	.
9.883	0.0289	0.05	Q	V	.	.	.	.
9.900	0.0290	0.05	Q	V	.	.	.	.
9.917	0.0290	0.05	Q	V	.	.	.	.
9.933	0.0291	0.05	Q	V	.	.	.	.
9.950	0.0292	0.05	Q	V	.	.	.	.
9.967	0.0292	0.05	Q	V	.	.	.	.
9.983	0.0293	0.05	Q	V	.	.	.	.
10.000	0.0294	0.05	Q	V	.	.	.	.
10.017	0.0295	0.05	Q	V	.	.	.	.
10.033	0.0295	0.05	Q	V	.	.	.	.
10.050	0.0296	0.05	Q	V	.	.	.	.
10.067	0.0297	0.05	Q	V	.	.	.	.
10.083	0.0297	0.05	Q	V	.	.	.	.
10.100	0.0298	0.05	Q	V	.	.	.	.
10.117	0.0299	0.05	Q	V	.	.	.	.
10.133	0.0299	0.05	Q	V	.	.	.	.
10.150	0.0300	0.05	Q	V	.	.	.	.
10.167	0.0301	0.05	Q	V	.	.	.	.
10.183	0.0302	0.05	Q	V	.	.	.	.
10.200	0.0302	0.05	Q	V	.	.	.	.
10.217	0.0303	0.05	Q	V	.	.	.	.
10.233	0.0304	0.05	Q	V	.	.	.	.
10.250	0.0304	0.05	Q	V	.	.	.	.
10.267	0.0305	0.05	Q	V	.	.	.	.
10.283	0.0306	0.05	Q	V	.	.	.	.
10.300	0.0306	0.05	Q	V	.	.	.	.
10.317	0.0307	0.05	Q	V	.	.	.	.
10.333	0.0308	0.05	Q	V	.	.	.	.
10.350	0.0309	0.05	Q	V	.	.	.	.
10.367	0.0309	0.05	Q	V	.	.	.	.
10.383	0.0310	0.05	Q	V	.	.	.	.
10.400	0.0311	0.05	Q	V	.	.	.	.
10.417	0.0311	0.05	Q	V	.	.	.	.

10.433	0.0312	0.05	Q	V	.	.	.	.
10.450	0.0313	0.05	Q	V	.	.	.	.
10.467	0.0314	0.05	Q	V	.	.	.	.
10.483	0.0314	0.05	Q	V	.	.	.	.
10.500	0.0315	0.05	Q	V	.	.	.	.
10.517	0.0316	0.05	Q	V	.	.	.	.
10.533	0.0317	0.05	Q	V	.	.	.	.
10.550	0.0317	0.05	Q	V	.	.	.	.
10.567	0.0318	0.05	Q	V	.	.	.	.
10.583	0.0319	0.05	Q	V	.	.	.	.
10.600	0.0319	0.05	Q	V	.	.	.	.
10.617	0.0320	0.05	Q	V	.	.	.	.
10.633	0.0321	0.05	Q	V	.	.	.	.
10.650	0.0322	0.05	Q	V	.	.	.	.
10.667	0.0322	0.05	Q	V	.	.	.	.
10.683	0.0323	0.05	Q	V	.	.	.	.
10.700	0.0324	0.05	Q	V	.	.	.	.
10.717	0.0325	0.05	Q	V	.	.	.	.
10.733	0.0325	0.05	Q	V	.	.	.	.
10.750	0.0326	0.05	Q	V	.	.	.	.
10.767	0.0327	0.05	Q	V	.	.	.	.
10.783	0.0328	0.05	Q	V	.	.	.	.
10.800	0.0328	0.05	Q	V	.	.	.	.
10.817	0.0329	0.05	Q	V	.	.	.	.
10.833	0.0330	0.05	Q	V	.	.	.	.
10.850	0.0331	0.05	Q	V	.	.	.	.
10.867	0.0331	0.06	Q	V	.	.	.	.
10.883	0.0332	0.06	Q	V	.	.	.	.
10.900	0.0333	0.06	Q	V	.	.	.	.
10.917	0.0334	0.06	Q	V	.	.	.	.
10.933	0.0334	0.06	Q	V	.	.	.	.
10.950	0.0335	0.06	Q	V	.	.	.	.
10.967	0.0336	0.06	Q	V	.	.	.	.
10.983	0.0337	0.06	Q	V	.	.	.	.
11.000	0.0338	0.06	Q	V	.	.	.	.
11.017	0.0338	0.06	Q	V	.	.	.	.
11.033	0.0339	0.06	Q	V	.	.	.	.
11.050	0.0340	0.06	Q	V	.	.	.	.
11.067	0.0341	0.06	Q	V	.	.	.	.
11.083	0.0341	0.06	Q	V	.	.	.	.
11.100	0.0342	0.06	Q	V	.	.	.	.
11.117	0.0343	0.06	Q	V	.	.	.	.
11.133	0.0344	0.06	Q	V	.	.	.	.
11.150	0.0345	0.06	Q	V	.	.	.	.
11.167	0.0345	0.06	Q	V	.	.	.	.
11.183	0.0346	0.06	Q	V	.	.	.	.
11.200	0.0347	0.06	Q	V	.	.	.	.
11.217	0.0348	0.06	Q	V	.	.	.	.
11.233	0.0348	0.06	Q	V	.	.	.	.
11.250	0.0349	0.06	Q	V	.	.	.	.

11.267	0.0350	0.06	Q	V	.	.	.
11.283	0.0351	0.06	Q	V	.	.	.
11.300	0.0352	0.06	Q	V	.	.	.
11.317	0.0352	0.06	Q	V	.	.	.
11.333	0.0353	0.06	Q	V	.	.	.
11.350	0.0354	0.06	Q	V	.	.	.
11.367	0.0355	0.06	Q	V	.	.	.
11.383	0.0356	0.06	Q	V	.	.	.
11.400	0.0356	0.06	Q	V	.	.	.
11.417	0.0357	0.06	Q	V	.	.	.
11.433	0.0358	0.06	Q	V	.	.	.
11.450	0.0359	0.06	Q	V	.	.	.
11.467	0.0360	0.06	Q	V	.	.	.
11.483	0.0361	0.06	Q	V	.	.	.
11.500	0.0361	0.06	Q	V	.	.	.
11.517	0.0362	0.06	Q	V	.	.	.
11.533	0.0363	0.06	Q	V	.	.	.
11.550	0.0364	0.06	Q	V	.	.	.
11.567	0.0365	0.06	.Q	V	.	.	.
11.583	0.0366	0.06	.Q	V	.	.	.
11.600	0.0366	0.06	.Q	V	.	.	.
11.617	0.0367	0.06	.Q	V	.	.	.
11.633	0.0368	0.06	.Q	V	.	.	.
11.650	0.0369	0.06	.Q	V	.	.	.
11.667	0.0370	0.06	.Q	V	.	.	.
11.683	0.0371	0.06	.Q	V	.	.	.
11.700	0.0371	0.06	.Q	V	.	.	.
11.717	0.0372	0.06	.Q	V	.	.	.
11.733	0.0373	0.06	.Q	V	.	.	.
11.750	0.0374	0.06	.Q	V	.	.	.
11.767	0.0375	0.06	.Q	V	.	.	.
11.783	0.0376	0.06	.Q	V	.	.	.
11.800	0.0376	0.06	.Q	V	.	.	.
11.817	0.0377	0.06	.Q	V	.	.	.
11.833	0.0378	0.06	.Q	V	.	.	.
11.850	0.0379	0.06	.Q	V	.	.	.
11.867	0.0380	0.06	.Q	V	.	.	.
11.883	0.0381	0.06	.Q	V	.	.	.
11.900	0.0382	0.06	.Q	V	.	.	.
11.917	0.0383	0.06	.Q	V.	.	.	.
11.933	0.0383	0.06	.Q	V.	.	.	.
11.950	0.0384	0.06	.Q	V.	.	.	.
11.967	0.0385	0.06	.Q	V.	.	.	.
11.983	0.0386	0.06	.Q	V.	.	.	.
12.000	0.0387	0.06	.Q	V.	.	.	.
12.017	0.0388	0.06	.Q	V.	.	.	.
12.033	0.0389	0.06	.Q	V.	.	.	.
12.050	0.0390	0.06	.Q	V.	.	.	.
12.067	0.0390	0.07	.Q	V.	.	.	.
12.083	0.0391	0.07	.Q	V.	.	.	.

12.100	0.0392	0.07	.Q	V.	.	.	.
12.117	0.0393	0.07	.Q	V.	.	.	.
12.133	0.0394	0.07	.Q	V.	.	.	.
12.150	0.0395	0.07	.Q	V.	.	.	.
12.167	0.0396	0.07	.Q	V.	.	.	.
12.183	0.0397	0.08	.Q	V.	.	.	.
12.200	0.0398	0.08	.Q	V.	.	.	.
12.217	0.0400	0.08	.Q	V.	.	.	.
12.233	0.0401	0.08	.Q	V.	.	.	.
12.250	0.0402	0.08	.Q	V.	.	.	.
12.267	0.0403	0.08	.Q	V.	.	.	.
12.283	0.0404	0.08	.Q	V.	.	.	.
12.300	0.0405	0.08	.Q	V.	.	.	.
12.317	0.0406	0.08	.Q	V.	.	.	.
12.333	0.0407	0.08	.Q	V.	.	.	.
12.350	0.0408	0.08	.Q	V.	.	.	.
12.367	0.0410	0.08	.Q	V.	.	.	.
12.383	0.0411	0.08	.Q	V.	.	.	.
12.400	0.0412	0.08	.Q	V.	.	.	.
12.417	0.0413	0.08	.Q	V.	.	.	.
12.433	0.0414	0.08	.Q	V.	.	.	.
12.450	0.0415	0.08	.Q	V.	.	.	.
12.467	0.0416	0.08	.Q	V.	.	.	.
12.483	0.0418	0.08	.Q	V.	.	.	.
12.500	0.0419	0.08	.Q	V.	.	.	.
12.517	0.0420	0.08	.Q	V.	.	.	.
12.533	0.0421	0.08	.Q	V.	.	.	.
12.550	0.0422	0.08	.Q	V.	.	.	.
12.567	0.0423	0.08	.Q	V.	.	.	.
12.583	0.0425	0.08	.Q	V.	.	.	.
12.600	0.0426	0.09	.Q	V	.	.	.
12.617	0.0427	0.09	.Q	V	.	.	.
12.633	0.0428	0.09	.Q	V	.	.	.
12.650	0.0429	0.09	.Q	V	.	.	.
12.667	0.0430	0.09	.Q	V	.	.	.
12.683	0.0432	0.09	.Q	V	.	.	.
12.700	0.0433	0.09	.Q	V	.	.	.
12.717	0.0434	0.09	.Q	V	.	.	.
12.733	0.0435	0.09	.Q	V	.	.	.
12.750	0.0436	0.09	.Q	V	.	.	.
12.767	0.0438	0.09	.Q	V	.	.	.
12.783	0.0439	0.09	.Q	V	.	.	.
12.800	0.0440	0.09	.Q	V	.	.	.
12.817	0.0441	0.09	.Q	V	.	.	.
12.833	0.0442	0.09	.Q	V	.	.	.
12.850	0.0444	0.09	.Q	V	.	.	.
12.867	0.0445	0.09	.Q	V	.	.	.
12.883	0.0446	0.09	.Q	V	.	.	.
12.900	0.0447	0.09	.Q	V	.	.	.
12.917	0.0448	0.09	.Q	V	.	.	.

12.933	0.0450	0.09	.Q	V	.	.	.
12.950	0.0451	0.09	.Q	V	.	.	.
12.967	0.0452	0.09	.Q	V	.	.	.
12.983	0.0453	0.09	.Q	V	.	.	.
13.000	0.0455	0.09	.Q	V	.	.	.
13.017	0.0456	0.09	.Q	V	.	.	.
13.033	0.0457	0.09	.Q	V	.	.	.
13.050	0.0458	0.09	.Q	V	.	.	.
13.067	0.0460	0.09	.Q	V	.	.	.
13.083	0.0461	0.09	.Q	V	.	.	.
13.100	0.0462	0.09	.Q	V	.	.	.
13.117	0.0464	0.09	.Q	V	.	.	.
13.133	0.0465	0.09	.Q	V	.	.	.
13.150	0.0466	0.09	.Q	V	.	.	.
13.167	0.0467	0.09	.Q	.V	.	.	.
13.183	0.0469	0.09	.Q	.V	.	.	.
13.200	0.0470	0.09	.Q	.V	.	.	.
13.217	0.0471	0.09	.Q	.V	.	.	.
13.233	0.0473	0.09	.Q	.V	.	.	.
13.250	0.0474	0.09	.Q	.V	.	.	.
13.267	0.0475	0.10	.Q	.V	.	.	.
13.283	0.0476	0.10	.Q	.V	.	.	.
13.300	0.0478	0.10	.Q	.V	.	.	.
13.317	0.0479	0.10	.Q	.V	.	.	.
13.333	0.0480	0.10	.Q	.V	.	.	.
13.350	0.0482	0.10	.Q	.V	.	.	.
13.367	0.0483	0.10	.Q	.V	.	.	.
13.383	0.0484	0.10	.Q	.V	.	.	.
13.400	0.0486	0.10	.Q	.V	.	.	.
13.417	0.0487	0.10	.Q	.V	.	.	.
13.433	0.0489	0.10	.Q	.V	.	.	.
13.450	0.0490	0.10	.Q	.V	.	.	.
13.467	0.0491	0.10	.Q	.V	.	.	.
13.483	0.0493	0.10	.Q	.V	.	.	.
13.500	0.0494	0.10	.Q	.V	.	.	.
13.517	0.0495	0.10	.Q	.V	.	.	.
13.533	0.0497	0.10	.Q	.V	.	.	.
13.550	0.0498	0.10	.Q	.V	.	.	.
13.567	0.0499	0.10	.Q	.V	.	.	.
13.583	0.0501	0.10	.Q	.V	.	.	.
13.600	0.0502	0.10	.Q	.V	.	.	.
13.617	0.0504	0.10	.Q	.V	.	.	.
13.633	0.0505	0.10	.Q	.V	.	.	.
13.650	0.0507	0.10	.Q	.V	.	.	.
13.667	0.0508	0.10	.Q	.V	.	.	.
13.683	0.0509	0.10	.Q	.V	.	.	.
13.700	0.0511	0.10	.Q	. V	.	.	.
13.717	0.0512	0.10	.Q	. V	.	.	.
13.733	0.0514	0.10	.Q	. V	.	.	.
13.750	0.0515	0.11	.Q	. V	.	.	.

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13.767      0.0517      0.11  .Q        . V       .         .         .
13.783      0.0518      0.11  .Q        . V       .         .         .
13.800      0.0519      0.11  .Q        . V       .         .         .
13.817      0.0521      0.11  .Q        . V       .         .         .
13.833      0.0522      0.11  .Q        . V       .         .         .
13.850      0.0524      0.11  .Q        . V       .         .         .
13.867      0.0525      0.11  .Q        . V       .         .         .
13.883      0.0527      0.11  .Q        . V       .         .         .
13.900      0.0528      0.11  .Q        . V       .         .         .
13.917      0.0530      0.11  .Q        . V       .         .         .
13.933      0.0531      0.11  .Q        . V       .         .         .
13.950      0.0533      0.11  .Q        . V       .         .         .
13.967      0.0534      0.11  .Q        . V       .         .         .
13.983      0.0536      0.11  .Q        . V       .         .         .
14.000      0.0537      0.11  .Q        . V       .         .         .
14.017      0.0539      0.11  .Q        . V       .         .         .
14.033      0.0541      0.11  .Q        . V       .         .         .
14.050      0.0542      0.11  .Q        . V       .         .         .
14.067      0.0544      0.11  .Q        . V       .         .         .
14.083      0.0545      0.12  .Q        . V       .         .         .
14.100      0.0547      0.12  .Q        . V       .         .         .
14.117      0.0549      0.12  .Q        . V       .         .         .
14.133      0.0550      0.12  .Q        . V       .         .         .
14.150      0.0552      0.12  .Q        . V       .         .         .
14.167      0.0553      0.12  .Q        .  V      .         .         .
14.183      0.0555      0.12  .Q        .  V      .         .         .
14.200      0.0557      0.12  .Q        .  V      .         .         .
14.217      0.0558      0.12  .Q        .  V      .         .         .
14.233      0.0560      0.12  . Q       .  V      .         .         .
14.250      0.0562      0.12  . Q       .  V      .         .         .
14.267      0.0563      0.12  . Q       .  V      .         .         .
14.283      0.0565      0.12  . Q       .  V      .         .         .
14.300      0.0567      0.12  . Q       .  V      .         .         .
14.317      0.0569      0.13  . Q       .  V      .         .         .
14.333      0.0570      0.13  . Q       .  V      .         .         .
14.350      0.0572      0.13  . Q       .  V      .         .         .
14.367      0.0574      0.13  . Q       .  V      .         .         .
14.383      0.0576      0.13  . Q       .  V      .         .         .
14.400      0.0577      0.13  . Q       .  V      .         .         .
14.417      0.0579      0.13  . Q       .  V      .         .         .
14.433      0.0581      0.13  . Q       .  V      .         .         .
14.450      0.0583      0.13  . Q       .  V      .         .         .
14.467      0.0585      0.13  . Q       .  V      .         .         .
14.483      0.0586      0.13  . Q       .  V      .         .         .
14.500      0.0588      0.13  . Q       .  V      .         .         .
14.517      0.0590      0.13  . Q       .  V      .         .         .
14.533      0.0592      0.13  . Q       .  V      .         .         .
14.550      0.0594      0.13  . Q       .  V      .         .         .
14.567      0.0596      0.13  . Q       .   V     .         .         .
14.583      0.0597      0.14  . Q       .   V     .         .         .
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14.600      0.0599      0.14  . Q       .   V     .         .         .
14.617      0.0601      0.14  . Q       .   V     .         .         .
14.633      0.0603      0.14  . Q       .   V     .         .         .
14.650      0.0605      0.14  . Q       .   V     .         .         .
14.667      0.0607      0.14  . Q       .   V     .         .         .
14.683      0.0609      0.14  . Q       .   V     .         .         .
14.700      0.0611      0.14  . Q       .   V     .         .         .
14.717      0.0613      0.14  . Q       .   V     .         .         .
14.733      0.0615      0.15  . Q       .   V     .         .         .
14.750      0.0617      0.15  . Q       .   V     .         .         .
14.767      0.0619      0.15  . Q       .   V     .         .         .
14.783      0.0621      0.15  . Q       .   V     .         .         .
14.800      0.0623      0.15  . Q       .   V     .         .         .
14.817      0.0625      0.15  . Q       .   V     .         .         .
14.833      0.0627      0.15  . Q       .   V     .         .         .
14.850      0.0629      0.15  . Q       .   V     .         .         .
14.867      0.0631      0.15  . Q       .   V     .         .         .
14.883      0.0633      0.15  . Q       .   V     .         .         .
14.900      0.0636      0.15  . Q       .   V     .         .         .
14.917      0.0638      0.15  . Q       .    V    .         .         .
14.933      0.0640      0.15  . Q       .    V    .         .         .
14.950      0.0642      0.16  . Q       .    V    .         .         .
14.967      0.0644      0.16  . Q       .    V    .         .         .
14.983      0.0646      0.16  . Q       .    V    .         .         .
15.000      0.0649      0.16  . Q       .    V    .         .         .
15.017      0.0651      0.16  . Q       .    V    .         .         .
15.033      0.0653      0.16  . Q       .    V    .         .         .
15.050      0.0655      0.17  . Q       .    V    .         .         .
15.067      0.0658      0.17  . Q       .    V    .         .         .
15.083      0.0660      0.17  . Q       .    V    .         .         .
15.100      0.0662      0.17  . Q       .    V    .         .         .
15.117      0.0665      0.17  . Q       .    V    .         .         .
15.133      0.0667      0.17  . Q       .    V    .         .         .
15.150      0.0670      0.17  . Q       .    V    .         .         .
15.167      0.0672      0.18  . Q       .    V    .         .         .
15.183      0.0674      0.18  . Q       .    V    .         .         .
15.200      0.0677      0.18  . Q       .    V    .         .         .
15.217      0.0679      0.18  . Q       .    V    .         .         .
15.233      0.0682      0.18  . Q       .     V   .         .         .
15.250      0.0684      0.18  .  Q      .     V   .         .         .
15.267      0.0687      0.18  .  Q      .     V   .         .         .
15.283      0.0689      0.18  .  Q      .     V   .         .         .
15.300      0.0692      0.19  .  Q      .     V   .         .         .
15.317      0.0694      0.19  .  Q      .     V   .         .         .
15.333      0.0697      0.19  .  Q      .     V   .         .         .
15.350      0.0700      0.19  .  Q      .     V   .         .         .
15.367      0.0702      0.19  .  Q      .     V   .         .         .
15.383      0.0705      0.20  .  Q      .     V   .         .         .
15.400      0.0708      0.20  .  Q      .     V   .         .         .
15.417      0.0710      0.20  .  Q      .     V   .         .         .
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15.433      0.0713      0.20  .  Q      .     V   .         .         .
15.450      0.0716      0.20  .  Q      .     V   .         .         .
15.467      0.0719      0.21  .  Q      .     V   .         .         .
15.483      0.0722      0.21  .  Q      .     V   .         .         .
15.500      0.0725      0.21  .  Q      .      V  .         .         .
15.517      0.0728      0.21  .  Q      .      V  .         .         .
15.533      0.0730      0.21  .  Q      .      V  .         .         .
15.550      0.0733      0.22  .  Q      .      V  .         .         .
15.567      0.0736      0.22  .  Q      .      V  .         .         .
15.583      0.0739      0.22  .  Q      .      V  .         .         .
15.600      0.0743      0.22  .  Q      .      V  .         .         .
15.617      0.0746      0.22  .  Q      .      V  .         .         .
15.633      0.0749      0.23  .  Q      .      V  .         .         .
15.650      0.0752      0.23  .  Q      .      V  .         .         .
15.667      0.0755      0.25  .   Q     .      V  .         .         .
15.683      0.0759      0.27  .   Q     .      V  .         .         .
15.700      0.0763      0.28  .   Q     .      V  .         .         .
15.717      0.0767      0.30  .    Q    .       V .         .         .
15.733      0.0771      0.32  .    Q    .       V .         .         .
15.750      0.0776      0.34  .    Q    .       V .         .         .
15.767      0.0781      0.36  .    Q    .       V .         .         .
15.783      0.0786      0.38  .     Q   .       V .         .         .
15.800      0.0792      0.39  .     Q   .       V .         .         .
15.817      0.0797      0.41  .     Q   .       V .         .         .
15.833      0.0803      0.43  .      Q  .       V .         .         .
15.850      0.0810      0.45  .      Q  .        V.         .         .
15.867      0.0816      0.48  .      Q  .        V.         .         .
15.883      0.0823      0.50  .       Q .        V.         .         .
15.900      0.0830      0.52  .       Q .        V.         .         .
15.917      0.0838      0.54  .       Q .        V.         .         .
15.933      0.0845      0.56  .        Q.        V.         .         .
15.950      0.0853      0.58  .        Q.         V         .         .
15.967      0.0862      0.61  .         Q         V         .         .
15.983      0.0870      0.63  .         Q         V         .         .
16.000      0.0879      0.65  .         Q         V         .         .
16.017      0.0890      0.74  .         . Q       V         .         .
16.033      0.0902      0.90  .         .    Q    .V        .         .
16.050      0.0917      1.07  .         .      Q  .V        .         .
16.067      0.0934      1.23  .         .         QV        .         .
16.083      0.0953      1.39  .         .         . VQ      .         .
16.100      0.0974      1.55  .         .         . V  Q    .         .
16.117      0.0998      1.71  .         .         .  V    Q .         .
16.133      0.1023      1.87  .         .         .   V     .Q        .
16.150      0.1051      2.04  .         .         .   V     .  Q      .
16.167      0.1082      2.20  .         .         .    V    .     Q   .
16.183      0.1115      2.41  .         .         .     V   .         Q
16.200      0.1146      2.27  .         .         .     V   .      Q  .
16.217      0.1175      2.07  .         .         .      V  .   Q     .
16.233      0.1200      1.88  .         .         .       V .Q        .
16.250      0.1224      1.68  .         .         .      QV .         .
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16.267      0.1244      1.49  .         .         .   Q    V.         .
16.283      0.1262      1.29  .         .         .Q       V.         .
16.300      0.1277      1.10  .         .       Q .         V         .
16.317      0.1289      0.90  .         .   Q     .         V         .
16.333      0.1299      0.71  .         .Q        .         V         .
16.350      0.1306      0.51  .       Q .         .         V         .
16.367      0.1311      0.33  .    Q    .         .         V         .
16.383      0.1315      0.29  .   Q     .         .         V         .
16.400      0.1319      0.28  .   Q     .         .         .V        .
16.417      0.1322      0.27  .   Q     .         .         .V        .
16.433      0.1326      0.26  .   Q     .         .         .V        .
16.450      0.1329      0.26  .   Q     .         .         .V        .
16.467      0.1333      0.25  .   Q     .         .         .V        .
16.483      0.1336      0.24  .  Q      .         .         .V        .
16.500      0.1339      0.23  .  Q      .         .         .V        .
16.517      0.1342      0.22  .  Q      .         .         .V        .
16.533      0.1345      0.21  .  Q      .         .         .V        .
16.550      0.1348      0.20  .  Q      .         .         .V        .
16.567      0.1351      0.20  .  Q      .         .         .V        .
16.583      0.1353      0.19  .  Q      .         .         .V        .
16.600      0.1356      0.19  .  Q      .         .         .V        .
16.617      0.1359      0.19  .  Q      .         .         .V        .
16.633      0.1361      0.18  .  Q      .         .         . V       .
16.650      0.1364      0.18  . Q       .         .         . V       .
16.667      0.1366      0.18  . Q       .         .         . V       .
16.683      0.1368      0.17  . Q       .         .         . V       .
16.700      0.1371      0.17  . Q       .         .         . V       .
16.717      0.1373      0.16  . Q       .         .         . V       .
16.733      0.1375      0.16  . Q       .         .         . V       .
16.750      0.1377      0.16  . Q       .         .         . V       .
16.767      0.1380      0.16  . Q       .         .         . V       .
16.783      0.1382      0.16  . Q       .         .         . V       .
16.800      0.1384      0.15  . Q       .         .         . V       .
16.817      0.1386      0.15  . Q       .         .         . V       .
16.833      0.1388      0.15  . Q       .         .         . V       .
16.850      0.1390      0.15  . Q       .         .         . V       .
16.867      0.1392      0.15  . Q       .         .         . V       .
16.883      0.1394      0.14  . Q       .         .         . V       .
16.900      0.1396      0.14  . Q       .         .         . V       .
16.917      0.1398      0.14  . Q       .         .         . V       .
16.933      0.1400      0.14  . Q       .         .         . V       .
16.950      0.1402      0.14  . Q       .         .         .  V      .
16.967      0.1403      0.14  . Q       .         .         .  V      .
16.983      0.1405      0.13  . Q       .         .         .  V      .
17.000      0.1407      0.13  . Q       .         .         .  V      .
17.017      0.1409      0.13  . Q       .         .         .  V      .
17.033      0.1411      0.13  . Q       .         .         .  V      .
17.050      0.1412      0.13  . Q       .         .         .  V      .
17.067      0.1414      0.13  . Q       .         .         .  V      .
17.083      0.1416      0.13  . Q       .         .         .  V      .
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17.100	0.1418	0.12	. Q	.	.	.	V	.
17.117	0.1419	0.12	. Q	.	.	.	V	.
17.133	0.1421	0.12	. Q	.	.	.	V	.
17.150	0.1423	0.12	.Q	.	.	.	V	.
17.167	0.1424	0.12	.Q	.	.	.	V	.
17.183	0.1426	0.12	.Q	.	.	.	V	.
17.200	0.1428	0.12	.Q	.	.	.	V	.
17.217	0.1429	0.11	.Q	.	.	.	V	.
17.233	0.1431	0.11	.Q	.	.	.	V	.
17.250	0.1432	0.11	.Q	.	.	.	V	.
17.267	0.1434	0.11	.Q	.	.	.	V	.
17.283	0.1435	0.11	.Q	.	.	.	V	.
17.300	0.1437	0.11	.Q	.	.	.	V	.
17.317	0.1438	0.11	.Q	.	.	.	V	.
17.333	0.1440	0.11	.Q	.	.	.	V	.
17.350	0.1441	0.11	.Q	.	.	.	V	.
17.367	0.1443	0.11	.Q	.	.	.	V	.
17.383	0.1444	0.10	.Q	.	.	.	V	.
17.400	0.1445	0.10	.Q	.	.	.	V	.
17.417	0.1447	0.10	.Q	.	.	.	V	.
17.433	0.1448	0.10	.Q	.	.	.	V	.
17.450	0.1450	0.10	.Q	.	.	.	V	.
17.467	0.1451	0.10	.Q	.	.	.	V	.
17.483	0.1452	0.10	.Q	.	.	.	V	.
17.500	0.1454	0.10	.Q	.	.	.	V	.
17.517	0.1455	0.10	.Q	.	.	.	V	.
17.533	0.1456	0.10	.Q	.	.	.	V	.
17.550	0.1458	0.10	.Q	.	.	.	V	.
17.567	0.1459	0.10	.Q	.	.	.	V	.
17.583	0.1460	0.10	.Q	.	.	.	V	.
17.600	0.1462	0.10	.Q	.	.	.	V	.
17.617	0.1463	0.09	.Q	.	.	.	V	.
17.633	0.1464	0.09	.Q	.	.	.	V	.
17.650	0.1466	0.09	.Q	.	.	.	V	.
17.667	0.1467	0.09	.Q	.	.	.	V	.
17.683	0.1468	0.09	.Q	.	.	.	V	.
17.700	0.1469	0.09	.Q	.	.	.	V	.
17.717	0.1471	0.09	.Q	.	.	.	V	.
17.733	0.1472	0.09	.Q	.	.	.	V	.
17.750	0.1473	0.09	.Q	.	.	.	V	.
17.767	0.1474	0.09	.Q	.	.	.	V	.
17.783	0.1476	0.09	.Q	.	.	.	V	.
17.800	0.1477	0.09	.Q	.	.	.	V	.
17.817	0.1478	0.09	.Q	.	.	.	V	.
17.833	0.1479	0.09	.Q	.	.	.	V	.
17.850	0.1480	0.09	.Q	.	.	.	V	.
17.867	0.1482	0.09	.Q	.	.	.	V	.
17.883	0.1483	0.09	.Q	.	.	.	V	.
17.900	0.1484	0.09	.Q	.	.	.	V	.
17.917	0.1485	0.09	.Q	.	.	.	V	.

17.933	0.1486	0.09	.Q	.	.	.	V	.
17.950	0.1488	0.08	.Q	.	.	.	V	.
17.967	0.1489	0.08	.Q	.	.	.	V	.
17.983	0.1490	0.08	.Q	.	.	.	V	.
18.000	0.1491	0.08	.Q	.	.	.	V	.
18.017	0.1492	0.08	.Q	.	.	.	V	.
18.033	0.1493	0.08	.Q	.	.	.	V	.
18.050	0.1494	0.08	.Q	.	.	.	V	.
18.067	0.1495	0.08	.Q	.	.	.	V	.
18.083	0.1496	0.08	.Q	.	.	.	V	.
18.100	0.1497	0.08	.Q	.	.	.	V	.
18.117	0.1499	0.07	.Q	.	.	.	V	.
18.133	0.1500	0.07	.Q	.	.	.	V	.
18.150	0.1500	0.07	.Q	.	.	.	V	.
18.167	0.1501	0.07	.Q	.	.	.	V	.
18.183	0.1502	0.07	.Q	.	.	.	V	.
18.200	0.1503	0.07	.Q	.	.	.	V	.
18.217	0.1504	0.07	.Q	.	.	.	V	.
18.233	0.1505	0.07	.Q	.	.	.	V	.
18.250	0.1506	0.07	.Q	.	.	.	V	.
18.267	0.1507	0.07	.Q	.	.	.	V	.
18.283	0.1508	0.06	.Q	.	.	.	V	.
18.300	0.1509	0.06	.Q	.	.	.	V	.
18.317	0.1510	0.06	.Q	.	.	.	V	.
18.333	0.1511	0.06	.Q	.	.	.	V	.
18.350	0.1511	0.06	.Q	.	.	.	V	.
18.367	0.1512	0.06	.Q	.	.	.	V	.
18.383	0.1513	0.06	.Q	.	.	.	V	.
18.400	0.1514	0.06	.Q	.	.	.	V	.
18.417	0.1515	0.06	.Q	.	.	.	V	.
18.433	0.1516	0.06	.Q	.	.	.	V	.
18.450	0.1516	0.06	.Q	.	.	.	V	.
18.467	0.1517	0.06	Q	.	.	.	V	.
18.483	0.1518	0.06	Q	.	.	.	V	.
18.500	0.1519	0.06	Q	.	.	.	V	.
18.517	0.1520	0.06	Q	.	.	.	V	.
18.533	0.1521	0.06	Q	.	.	.	V	.
18.550	0.1521	0.06	Q	.	.	.	V	.
18.567	0.1522	0.06	Q	.	.	.	V	.
18.583	0.1523	0.06	Q	.	.	.	V	.
18.600	0.1524	0.06	Q	.	.	.	V	.
18.617	0.1525	0.06	Q	.	.	.	V	.
18.633	0.1525	0.06	Q	.	.	.	V	.
18.650	0.1526	0.06	Q	.	.	.	V	.
18.667	0.1527	0.06	Q	.	.	.	V	.
18.683	0.1528	0.06	Q	.	.	.	V	.
18.700	0.1528	0.06	Q	.	.	.	V	.
18.717	0.1529	0.06	Q	.	.	.	V	.
18.733	0.1530	0.06	Q	.	.	.	V	.
18.750	0.1531	0.06	Q	.	.	.	V	.

18.767	0.1532	0.06	Q	.	.	.	V	.
18.783	0.1532	0.06	Q	.	.	.	V	.
18.800	0.1533	0.06	Q	.	.	.	V	.
18.817	0.1534	0.05	Q	.	.	.	V	.
18.833	0.1535	0.05	Q	.	.	.	V	.
18.850	0.1535	0.05	Q	.	.	.	V	.
18.867	0.1536	0.05	Q	.	.	.	V	.
18.883	0.1537	0.05	Q	.	.	.	V	.
18.900	0.1538	0.05	Q	.	.	.	V	.
18.917	0.1538	0.05	Q	.	.	.	V	.
18.933	0.1539	0.05	Q	.	.	.	V	.
18.950	0.1540	0.05	Q	.	.	.	V	.
18.967	0.1540	0.05	Q	.	.	.	V	.
18.983	0.1541	0.05	Q	.	.	.	V	.
19.000	0.1542	0.05	Q	.	.	.	V	.
19.017	0.1543	0.05	Q	.	.	.	V	.
19.033	0.1543	0.05	Q	.	.	.	V	.
19.050	0.1544	0.05	Q	.	.	.	V	.
19.067	0.1545	0.05	Q	.	.	.	V	.
19.083	0.1546	0.05	Q	.	.	.	V	.
19.100	0.1546	0.05	Q	.	.	.	V	.
19.117	0.1547	0.05	Q	.	.	.	V	.
19.133	0.1548	0.05	Q	.	.	.	V	.
19.150	0.1548	0.05	Q	.	.	.	V	.
19.167	0.1549	0.05	Q	.	.	.	V	.
19.183	0.1550	0.05	Q	.	.	.	V	.
19.200	0.1550	0.05	Q	.	.	.	V	.
19.217	0.1551	0.05	Q	.	.	.	V	.
19.233	0.1552	0.05	Q	.	.	.	V	.
19.250	0.1552	0.05	Q	.	.	.	V	.
19.267	0.1553	0.05	Q	.	.	.	V	.
19.283	0.1554	0.05	Q	.	.	.	V	.
19.300	0.1555	0.05	Q	.	.	.	V	.
19.317	0.1555	0.05	Q	.	.	.	V	.
19.333	0.1556	0.05	Q	.	.	.	V	.
19.350	0.1557	0.05	Q	.	.	.	V	.
19.367	0.1557	0.05	Q	.	.	.	V	.
19.383	0.1558	0.05	Q	.	.	.	V	.
19.400	0.1559	0.05	Q	.	.	.	V	.
19.417	0.1559	0.05	Q	.	.	.	V	.
19.433	0.1560	0.05	Q	.	.	.	V	.
19.450	0.1561	0.05	Q	.	.	.	V	.
19.467	0.1561	0.05	Q	.	.	.	V	.
19.483	0.1562	0.05	Q	.	.	.	V	.
19.500	0.1563	0.05	Q	.	.	.	V	.
19.517	0.1563	0.05	Q	.	.	.	V	.
19.533	0.1564	0.05	Q	.	.	.	V	.
19.550	0.1564	0.05	Q	.	.	.	V	.
19.567	0.1565	0.05	Q	.	.	.	V	.
19.583	0.1566	0.05	Q	.	.	.	V	.

19.600	0.1566	0.05	Q	.	.	.	V	.
19.617	0.1567	0.05	Q	.	.	.	V	.
19.633	0.1568	0.05	Q	.	.	.	V	.
19.650	0.1568	0.05	Q	.	.	.	V	.
19.667	0.1569	0.05	Q	.	.	.	V	.
19.683	0.1570	0.05	Q	.	.	.	V	.
19.700	0.1570	0.05	Q	.	.	.	V	.
19.717	0.1571	0.05	Q	.	.	.	V	.
19.733	0.1571	0.05	Q	.	.	.	V	.
19.750	0.1572	0.05	Q	.	.	.	V	.
19.767	0.1573	0.05	Q	.	.	.	V	.
19.783	0.1573	0.05	Q	.	.	.	V	.
19.800	0.1574	0.05	Q	.	.	.	V	.
19.817	0.1575	0.04	Q	.	.	.	V	.
19.833	0.1575	0.04	Q	.	.	.	V	.
19.850	0.1576	0.04	Q	.	.	.	V	.
19.867	0.1576	0.04	Q	.	.	.	V	.
19.883	0.1577	0.04	Q	.	.	.	V	.
19.900	0.1578	0.04	Q	.	.	.	V	.
19.917	0.1578	0.04	Q	.	.	.	V	.
19.933	0.1579	0.04	Q	.	.	.	V	.
19.950	0.1579	0.04	Q	.	.	.	V	.
19.967	0.1580	0.04	Q	.	.	.	V	.
19.983	0.1581	0.04	Q	.	.	.	V	.
20.000	0.1581	0.04	Q	.	.	.	V	.
20.017	0.1582	0.04	Q	.	.	.	V	.
20.033	0.1582	0.04	Q	.	.	.	V	.
20.050	0.1583	0.04	Q	.	.	.	V	.
20.067	0.1584	0.04	Q	.	.	.	V	.
20.083	0.1584	0.04	Q	.	.	.	V	.
20.100	0.1585	0.04	Q	.	.	.	V	.
20.117	0.1585	0.04	Q	.	.	.	V	.
20.133	0.1586	0.04	Q	.	.	.	V	.
20.150	0.1587	0.04	Q	.	.	.	V	.
20.167	0.1587	0.04	Q	.	.	.	V	.
20.183	0.1588	0.04	Q	.	.	.	V	.
20.200	0.1588	0.04	Q	.	.	.	V	.
20.217	0.1589	0.04	Q	.	.	.	V	.
20.233	0.1590	0.04	Q	.	.	.	V	.
20.250	0.1590	0.04	Q	.	.	.	V	.
20.267	0.1591	0.04	Q	.	.	.	V	.
20.283	0.1591	0.04	Q	.	.	.	V	.
20.300	0.1592	0.04	Q	.	.	.	V	.
20.317	0.1592	0.04	Q	.	.	.	V	.
20.333	0.1593	0.04	Q	.	.	.	V	.
20.350	0.1594	0.04	Q	.	.	.	V	.
20.367	0.1594	0.04	Q	.	.	.	V	.
20.383	0.1595	0.04	Q	.	.	.	V	.
20.400	0.1595	0.04	Q	.	.	.	V	.
20.417	0.1596	0.04	Q	.	.	.	V	.

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20.433      0.1596      0.04  Q        .         .         .      V  .
20.450      0.1597      0.04  Q        .         .         .      V  .
20.467      0.1597      0.04  Q        .         .         .      V  .
20.483      0.1598      0.04  Q        .         .         .      V  .
20.500      0.1599      0.04  Q        .         .         .      V  .
20.517      0.1599      0.04  Q        .         .         .      V  .
20.533      0.1600      0.04  Q        .         .         .      V  .
20.550      0.1600      0.04  Q        .         .         .      V  .
20.567      0.1601      0.04  Q        .         .         .      V  .
20.583      0.1601      0.04  Q        .         .         .      V  .
20.600      0.1602      0.04  Q        .         .         .      V  .
20.617      0.1602      0.04  Q        .         .         .      V  .
20.633      0.1603      0.04  Q        .         .         .      V  .
20.650      0.1604      0.04  Q        .         .         .      V  .
20.667      0.1604      0.04  Q        .         .         .      V  .
20.683      0.1605      0.04  Q        .         .         .      V  .
20.700      0.1605      0.04  Q        .         .         .      V  .
20.717      0.1606      0.04  Q        .         .         .      V  .
20.733      0.1606      0.04  Q        .         .         .      V  .
20.750      0.1607      0.04  Q        .         .         .      V  .
20.767      0.1607      0.04  Q        .         .         .      V  .
20.783      0.1608      0.04  Q        .         .         .      V  .
20.800      0.1608      0.04  Q        .         .         .      V  .
20.817      0.1609      0.04  Q        .         .         .      V  .
20.833      0.1609      0.04  Q        .         .         .      V  .
20.850      0.1610      0.04  Q        .         .         .      V  .
20.867      0.1610      0.04  Q        .         .         .      V  .
20.883      0.1611      0.04  Q        .         .         .      V  .
20.900      0.1612      0.04  Q        .         .         .      V  .
20.917      0.1612      0.04  Q        .         .         .      V  .
20.933      0.1613      0.04  Q        .         .         .      V  .
20.950      0.1613      0.04  Q        .         .         .      V  .
20.967      0.1614      0.04  Q        .         .         .       V .
20.983      0.1614      0.04  Q        .         .         .       V .
21.000      0.1615      0.04  Q        .         .         .       V .
21.017      0.1615      0.04  Q        .         .         .       V .
21.033      0.1616      0.04  Q        .         .         .       V .
21.050      0.1616      0.04  Q        .         .         .       V .
21.067      0.1617      0.04  Q        .         .         .       V .
21.083      0.1617      0.04  Q        .         .         .       V .
21.100      0.1618      0.04  Q        .         .         .       V .
21.117      0.1618      0.04  Q        .         .         .       V .
21.133      0.1619      0.04  Q        .         .         .       V .
21.150      0.1619      0.04  Q        .         .         .       V .
21.167      0.1620      0.04  Q        .         .         .       V .
21.183      0.1620      0.04  Q        .         .         .       V .
21.200      0.1621      0.04  Q        .         .         .       V .
21.217      0.1621      0.04  Q        .         .         .       V .
21.233      0.1622      0.04  Q        .         .         .       V .
21.250      0.1622      0.04  Q        .         .         .       V .
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21.267	0.1623	0.04	Q	.	.	.	V .
21.283	0.1623	0.04	Q	.	.	.	V .
21.300	0.1624	0.04	Q	.	.	.	V .
21.317	0.1624	0.04	Q	.	.	.	V .
21.333	0.1625	0.04	Q	.	.	.	V .
21.350	0.1625	0.04	Q	.	.	.	V .
21.367	0.1626	0.04	Q	.	.	.	V .
21.383	0.1626	0.04	Q	.	.	.	V .
21.400	0.1627	0.04	Q	.	.	.	V .
21.417	0.1627	0.04	Q	.	.	.	V .
21.433	0.1628	0.04	Q	.	.	.	V .
21.450	0.1628	0.04	Q	.	.	.	V .
21.467	0.1629	0.04	Q	.	.	.	V .
21.483	0.1629	0.04	Q	.	.	.	V .
21.500	0.1630	0.04	Q	.	.	.	V .
21.517	0.1630	0.04	Q	.	.	.	V .
21.533	0.1631	0.04	Q	.	.	.	V .
21.550	0.1631	0.04	Q	.	.	.	V .
21.567	0.1632	0.04	Q	.	.	.	V .
21.583	0.1632	0.04	Q	.	.	.	V .
21.600	0.1633	0.04	Q	.	.	.	V .
21.617	0.1633	0.03	Q	.	.	.	V .
21.633	0.1634	0.03	Q	.	.	.	V .
21.650	0.1634	0.03	Q	.	.	.	V .
21.667	0.1635	0.03	Q	.	.	.	V .
21.683	0.1635	0.03	Q	.	.	.	V .
21.700	0.1636	0.03	Q	.	.	.	V .
21.717	0.1636	0.03	Q	.	.	.	V .
21.733	0.1636	0.03	Q	.	.	.	V .
21.750	0.1637	0.03	Q	.	.	.	V .
21.767	0.1637	0.03	Q	.	.	.	V .
21.783	0.1638	0.03	Q	.	.	.	V .
21.800	0.1638	0.03	Q	.	.	.	V .
21.817	0.1639	0.03	Q	.	.	.	V .
21.833	0.1639	0.03	Q	.	.	.	V .
21.850	0.1640	0.03	Q	.	.	.	V .
21.867	0.1640	0.03	Q	.	.	.	V .
21.883	0.1641	0.03	Q	.	.	.	V .
21.900	0.1641	0.03	Q	.	.	.	V .
21.917	0.1642	0.03	Q	.	.	.	V .
21.933	0.1642	0.03	Q	.	.	.	V .
21.950	0.1643	0.03	Q	.	.	.	V .
21.967	0.1643	0.03	Q	.	.	.	V .
21.983	0.1643	0.03	Q	.	.	.	V .
22.000	0.1644	0.03	Q	.	.	.	V .
22.017	0.1644	0.03	Q	.	.	.	V .
22.033	0.1645	0.03	Q	.	.	.	V .
22.050	0.1645	0.03	Q	.	.	.	V .
22.067	0.1646	0.03	Q	.	.	.	V .
22.083	0.1646	0.03	Q	.	.	.	V .

22.100	0.1647	0.03	Q	.	.	.	V .
22.117	0.1647	0.03	Q	.	.	.	V .
22.133	0.1648	0.03	Q	.	.	.	V .
22.150	0.1648	0.03	Q	.	.	.	V .
22.167	0.1649	0.03	Q	.	.	.	V .
22.183	0.1649	0.03	Q	.	.	.	V .
22.200	0.1649	0.03	Q	.	.	.	V .
22.217	0.1650	0.03	Q	.	.	.	V .
22.233	0.1650	0.03	Q	.	.	.	V .
22.250	0.1651	0.03	Q	.	.	.	V .
22.267	0.1651	0.03	Q	.	.	.	V .
22.283	0.1652	0.03	Q	.	.	.	V .
22.300	0.1652	0.03	Q	.	.	.	V .
22.317	0.1653	0.03	Q	.	.	.	V .
22.333	0.1653	0.03	Q	.	.	.	V .
22.350	0.1653	0.03	Q	.	.	.	V .
22.367	0.1654	0.03	Q	.	.	.	V .
22.383	0.1654	0.03	Q	.	.	.	V .
22.400	0.1655	0.03	Q	.	.	.	V .
22.417	0.1655	0.03	Q	.	.	.	V .
22.433	0.1656	0.03	Q	.	.	.	V .
22.450	0.1656	0.03	Q	.	.	.	V.
22.467	0.1657	0.03	Q	.	.	.	V.
22.483	0.1657	0.03	Q	.	.	.	V.
22.500	0.1657	0.03	Q	.	.	.	V.
22.517	0.1658	0.03	Q	.	.	.	V.
22.533	0.1658	0.03	Q	.	.	.	V.
22.550	0.1659	0.03	Q	.	.	.	V.
22.567	0.1659	0.03	Q	.	.	.	V.
22.583	0.1660	0.03	Q	.	.	.	V.
22.600	0.1660	0.03	Q	.	.	.	V.
22.617	0.1660	0.03	Q	.	.	.	V.
22.633	0.1661	0.03	Q	.	.	.	V.
22.650	0.1661	0.03	Q	.	.	.	V.
22.667	0.1662	0.03	Q	.	.	.	V.
22.683	0.1662	0.03	Q	.	.	.	V.
22.700	0.1663	0.03	Q	.	.	.	V.
22.717	0.1663	0.03	Q	.	.	.	V.
22.733	0.1663	0.03	Q	.	.	.	V.
22.750	0.1664	0.03	Q	.	.	.	V.
22.767	0.1664	0.03	Q	.	.	.	V.
22.783	0.1665	0.03	Q	.	.	.	V.
22.800	0.1665	0.03	Q	.	.	.	V.
22.817	0.1666	0.03	Q	.	.	.	V.
22.833	0.1666	0.03	Q	.	.	.	V.
22.850	0.1666	0.03	Q	.	.	.	V.
22.867	0.1667	0.03	Q	.	.	.	V.
22.883	0.1667	0.03	Q	.	.	.	V.
22.900	0.1668	0.03	Q	.	.	.	V.
22.917	0.1668	0.03	Q	.	.	.	V.

22.933	0.1669	0.03	Q	.	.	.	V.
22.950	0.1669	0.03	Q	.	.	.	V.
22.967	0.1669	0.03	Q	.	.	.	V.
22.983	0.1670	0.03	Q	.	.	.	V.
23.000	0.1670	0.03	Q	.	.	.	V.
23.017	0.1671	0.03	Q	.	.	.	V.
23.033	0.1671	0.03	Q	.	.	.	V.
23.050	0.1672	0.03	Q	.	.	.	V.
23.067	0.1672	0.03	Q	.	.	.	V.
23.083	0.1672	0.03	Q	.	.	.	V.
23.100	0.1673	0.03	Q	.	.	.	V.
23.117	0.1673	0.03	Q	.	.	.	V.
23.133	0.1674	0.03	Q	.	.	.	V.
23.150	0.1674	0.03	Q	.	.	.	V.
23.167	0.1674	0.03	Q	.	.	.	V.
23.183	0.1675	0.03	Q	.	.	.	V.
23.200	0.1675	0.03	Q	.	.	.	V.
23.217	0.1676	0.03	Q	.	.	.	V.
23.233	0.1676	0.03	Q	.	.	.	V.
23.250	0.1676	0.03	Q	.	.	.	V.
23.267	0.1677	0.03	Q	.	.	.	V.
23.283	0.1677	0.03	Q	.	.	.	V.
23.300	0.1678	0.03	Q	.	.	.	V.
23.317	0.1678	0.03	Q	.	.	.	V.
23.333	0.1678	0.03	Q	.	.	.	V.
23.350	0.1679	0.03	Q	.	.	.	V.
23.367	0.1679	0.03	Q	.	.	.	V.
23.383	0.1680	0.03	Q	.	.	.	V.
23.400	0.1680	0.03	Q	.	.	.	V.
23.417	0.1681	0.03	Q	.	.	.	V.
23.433	0.1681	0.03	Q	.	.	.	V.
23.450	0.1681	0.03	Q	.	.	.	V.
23.467	0.1682	0.03	Q	.	.	.	V.
23.483	0.1682	0.03	Q	.	.	.	V.
23.500	0.1683	0.03	Q	.	.	.	V.
23.517	0.1683	0.03	Q	.	.	.	V.
23.533	0.1683	0.03	Q	.	.	.	V.
23.550	0.1684	0.03	Q	.	.	.	V.
23.567	0.1684	0.03	Q	.	.	.	V.
23.583	0.1685	0.03	Q	.	.	.	V.
23.600	0.1685	0.03	Q	.	.	.	V.
23.617	0.1685	0.03	Q	.	.	.	V.
23.633	0.1686	0.03	Q	.	.	.	V.
23.650	0.1686	0.03	Q	.	.	.	V.
23.667	0.1686	0.03	Q	.	.	.	V.
23.683	0.1687	0.03	Q	.	.	.	V.
23.700	0.1687	0.03	Q	.	.	.	V.
23.717	0.1688	0.03	Q	.	.	.	V.
23.733	0.1688	0.03	Q	.	.	.	V.
23.750	0.1688	0.03	Q	.	.	.	V.

23.767	0.1689	0.03	Q	.	.	.	V.
23.783	0.1689	0.03	Q	.	.	.	V.
23.800	0.1690	0.03	Q	.	.	.	V.
23.817	0.1690	0.03	Q	.	.	.	V.
23.833	0.1690	0.03	Q	.	.	.	V.
23.850	0.1691	0.03	Q	.	.	.	V.
23.867	0.1691	0.03	Q	.	.	.	V.
23.883	0.1692	0.03	Q	.	.	.	V.
23.900	0.1692	0.03	Q	.	.	.	V.
23.917	0.1692	0.03	Q	.	.	.	V.
23.933	0.1693	0.03	Q	.	.	.	V.
23.950	0.1693	0.03	Q	.	.	.	V.
23.967	0.1693	0.03	Q	.	.	.	V.
23.983	0.1694	0.03	Q	.	.	.	V.
24.000	0.1694	0.03	Q	.	.	.	V.
24.017	0.1695	0.03	Q	.	.	.	V.
24.033	0.1695	0.03	Q	.	.	.	V.
24.050	0.1695	0.03	Q	.	.	.	V.
24.067	0.1696	0.03	Q	.	.	.	V.
24.083	0.1696	0.03	Q	.	.	.	V.
24.100	0.1697	0.03	Q	.	.	.	V.
24.117	0.1697	0.03	Q	.	.	.	V.
24.133	0.1697	0.02	Q	.	.	.	V.
24.150	0.1697	0.02	Q	.	.	.	V.
24.167	0.1698	0.02	Q	.	.	.	V.
24.183	0.1698	0.01	Q	.	.	.	V.
24.200	0.1698	0.01	Q	.	.	.	V.
24.217	0.1698	0.01	Q	.	.	.	V.

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
(Note: 100% of Peak Flow Rate estimate assumed to have
an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
0%	1453.0
10%	245.0
20%	145.0
30%	95.0
40%	80.0
50%	70.0
60%	55.0
70%	40.0
80%	25.0
90%	15.0

==========

END OF FLOODSCx ROUTING ANALYSIS

```
**************************************************************************

             F L O O D    R O U T I N G    A N A L Y S I S
             USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
          (c) Copyright 1989-2014 Advanced Engineering Software (aes)
              Ver. 21.0  Release Date: 06/01/2014  License ID 1202

                           Analysis prepared by:

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                               Irvine, CA. 92614
                                  949-988-5815

 ************************* DESCRIPTION OF STUDY *************************
* GREAT SCOTT                                                           *
* 2 YR STORM PROP - NO DET. SYSTEM                                      *
* CGULLIXSON REV HHTUN                                                  *
 ************************************************************************

  FILE NAME: GSFR2.DAT
  TIME/DATE OF STUDY: 09:32 08/23/2023

   The Small Area Unit Hydrograph Procedures in Section J
   of the Hydrology Manual provides estimates of runoff
   hydrograph and runoff volume for watersheds whose time of
   concentration is less than 25 minutes. The PROGRAM User
   should check the applicability of using the small area unit
   hydrograph procedures, and follow the guidelines in
   Sections J and K.5 in complex watershed modeling.


**************************************************************************
  FLOW PROCESS FROM NODE    400.00 TO NODE    405.00 IS CODE = 1.2
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (SMALL AREA UNIT-HYDROGRAPH ANALYSIS) <<<<<
==========================================================================

  (SMALL AREA UNIT-HYDROGRAPH ADDED TO STREAM #1)

    RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
    TOTAL CATCHMENT AREA(ACRES) =    2.00
    SOIL-LOSS RATE, Fm,(INCH/HR) =  0.184
    LOW LOSS FRACTION = 0.612
    TIME OF CONCENTRATION(MIN.) =  8.80
    SMALL AREA PEAK Q COMPUTED USING PEAK FLOW RATE FORMULA
    ORANGE COUNTY "VALLEY" RAINFALL VALUES ARE USED:
    RETURN FREQUENCY(YEARS) =   2
       5-MINUTE POINT RAINFALL VALUE(INCHES) =  0.19
```

```
      30-MINUTE POINT RAINFALL VALUE(INCHES) =  0.40
       1-HOUR   POINT RAINFALL VALUE(INCHES) =  0.53
       3-HOUR   POINT RAINFALL VALUE(INCHES) =  0.89
       6-HOUR   POINT RAINFALL VALUE(INCHES) =  1.22
      24-HOUR   POINT RAINFALL VALUE(INCHES) =  2.05

--------------------------------------------------------------------------------
    TOTAL CATCHMENT   RUNOFF  VOLUME(ACRE-FEET) =     0.14
    TOTAL CATCHMENT SOIL-LOSS VOLUME(ACRE-FEET) =     0.20

--------------------------------------------------------------------------------
♠
================================================================================

                      2 4 - H O U R    S T O R M
                   R U N O F F    H Y D R O G R A P H

================================================================================
               HYDROGRAPH IN  ONE-MINUTE UNIT INTERVALS(CFS)
        (Notes: Time indicated is at END of Each Unit Intervals.
                Peak 5-minute rainfall intensity is modeled as
                a constant value for entire 5-minute period.)
--------------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.        0.7       1.3       2.0       2.6
--------------------------------------------------------------------------------
   0.017      0.0000      0.00  Q        .         .         .         .
   0.033      0.0000      0.00  Q        .         .         .         .
   0.050      0.0000      0.01  Q        .         .         .         .
   0.067      0.0000      0.01  Q        .         .         .         .
   0.083      0.0000      0.01  Q        .         .         .         .
   0.100      0.0001      0.01  Q        .         .         .         .
   0.117      0.0001      0.02  Q        .         .         .         .
   0.133      0.0001      0.02  Q        .         .         .         .
   0.150      0.0001      0.02  Q        .         .         .         .
   0.167      0.0002      0.02  Q        .         .         .         .
   0.183      0.0002      0.02  Q        .         .         .         .
   0.200      0.0002      0.02  Q        .         .         .         .
   0.217      0.0003      0.02  Q        .         .         .         .
   0.233      0.0003      0.02  Q        .         .         .         .
   0.250      0.0003      0.02  Q        .         .         .         .
   0.267      0.0003      0.02  Q        .         .         .         .
   0.283      0.0004      0.02  Q        .         .         .         .
   0.300      0.0004      0.02  Q        .         .         .         .
   0.317      0.0004      0.02  Q        .         .         .         .
   0.333      0.0005      0.02  Q        .         .         .         .
   0.350      0.0005      0.02  Q        .         .         .         .
   0.367      0.0005      0.02  Q        .         .         .         .
   0.383      0.0006      0.02  Q        .         .         .         .
   0.400      0.0006      0.02  Q        .         .         .         .
   0.417      0.0006      0.02  Q        .         .         .         .
```

0.433	0.0007	0.02	Q	.	.	.	.
0.450	0.0007	0.02	Q	.	.	.	.
0.467	0.0007	0.02	Q	.	.	.	.
0.483	0.0007	0.02	Q	.	.	.	.
0.500	0.0008	0.02	Q	.	.	.	.
0.517	0.0008	0.02	Q	.	.	.	.
0.533	0.0008	0.02	Q	.	.	.	.
0.550	0.0009	0.02	Q	.	.	.	.
0.567	0.0009	0.02	Q	.	.	.	.
0.583	0.0009	0.02	Q	.	.	.	.
0.600	0.0010	0.02	Q	.	.	.	.
0.617	0.0010	0.02	Q	.	.	.	.
0.633	0.0010	0.02	Q	.	.	.	.
0.650	0.0011	0.02	Q	.	.	.	.
0.667	0.0011	0.02	Q	.	.	.	.
0.683	0.0011	0.02	Q	.	.	.	.
0.700	0.0012	0.02	Q	.	.	.	.
0.717	0.0012	0.02	Q	.	.	.	.
0.733	0.0012	0.02	Q	.	.	.	.
0.750	0.0013	0.02	Q	.	.	.	.
0.767	0.0013	0.02	Q	.	.	.	.
0.783	0.0013	0.02	Q	.	.	.	.
0.800	0.0013	0.02	Q	.	.	.	.
0.817	0.0014	0.02	Q	.	.	.	.
0.833	0.0014	0.02	Q	.	.	.	.
0.850	0.0014	0.02	Q	.	.	.	.
0.867	0.0015	0.02	Q	.	.	.	.
0.883	0.0015	0.02	Q	.	.	.	.
0.900	0.0015	0.02	Q	.	.	.	.
0.917	0.0016	0.02	Q	.	.	.	.
0.933	0.0016	0.02	Q	.	.	.	.
0.950	0.0016	0.02	Q	.	.	.	.
0.967	0.0017	0.02	Q	.	.	.	.
0.983	0.0017	0.02	Q	.	.	.	.
1.000	0.0017	0.02	Q	.	.	.	.
1.017	0.0018	0.02	Q	.	.	.	.
1.033	0.0018	0.02	Q	.	.	.	.
1.050	0.0018	0.02	Q	.	.	.	.
1.067	0.0019	0.02	Q	.	.	.	.
1.083	0.0019	0.02	Q	.	.	.	.
1.100	0.0019	0.02	Q	.	.	.	.
1.117	0.0020	0.02	Q	.	.	.	.
1.133	0.0020	0.02	Q	.	.	.	.
1.150	0.0020	0.02	Q	.	.	.	.
1.167	0.0020	0.02	Q	.	.	.	.
1.183	0.0021	0.02	Q	.	.	.	.
1.200	0.0021	0.02	Q	.	.	.	.
1.217	0.0021	0.02	Q	.	.	.	.
1.233	0.0022	0.02	Q	.	.	.	.
1.250	0.0022	0.02	Q	.	.	.	.

1.267	0.0022	0.02	Q	.	.	.	.
1.283	0.0023	0.02	Q	.	.	.	.
1.300	0.0023	0.02	Q	.	.	.	.
1.317	0.0023	0.02	Q	.	.	.	.
1.333	0.0024	0.02	Q	.	.	.	.
1.350	0.0024	0.02	Q	.	.	.	.
1.367	0.0024	0.02	Q	.	.	.	.
1.383	0.0025	0.02	Q	.	.	.	.
1.400	0.0025	0.02	Q	.	.	.	.
1.417	0.0025	0.02	Q	.	.	.	.
1.433	0.0026	0.02	Q	.	.	.	.
1.450	0.0026	0.02	Q	.	.	.	.
1.467	0.0026	0.02	Q	.	.	.	.
1.483	0.0027	0.02	Q	.	.	.	.
1.500	0.0027	0.02	Q	.	.	.	.
1.517	0.0027	0.02	Q	.	.	.	.
1.533	0.0028	0.02	Q	.	.	.	.
1.550	0.0028	0.02	Q	.	.	.	.
1.567	0.0028	0.02	Q	.	.	.	.
1.583	0.0029	0.02	Q	.	.	.	.
1.600	0.0029	0.02	Q	.	.	.	.
1.617	0.0029	0.02	Q	.	.	.	.
1.633	0.0030	0.02	Q	.	.	.	.
1.650	0.0030	0.02	Q	.	.	.	.
1.667	0.0030	0.02	Q	.	.	.	.
1.683	0.0031	0.02	Q	.	.	.	.
1.700	0.0031	0.02	Q	.	.	.	.
1.717	0.0031	0.02	Q	.	.	.	.
1.733	0.0032	0.02	Q	.	.	.	.
1.750	0.0032	0.02	Q	.	.	.	.
1.767	0.0032	0.02	Q	.	.	.	.
1.783	0.0032	0.02	Q	.	.	.	.
1.800	0.0033	0.02	Q	.	.	.	.
1.817	0.0033	0.02	Q	.	.	.	.
1.833	0.0033	0.02	Q	.	.	.	.
1.850	0.0034	0.02	Q	.	.	.	.
1.867	0.0034	0.02	Q	.	.	.	.
1.883	0.0034	0.02	Q	.	.	.	.
1.900	0.0035	0.02	Q	.	.	.	.
1.917	0.0035	0.02	Q	.	.	.	.
1.933	0.0035	0.02	QV	.	.	.	.
1.950	0.0036	0.02	QV	.	.	.	.
1.967	0.0036	0.02	QV	.	.	.	.
1.983	0.0036	0.02	QV	.	.	.	.
2.000	0.0037	0.02	QV	.	.	.	.
2.017	0.0037	0.02	QV	.	.	.	.
2.033	0.0037	0.02	QV	.	.	.	.
2.050	0.0038	0.02	QV	.	.	.	.
2.067	0.0038	0.02	QV	.	.	.	.
2.083	0.0038	0.02	QV	.	.	.	.

2.100	0.0039	0.02	QV	.	.	.	.
2.117	0.0039	0.02	QV	.	.	.	.
2.133	0.0039	0.02	QV	.	.	.	.
2.150	0.0040	0.02	QV	.	.	.	.
2.167	0.0040	0.02	QV	.	.	.	.
2.183	0.0040	0.02	QV	.	.	.	.
2.200	0.0041	0.02	QV	.	.	.	.
2.217	0.0041	0.02	QV	.	.	.	.
2.233	0.0041	0.02	QV	.	.	.	.
2.250	0.0042	0.02	QV	.	.	.	.
2.267	0.0042	0.02	QV	.	.	.	.
2.283	0.0042	0.02	QV	.	.	.	.
2.300	0.0043	0.02	QV	.	.	.	.
2.317	0.0043	0.02	QV	.	.	.	.
2.333	0.0044	0.02	QV	.	.	.	.
2.350	0.0044	0.02	QV	.	.	.	.
2.367	0.0044	0.02	QV	.	.	.	.
2.383	0.0045	0.02	QV	.	.	.	.
2.400	0.0045	0.02	QV	.	.	.	.
2.417	0.0045	0.02	QV	.	.	.	.
2.433	0.0046	0.02	QV	.	.	.	.
2.450	0.0046	0.02	QV	.	.	.	.
2.467	0.0046	0.02	QV	.	.	.	.
2.483	0.0047	0.02	QV	.	.	.	.
2.500	0.0047	0.02	QV	.	.	.	.
2.517	0.0047	0.02	QV	.	.	.	.
2.533	0.0048	0.02	QV	.	.	.	.
2.550	0.0048	0.02	QV	.	.	.	.
2.567	0.0048	0.02	QV	.	.	.	.
2.583	0.0049	0.02	QV	.	.	.	.
2.600	0.0049	0.02	QV	.	.	.	.
2.617	0.0049	0.02	QV	.	.	.	.
2.633	0.0050	0.02	QV	.	.	.	.
2.650	0.0050	0.02	QV	.	.	.	.
2.667	0.0050	0.02	QV	.	.	.	.
2.683	0.0051	0.02	QV	.	.	.	.
2.700	0.0051	0.02	QV	.	.	.	.
2.717	0.0051	0.02	QV	.	.	.	.
2.733	0.0052	0.02	QV	.	.	.	.
2.750	0.0052	0.02	QV	.	.	.	.
2.767	0.0052	0.02	QV	.	.	.	.
2.783	0.0053	0.02	QV	.	.	.	.
2.800	0.0053	0.03	QV	.	.	.	.
2.817	0.0053	0.03	QV	.	.	.	.
2.833	0.0054	0.03	QV	.	.	.	.
2.850	0.0054	0.03	QV	.	.	.	.
2.867	0.0054	0.03	QV	.	.	.	.
2.883	0.0055	0.03	QV	.	.	.	.
2.900	0.0055	0.03	QV	.	.	.	.
2.917	0.0055	0.03	QV	.	.	.	.

2.933	0.0056	0.03	QV	.	.	.	.
2.950	0.0056	0.03	QV	.	.	.	.
2.967	0.0057	0.03	QV	.	.	.	.
2.983	0.0057	0.03	QV	.	.	.	.
3.000	0.0057	0.03	QV	.	.	.	.
3.017	0.0058	0.03	QV	.	.	.	.
3.033	0.0058	0.03	QV	.	.	.	.
3.050	0.0058	0.03	QV	.	.	.	.
3.067	0.0059	0.03	QV	.	.	.	.
3.083	0.0059	0.03	QV	.	.	.	.
3.100	0.0059	0.03	QV	.	.	.	.
3.117	0.0060	0.03	QV	.	.	.	.
3.133	0.0060	0.03	QV	.	.	.	.
3.150	0.0060	0.03	QV	.	.	.	.
3.167	0.0061	0.03	QV	.	.	.	.
3.183	0.0061	0.03	QV	.	.	.	.
3.200	0.0061	0.03	QV	.	.	.	.
3.217	0.0062	0.03	QV	.	.	.	.
3.233	0.0062	0.03	QV	.	.	.	.
3.250	0.0062	0.03	QV	.	.	.	.
3.267	0.0063	0.03	QV	.	.	.	.
3.283	0.0063	0.03	QV	.	.	.	.
3.300	0.0064	0.03	QV	.	.	.	.
3.317	0.0064	0.03	QV	.	.	.	.
3.333	0.0064	0.03	QV	.	.	.	.
3.350	0.0065	0.03	QV	.	.	.	.
3.367	0.0065	0.03	QV	.	.	.	.
3.383	0.0065	0.03	QV	.	.	.	.
3.400	0.0066	0.03	QV	.	.	.	.
3.417	0.0066	0.03	QV	.	.	.	.
3.433	0.0066	0.03	QV	.	.	.	.
3.450	0.0067	0.03	QV	.	.	.	.
3.467	0.0067	0.03	QV	.	.	.	.
3.483	0.0067	0.03	QV	.	.	.	.
3.500	0.0068	0.03	QV	.	.	.	.
3.517	0.0068	0.03	QV	.	.	.	.
3.533	0.0069	0.03	QV	.	.	.	.
3.550	0.0069	0.03	QV	.	.	.	.
3.567	0.0069	0.03	QV	.	.	.	.
3.583	0.0070	0.03	QV	.	.	.	.
3.600	0.0070	0.03	QV	.	.	.	.
3.617	0.0070	0.03	QV	.	.	.	.
3.633	0.0071	0.03	QV	.	.	.	.
3.650	0.0071	0.03	Q V	.	.	.	.
3.667	0.0071	0.03	Q V	.	.	.	.
3.683	0.0072	0.03	Q V	.	.	.	.
3.700	0.0072	0.03	Q V	.	.	.	.
3.717	0.0072	0.03	Q V	.	.	.	.
3.733	0.0073	0.03	Q V	.	.	.	.
3.750	0.0073	0.03	Q V	.	.	.	.

3.767	0.0074	0.03	Q V	.	.	.	.
3.783	0.0074	0.03	Q V	.	.	.	.
3.800	0.0074	0.03	Q V	.	.	.	.
3.817	0.0075	0.03	Q V	.	.	.	.
3.833	0.0075	0.03	Q V	.	.	.	.
3.850	0.0075	0.03	Q V	.	.	.	.
3.867	0.0076	0.03	Q V	.	.	.	.
3.883	0.0076	0.03	Q V	.	.	.	.
3.900	0.0076	0.03	Q V	.	.	.	.
3.917	0.0077	0.03	Q V	.	.	.	.
3.933	0.0077	0.03	Q V	.	.	.	.
3.950	0.0078	0.03	Q V	.	.	.	.
3.967	0.0078	0.03	Q V	.	.	.	.
3.983	0.0078	0.03	Q V	.	.	.	.
4.000	0.0079	0.03	Q V	.	.	.	.
4.017	0.0079	0.03	Q V	.	.	.	.
4.033	0.0079	0.03	Q V	.	.	.	.
4.050	0.0080	0.03	Q V	.	.	.	.
4.067	0.0080	0.03	Q V	.	.	.	.
4.083	0.0080	0.03	Q V	.	.	.	.
4.100	0.0081	0.03	Q V	.	.	.	.
4.117	0.0081	0.03	Q V	.	.	.	.
4.133	0.0082	0.03	Q V	.	.	.	.
4.150	0.0082	0.03	Q V	.	.	.	.
4.167	0.0082	0.03	Q V	.	.	.	.
4.183	0.0083	0.03	Q V	.	.	.	.
4.200	0.0083	0.03	Q V	.	.	.	.
4.217	0.0083	0.03	Q V	.	.	.	.
4.233	0.0084	0.03	Q V	.	.	.	.
4.250	0.0084	0.03	Q V	.	.	.	.
4.267	0.0085	0.03	Q V	.	.	.	.
4.283	0.0085	0.03	Q V	.	.	.	.
4.300	0.0085	0.03	Q V	.	.	.	.
4.317	0.0086	0.03	Q V	.	.	.	.
4.333	0.0086	0.03	Q V	.	.	.	.
4.350	0.0086	0.03	Q V	.	.	.	.
4.367	0.0087	0.03	Q V	.	.	.	.
4.383	0.0087	0.03	Q V	.	.	.	.
4.400	0.0088	0.03	Q V	.	.	.	.
4.417	0.0088	0.03	Q V	.	.	.	.
4.433	0.0088	0.03	Q V	.	.	.	.
4.450	0.0089	0.03	Q V	.	.	.	.
4.467	0.0089	0.03	Q V	.	.	.	.
4.483	0.0089	0.03	Q V	.	.	.	.
4.500	0.0090	0.03	Q V	.	.	.	.
4.517	0.0090	0.03	Q V	.	.	.	.
4.533	0.0091	0.03	Q V	.	.	.	.
4.550	0.0091	0.03	Q V	.	.	.	.
4.567	0.0091	0.03	Q V	.	.	.	.
4.583	0.0092	0.03	Q V	.	.	.	.

4.600	0.0092	0.03	Q	V	.	.	.	.
4.617	0.0092	0.03	Q	V	.	.	.	.
4.633	0.0093	0.03	Q	V	.	.	.	.
4.650	0.0093	0.03	Q	V	.	.	.	.
4.667	0.0094	0.03	Q	V	.	.	.	.
4.683	0.0094	0.03	Q	V	.	.	.	.
4.700	0.0094	0.03	Q	V	.	.	.	.
4.717	0.0095	0.03	Q	V	.	.	.	.
4.733	0.0095	0.03	Q	V	.	.	.	.
4.750	0.0095	0.03	Q	V	.	.	.	.
4.767	0.0096	0.03	Q	V	.	.	.	.
4.783	0.0096	0.03	Q	V	.	.	.	.
4.800	0.0097	0.03	Q	V	.	.	.	.
4.817	0.0097	0.03	Q	V	.	.	.	.
4.833	0.0097	0.03	Q	V	.	.	.	.
4.850	0.0098	0.03	Q	V	.	.	.	.
4.867	0.0098	0.03	Q	V	.	.	.	.
4.883	0.0098	0.03	Q	V	.	.	.	.
4.900	0.0099	0.03	Q	V	.	.	.	.
4.917	0.0099	0.03	Q	V	.	.	.	.
4.933	0.0100	0.03	Q	V	.	.	.	.
4.950	0.0100	0.03	Q	V	.	.	.	.
4.967	0.0100	0.03	Q	V	.	.	.	.
4.983	0.0101	0.03	Q	V	.	.	.	.
5.000	0.0101	0.03	Q	V	.	.	.	.
5.017	0.0102	0.03	Q	V	.	.	.	.
5.033	0.0102	0.03	Q	V	.	.	.	.
5.050	0.0102	0.03	Q	V	.	.	.	.
5.067	0.0103	0.03	Q	V	.	.	.	.
5.083	0.0103	0.03	Q	V	.	.	.	.
5.100	0.0104	0.03	Q	V	.	.	.	.
5.117	0.0104	0.03	Q	V	.	.	.	.
5.133	0.0104	0.03	Q	V	.	.	.	.
5.150	0.0105	0.03	Q	V	.	.	.	.
5.167	0.0105	0.03	Q	V	.	.	.	.
5.183	0.0105	0.03	Q	V	.	.	.	.
5.200	0.0106	0.03	Q	V	.	.	.	.
5.217	0.0106	0.03	Q	V	.	.	.	.
5.233	0.0107	0.03	Q	V	.	.	.	.
5.250	0.0107	0.03	Q	V	.	.	.	.
5.267	0.0107	0.03	Q	V	.	.	.	.
5.283	0.0108	0.03	Q	V	.	.	.	.
5.300	0.0108	0.03	Q	V	.	.	.	.
5.317	0.0109	0.03	Q	V	.	.	.	.
5.333	0.0109	0.03	Q	V	.	.	.	.
5.350	0.0109	0.03	Q	V	.	.	.	.
5.367	0.0110	0.03	Q	V	.	.	.	.
5.383	0.0110	0.03	Q	V	.	.	.	.
5.400	0.0111	0.03	Q	V	.	.	.	.
5.417	0.0111	0.03	Q	V	.	.	.	.

5.433	0.0111	0.03	Q	V	.	.	.	.
5.450	0.0112	0.03	Q	V	.	.	.	.
5.467	0.0112	0.03	Q	V	.	.	.	.
5.483	0.0113	0.03	Q	V	.	.	.	.
5.500	0.0113	0.03	Q	V	.	.	.	.
5.517	0.0113	0.03	Q	V	.	.	.	.
5.533	0.0114	0.03	Q	V	.	.	.	.
5.550	0.0114	0.03	Q	V	.	.	.	.
5.567	0.0115	0.03	Q	V	.	.	.	.
5.583	0.0115	0.03	Q	V	.	.	.	.
5.600	0.0115	0.03	Q	V	.	.	.	.
5.617	0.0116	0.03	Q	V	.	.	.	.
5.633	0.0116	0.03	Q	V	.	.	.	.
5.650	0.0117	0.03	Q	V	.	.	.	.
5.667	0.0117	0.03	Q	V	.	.	.	.
5.683	0.0117	0.03	Q	V	.	.	.	.
5.700	0.0118	0.03	Q	V	.	.	.	.
5.717	0.0118	0.03	Q	V	.	.	.	.
5.733	0.0119	0.03	Q	V	.	.	.	.
5.750	0.0119	0.03	Q	V	.	.	.	.
5.767	0.0119	0.03	Q	V	.	.	.	.
5.783	0.0120	0.03	Q	V	.	.	.	.
5.800	0.0120	0.03	Q	V	.	.	.	.
5.817	0.0121	0.03	Q	V	.	.	.	.
5.833	0.0121	0.03	Q	V	.	.	.	.
5.850	0.0121	0.03	Q	V	.	.	.	.
5.867	0.0122	0.03	Q	V	.	.	.	.
5.883	0.0122	0.03	Q	V	.	.	.	.
5.900	0.0123	0.03	Q	V	.	.	.	.
5.917	0.0123	0.03	Q	V	.	.	.	.
5.933	0.0123	0.03	Q	V	.	.	.	.
5.950	0.0124	0.03	Q	V	.	.	.	.
5.967	0.0124	0.03	Q	V	.	.	.	.
5.983	0.0125	0.03	Q	V	.	.	.	.
6.000	0.0125	0.03	Q	V	.	.	.	.
6.017	0.0125	0.03	Q	V	.	.	.	.
6.033	0.0126	0.03	Q	V	.	.	.	.
6.050	0.0126	0.03	Q	V	.	.	.	.
6.067	0.0127	0.03	Q	V	.	.	.	.
6.083	0.0127	0.03	Q	V	.	.	.	.
6.100	0.0128	0.03	Q	V	.	.	.	.
6.117	0.0128	0.03	Q	V	.	.	.	.
6.133	0.0128	0.03	Q	V	.	.	.	.
6.150	0.0129	0.03	Q	V	.	.	.	.
6.167	0.0129	0.03	Q	V	.	.	.	.
6.183	0.0130	0.03	Q	V	.	.	.	.
6.200	0.0130	0.03	Q	V	.	.	.	.
6.217	0.0130	0.03	Q	V	.	.	.	.
6.233	0.0131	0.03	Q	V	.	.	.	.
6.250	0.0131	0.03	Q	V	.	.	.	.

6.267	0.0132	0.03	Q	V	.	.	.	.
6.283	0.0132	0.03	Q	V	.	.	.	.
6.300	0.0132	0.03	Q	V	.	.	.	.
6.317	0.0133	0.03	Q	V	.	.	.	.
6.333	0.0133	0.03	Q	V	.	.	.	.
6.350	0.0134	0.03	Q	V	.	.	.	.
6.367	0.0134	0.03	Q	V	.	.	.	.
6.383	0.0135	0.03	Q	V	.	.	.	.
6.400	0.0135	0.03	Q	V	.	.	.	.
6.417	0.0135	0.03	Q	V	.	.	.	.
6.433	0.0136	0.03	Q	V	.	.	.	.
6.450	0.0136	0.03	Q	V	.	.	.	.
6.467	0.0137	0.03	Q	V	.	.	.	.
6.483	0.0137	0.03	Q	V	.	.	.	.
6.500	0.0138	0.03	Q	V	.	.	.	.
6.517	0.0138	0.03	Q	V	.	.	.	.
6.533	0.0138	0.03	Q	V	.	.	.	.
6.550	0.0139	0.03	Q	V	.	.	.	.
6.567	0.0139	0.03	Q	V	.	.	.	.
6.583	0.0140	0.03	Q	V	.	.	.	.
6.600	0.0140	0.03	Q	V	.	.	.	.
6.617	0.0140	0.03	Q	V	.	.	.	.
6.633	0.0141	0.03	Q	V	.	.	.	.
6.650	0.0141	0.03	Q	V	.	.	.	.
6.667	0.0142	0.03	Q	V	.	.	.	.
6.683	0.0142	0.03	Q	V	.	.	.	.
6.700	0.0143	0.03	Q	V	.	.	.	.
6.717	0.0143	0.03	Q	V	.	.	.	.
6.733	0.0143	0.03	Q	V	.	.	.	.
6.750	0.0144	0.03	Q	V	.	.	.	.
6.767	0.0144	0.03	Q	V	.	.	.	.
6.783	0.0145	0.03	Q	V	.	.	.	.
6.800	0.0145	0.03	Q	V	.	.	.	.
6.817	0.0146	0.03	Q	V	.	.	.	.
6.833	0.0146	0.03	Q	V	.	.	.	.
6.850	0.0147	0.03	Q	V	.	.	.	.
6.867	0.0147	0.03	Q	V	.	.	.	.
6.883	0.0147	0.03	Q	V	.	.	.	.
6.900	0.0148	0.03	Q	V	.	.	.	.
6.917	0.0148	0.03	Q	V	.	.	.	.
6.933	0.0149	0.03	Q	V	.	.	.	.
6.950	0.0149	0.03	Q	V	.	.	.	.
6.967	0.0150	0.03	Q	V	.	.	.	.
6.983	0.0150	0.03	Q	V	.	.	.	.
7.000	0.0150	0.03	Q	V	.	.	.	.
7.017	0.0151	0.03	Q	V	.	.	.	.
7.033	0.0151	0.03	Q	V	.	.	.	.
7.050	0.0152	0.03	Q	V	.	.	.	.
7.067	0.0152	0.03	Q	V	.	.	.	.
7.083	0.0153	0.03	Q	V	.	.	.	.

7.100	0.0153	0.03	Q	V	.	.	.	.
7.117	0.0153	0.03	Q	V	.	.	.	.
7.133	0.0154	0.03	Q	V	.	.	.	.
7.150	0.0154	0.03	Q	V	.	.	.	.
7.167	0.0155	0.03	Q	V	.	.	.	.
7.183	0.0155	0.03	Q	V	.	.	.	.
7.200	0.0156	0.03	Q	V	.	.	.	.
7.217	0.0156	0.03	Q	V	.	.	.	.
7.233	0.0157	0.03	Q	V	.	.	.	.
7.250	0.0157	0.03	Q	V	.	.	.	.
7.267	0.0157	0.03	Q	V	.	.	.	.
7.283	0.0158	0.03	Q	V	.	.	.	.
7.300	0.0158	0.03	Q	V	.	.	.	.
7.317	0.0159	0.03	Q	V	.	.	.	.
7.333	0.0159	0.03	Q	V	.	.	.	.
7.350	0.0160	0.03	Q	V	.	.	.	.
7.367	0.0160	0.03	Q	V	.	.	.	.
7.383	0.0161	0.03	Q	V	.	.	.	.
7.400	0.0161	0.03	Q	V	.	.	.	.
7.417	0.0162	0.03	Q	V	.	.	.	.
7.433	0.0162	0.03	Q	V	.	.	.	.
7.450	0.0162	0.03	Q	V	.	.	.	.
7.467	0.0163	0.03	Q	V	.	.	.	.
7.483	0.0163	0.03	Q	V	.	.	.	.
7.500	0.0164	0.03	Q	V	.	.	.	.
7.517	0.0164	0.03	Q	V	.	.	.	.
7.533	0.0165	0.03	Q	V	.	.	.	.
7.550	0.0165	0.03	Q	V	.	.	.	.
7.567	0.0166	0.03	Q	V	.	.	.	.
7.583	0.0166	0.03	Q	V	.	.	.	.
7.600	0.0166	0.03	Q	V	.	.	.	.
7.617	0.0167	0.03	Q	V	.	.	.	.
7.633	0.0167	0.03	Q	V	.	.	.	.
7.650	0.0168	0.03	Q	V	.	.	.	.
7.667	0.0168	0.03	Q	V	.	.	.	.
7.683	0.0169	0.03	Q	V	.	.	.	.
7.700	0.0169	0.03	Q	V	.	.	.	.
7.717	0.0170	0.03	Q	V	.	.	.	.
7.733	0.0170	0.03	Q	V	.	.	.	.
7.750	0.0171	0.03	Q	V	.	.	.	.
7.767	0.0171	0.03	Q	V	.	.	.	.
7.783	0.0172	0.03	Q	V	.	.	.	.
7.800	0.0172	0.03	Q	V	.	.	.	.
7.817	0.0172	0.03	Q	V	.	.	.	.
7.833	0.0173	0.03	Q	V	.	.	.	.
7.850	0.0173	0.03	Q	V	.	.	.	.
7.867	0.0174	0.03	Q	V	.	.	.	.
7.883	0.0174	0.03	Q	V	.	.	.	.
7.900	0.0175	0.03	Q	V	.	.	.	.
7.917	0.0175	0.03	Q	V	.	.	.	.

7.933	0.0176	0.03	Q	V	.	.	.	.
7.950	0.0176	0.03	Q	V	.	.	.	.
7.967	0.0177	0.03	Q	V	.	.	.	.
7.983	0.0177	0.03	Q	V	.	.	.	.
8.000	0.0178	0.03	Q	V	.	.	.	.
8.017	0.0178	0.03	Q	V	.	.	.	.
8.033	0.0179	0.03	Q	V	.	.	.	.
8.050	0.0179	0.03	Q	V	.	.	.	.
8.067	0.0180	0.03	Q	V	.	.	.	.
8.083	0.0180	0.03	Q	V	.	.	.	.
8.100	0.0180	0.03	Q	V	.	.	.	.
8.117	0.0181	0.03	Q	V	.	.	.	.
8.133	0.0181	0.03	Q	V	.	.	.	.
8.150	0.0182	0.03	Q	V	.	.	.	.
8.167	0.0182	0.03	Q	V	.	.	.	.
8.183	0.0183	0.03	Q	V	.	.	.	.
8.200	0.0183	0.03	Q	V	.	.	.	.
8.217	0.0184	0.03	Q	V	.	.	.	.
8.233	0.0184	0.03	Q	V	.	.	.	.
8.250	0.0185	0.03	Q	V	.	.	.	.
8.267	0.0185	0.03	Q	V	.	.	.	.
8.283	0.0186	0.03	Q	V	.	.	.	.
8.300	0.0186	0.03	Q	V	.	.	.	.
8.317	0.0187	0.03	Q	V	.	.	.	.
8.333	0.0187	0.03	Q	V	.	.	.	.
8.350	0.0188	0.04	Q	V	.	.	.	.
8.367	0.0188	0.04	Q	V	.	.	.	.
8.383	0.0189	0.04	Q	V	.	.	.	.
8.400	0.0189	0.04	Q	V	.	.	.	.
8.417	0.0190	0.04	Q	V	.	.	.	.
8.433	0.0190	0.04	Q	V	.	.	.	.
8.450	0.0191	0.04	Q	V	.	.	.	.
8.467	0.0191	0.04	Q	V	.	.	.	.
8.483	0.0192	0.04	Q	V	.	.	.	.
8.500	0.0192	0.04	Q	V	.	.	.	.
8.517	0.0192	0.04	Q	V	.	.	.	.
8.533	0.0193	0.04	Q	V	.	.	.	.
8.550	0.0193	0.04	Q	V	.	.	.	.
8.567	0.0194	0.04	Q	V	.	.	.	.
8.583	0.0194	0.04	Q	V	.	.	.	.
8.600	0.0195	0.04	Q	V	.	.	.	.
8.617	0.0195	0.04	Q	V	.	.	.	.
8.633	0.0196	0.04	Q	V	.	.	.	.
8.650	0.0196	0.04	Q	V	.	.	.	.
8.667	0.0197	0.04	Q	V	.	.	.	.
8.683	0.0197	0.04	Q	V	.	.	.	.
8.700	0.0198	0.04	Q	V	.	.	.	.
8.717	0.0198	0.04	Q	V	.	.	.	.
8.733	0.0199	0.04	Q	V	.	.	.	.
8.750	0.0199	0.04	Q	V	.	.	.	.

8.767	0.0200	0.04	Q	V	.	.	.	.
8.783	0.0200	0.04	Q	V	.	.	.	.
8.800	0.0201	0.04	Q	V	.	.	.	.
8.817	0.0201	0.04	Q	V	.	.	.	.
8.833	0.0202	0.04	Q	V	.	.	.	.
8.850	0.0202	0.04	Q	V	.	.	.	.
8.867	0.0203	0.04	Q	V	.	.	.	.
8.883	0.0203	0.04	Q	V	.	.	.	.
8.900	0.0204	0.04	Q	V	.	.	.	.
8.917	0.0204	0.04	Q	V	.	.	.	.
8.933	0.0205	0.04	Q	V	.	.	.	.
8.950	0.0205	0.04	Q	V	.	.	.	.
8.967	0.0206	0.04	Q	V	.	.	.	.
8.983	0.0206	0.04	Q	V	.	.	.	.
9.000	0.0207	0.04	Q	V	.	.	.	.
9.017	0.0207	0.04	Q	V	.	.	.	.
9.033	0.0208	0.04	Q	V	.	.	.	.
9.050	0.0209	0.04	Q	V	.	.	.	.
9.067	0.0209	0.04	Q	V	.	.	.	.
9.083	0.0210	0.04	Q	V	.	.	.	.
9.100	0.0210	0.04	Q	V	.	.	.	.
9.117	0.0211	0.04	Q	V	.	.	.	.
9.133	0.0211	0.04	Q	V	.	.	.	.
9.150	0.0212	0.04	Q	V	.	.	.	.
9.167	0.0212	0.04	Q	V	.	.	.	.
9.183	0.0213	0.04	Q	V	.	.	.	.
9.200	0.0213	0.04	Q	V	.	.	.	.
9.217	0.0214	0.04	Q	V	.	.	.	.
9.233	0.0214	0.04	Q	V	.	.	.	.
9.250	0.0215	0.04	Q	V	.	.	.	.
9.267	0.0215	0.04	Q	V	.	.	.	.
9.283	0.0216	0.04	Q	V	.	.	.	.
9.300	0.0216	0.04	Q	V	.	.	.	.
9.317	0.0217	0.04	Q	V	.	.	.	.
9.333	0.0217	0.04	Q	V	.	.	.	.
9.350	0.0218	0.04	Q	V	.	.	.	.
9.367	0.0218	0.04	Q	V	.	.	.	.
9.383	0.0219	0.04	Q	V	.	.	.	.
9.400	0.0219	0.04	Q	V	.	.	.	.
9.417	0.0220	0.04	Q	V	.	.	.	.
9.433	0.0221	0.04	Q	V	.	.	.	.
9.450	0.0221	0.04	Q	V	.	.	.	.
9.467	0.0222	0.04	Q	V	.	.	.	.
9.483	0.0222	0.04	Q	V	.	.	.	.
9.500	0.0223	0.04	Q	V	.	.	.	.
9.517	0.0223	0.04	Q	V	.	.	.	.
9.533	0.0224	0.04	Q	V	.	.	.	.
9.550	0.0224	0.04	Q	V	.	.	.	.
9.567	0.0225	0.04	Q	V	.	.	.	.
9.583	0.0225	0.04	Q	V	.	.	.	.

9.600	0.0226	0.04	Q	V	.	.	.	.
9.617	0.0226	0.04	Q	V	.	.	.	.
9.633	0.0227	0.04	Q	V	.	.	.	.
9.650	0.0227	0.04	Q	V	.	.	.	.
9.667	0.0228	0.04	Q	V	.	.	.	.
9.683	0.0229	0.04	Q	V	.	.	.	.
9.700	0.0229	0.04	Q	V	.	.	.	.
9.717	0.0230	0.04	Q	V	.	.	.	.
9.733	0.0230	0.04	Q	V	.	.	.	.
9.750	0.0231	0.04	Q	V	.	.	.	.
9.767	0.0231	0.04	Q	V	.	.	.	.
9.783	0.0232	0.04	Q	V	.	.	.	.
9.800	0.0232	0.04	Q	V	.	.	.	.
9.817	0.0233	0.04	Q	V	.	.	.	.
9.833	0.0234	0.04	Q	V	.	.	.	.
9.850	0.0234	0.04	Q	V	.	.	.	.
9.867	0.0235	0.04	Q	V	.	.	.	.
9.883	0.0235	0.04	Q	V	.	.	.	.
9.900	0.0236	0.04	Q	V	.	.	.	.
9.917	0.0236	0.04	Q	V	.	.	.	.
9.933	0.0237	0.04	Q	V	.	.	.	.
9.950	0.0237	0.04	Q	V	.	.	.	.
9.967	0.0238	0.04	Q	V	.	.	.	.
9.983	0.0239	0.04	Q	V	.	.	.	.
10.000	0.0239	0.04	Q	V	.	.	.	.
10.017	0.0240	0.04	Q	V	.	.	.	.
10.033	0.0240	0.04	Q	V	.	.	.	.
10.050	0.0241	0.04	Q	V	.	.	.	.
10.067	0.0241	0.04	Q	V	.	.	.	.
10.083	0.0242	0.04	Q	V	.	.	.	.
10.100	0.0242	0.04	Q	V	.	.	.	.
10.117	0.0243	0.04	Q	V	.	.	.	.
10.133	0.0244	0.04	Q	V	.	.	.	.
10.150	0.0244	0.04	Q	V	.	.	.	.
10.167	0.0245	0.04	Q	V	.	.	.	.
10.183	0.0245	0.04	Q	V	.	.	.	.
10.200	0.0246	0.04	Q	V	.	.	.	.
10.217	0.0246	0.04	Q	V	.	.	.	.
10.233	0.0247	0.04	Q	V	.	.	.	.
10.250	0.0248	0.04	Q	V	.	.	.	.
10.267	0.0248	0.04	Q	V	.	.	.	.
10.283	0.0249	0.04	Q	V	.	.	.	.
10.300	0.0249	0.04	Q	V	.	.	.	.
10.317	0.0250	0.04	Q	V	.	.	.	.
10.333	0.0250	0.04	Q	V	.	.	.	.
10.350	0.0251	0.04	Q	V	.	.	.	.
10.367	0.0252	0.04	Q	V	.	.	.	.
10.383	0.0252	0.04	Q	V	.	.	.	.
10.400	0.0253	0.04	Q	V	.	.	.	.
10.417	0.0253	0.04	Q	V	.	.	.	.

10.433	0.0254	0.04	Q	V	.	.	.	.
10.450	0.0255	0.04	Q	V	.	.	.	.
10.467	0.0255	0.04	Q	V	.	.	.	.
10.483	0.0256	0.04	Q	V	.	.	.	.
10.500	0.0256	0.04	Q	V	.	.	.	.
10.517	0.0257	0.04	Q	V	.	.	.	.
10.533	0.0258	0.04	Q	V	.	.	.	.
10.550	0.0258	0.04	Q	V	.	.	.	.
10.567	0.0259	0.04	Q	V	.	.	.	.
10.583	0.0259	0.04	Q	V	.	.	.	.
10.600	0.0260	0.04	Q	V	.	.	.	.
10.617	0.0261	0.04	Q	V	.	.	.	.
10.633	0.0261	0.04	Q	V	.	.	.	.
10.650	0.0262	0.04	Q	V	.	.	.	.
10.667	0.0262	0.04	Q	V	.	.	.	.
10.683	0.0263	0.04	Q	V	.	.	.	.
10.700	0.0264	0.04	Q	V	.	.	.	.
10.717	0.0264	0.04	Q	V	.	.	.	.
10.733	0.0265	0.04	Q	V	.	.	.	.
10.750	0.0265	0.04	Q	V	.	.	.	.
10.767	0.0266	0.04	Q	V	.	.	.	.
10.783	0.0267	0.04	Q	V	.	.	.	.
10.800	0.0267	0.04	Q	V	.	.	.	.
10.817	0.0268	0.04	Q	V	.	.	.	.
10.833	0.0268	0.04	Q	V	.	.	.	.
10.850	0.0269	0.04	Q	V	.	.	.	.
10.867	0.0270	0.04	Q	V	.	.	.	.
10.883	0.0270	0.04	Q	V	.	.	.	.
10.900	0.0271	0.05	Q	V	.	.	.	.
10.917	0.0272	0.05	Q	V	.	.	.	.
10.933	0.0272	0.05	Q	V	.	.	.	.
10.950	0.0273	0.05	Q	V	.	.	.	.
10.967	0.0273	0.05	Q	V	.	.	.	.
10.983	0.0274	0.05	Q	V	.	.	.	.
11.000	0.0275	0.05	Q	V	.	.	.	.
11.017	0.0275	0.05	Q	V	.	.	.	.
11.033	0.0276	0.05	Q	V	.	.	.	.
11.050	0.0277	0.05	Q	V	.	.	.	.
11.067	0.0277	0.05	Q	V	.	.	.	.
11.083	0.0278	0.05	Q	V	.	.	.	.
11.100	0.0278	0.05	Q	V	.	.	.	.
11.117	0.0279	0.05	Q	V	.	.	.	.
11.133	0.0280	0.05	Q	V	.	.	.	.
11.150	0.0280	0.05	Q	V	.	.	.	.
11.167	0.0281	0.05	Q	V	.	.	.	.
11.183	0.0282	0.05	Q	V	.	.	.	.
11.200	0.0282	0.05	Q	V	.	.	.	.
11.217	0.0283	0.05	Q	V	.	.	.	.
11.233	0.0284	0.05	Q	V	.	.	.	.
11.250	0.0284	0.05	Q	V	.	.	.	.

11.267	0.0285	0.05	Q	V	.	.	.	.
11.283	0.0285	0.05	Q	V	.	.	.	.
11.300	0.0286	0.05	Q	V	.	.	.	.
11.317	0.0287	0.05	Q	V	.	.	.	.
11.333	0.0287	0.05	Q	V	.	.	.	.
11.350	0.0288	0.05	Q	V	.	.	.	.
11.367	0.0289	0.05	Q	V	.	.	.	.
11.383	0.0289	0.05	Q	V	.	.	.	.
11.400	0.0290	0.05	Q	V	.	.	.	.
11.417	0.0291	0.05	Q	V	.	.	.	.
11.433	0.0291	0.05	Q	V	.	.	.	.
11.450	0.0292	0.05	Q	V	.	.	.	.
11.467	0.0293	0.05	Q	V	.	.	.	.
11.483	0.0293	0.05	Q	V	.	.	.	.
11.500	0.0294	0.05	Q	V	.	.	.	.
11.517	0.0295	0.05	Q	V	.	.	.	.
11.533	0.0295	0.05	Q	V	.	.	.	.
11.550	0.0296	0.05	Q	V	.	.	.	.
11.567	0.0297	0.05	Q	V	.	.	.	.
11.583	0.0297	0.05	Q	V	.	.	.	.
11.600	0.0298	0.05	Q	V	.	.	.	.
11.617	0.0299	0.05	Q	V	.	.	.	.
11.633	0.0299	0.05	Q	V	.	.	.	.
11.650	0.0300	0.05	Q	V	.	.	.	.
11.667	0.0301	0.05	Q	V	.	.	.	.
11.683	0.0302	0.05	Q	V	.	.	.	.
11.700	0.0302	0.05	Q	V	.	.	.	.
11.717	0.0303	0.05	Q	V	.	.	.	.
11.733	0.0304	0.05	Q	V	.	.	.	.
11.750	0.0304	0.05	Q	V	.	.	.	.
11.767	0.0305	0.05	Q	V	.	.	.	.
11.783	0.0306	0.05	Q	V	.	.	.	.
11.800	0.0306	0.05	Q	V	.	.	.	.
11.817	0.0307	0.05	Q	V	.	.	.	.
11.833	0.0308	0.05	Q	V	.	.	.	.
11.850	0.0308	0.05	Q	V	.	.	.	.
11.867	0.0309	0.05	Q	V	.	.	.	.
11.883	0.0310	0.05	Q	V	.	.	.	.
11.900	0.0311	0.05	Q	V	.	.	.	.
11.917	0.0311	0.05	Q	V	.	.	.	.
11.933	0.0312	0.05	Q	V	.	.	.	.
11.950	0.0313	0.05	Q	V	.	.	.	.
11.967	0.0313	0.05	Q	V	.	.	.	.
11.983	0.0314	0.05	Q	V	.	.	.	.
12.000	0.0315	0.05	Q	V	.	.	.	.
12.017	0.0316	0.05	Q	V	.	.	.	.
12.033	0.0316	0.05	Q	V	.	.	.	.
12.050	0.0317	0.05	Q	V	.	.	.	.
12.067	0.0318	0.05	Q	V	.	.	.	.
12.083	0.0319	0.06	Q	V.		.	.	.

12.100	0.0319	0.06	Q	V.	.	.	.
12.117	0.0320	0.06	Q	V.	.	.	.
12.133	0.0321	0.06	Q	V.	.	.	.
12.150	0.0322	0.06	Q	V.	.	.	.
12.167	0.0323	0.06	Q	V.	.	.	.
12.183	0.0323	0.06	Q	V.	.	.	.
12.200	0.0324	0.06	Q	V.	.	.	.
12.217	0.0325	0.06	Q	V.	.	.	.
12.233	0.0326	0.06	Q	V.	.	.	.
12.250	0.0327	0.07	Q	V.	.	.	.
12.267	0.0328	0.07	Q	V.	.	.	.
12.283	0.0329	0.07	.Q	V.	.	.	.
12.300	0.0330	0.07	.Q	V.	.	.	.
12.317	0.0331	0.07	.Q	V.	.	.	.
12.333	0.0332	0.07	.Q	V.	.	.	.
12.350	0.0332	0.07	.Q	V.	.	.	.
12.367	0.0333	0.07	.Q	V.	.	.	.
12.383	0.0334	0.07	.Q	V.	.	.	.
12.400	0.0335	0.07	.Q	V.	.	.	.
12.417	0.0336	0.07	.Q	V.	.	.	.
12.433	0.0337	0.07	.Q	V.	.	.	.
12.450	0.0338	0.07	.Q	V.	.	.	.
12.467	0.0339	0.07	.Q	V.	.	.	.
12.483	0.0340	0.07	.Q	V.	.	.	.
12.500	0.0341	0.07	.Q	V.	.	.	.
12.517	0.0342	0.07	.Q	V.	.	.	.
12.533	0.0343	0.07	.Q	V.	.	.	.
12.550	0.0344	0.07	.Q	V.	.	.	.
12.567	0.0345	0.07	.Q	V.	.	.	.
12.583	0.0346	0.07	.Q	V.	.	.	.
12.600	0.0347	0.07	.Q	V.	.	.	.
12.617	0.0347	0.07	.Q	V.	.	.	.
12.633	0.0348	0.07	.Q	V.	.	.	.
12.650	0.0349	0.07	.Q	V.	.	.	.
12.667	0.0350	0.07	.Q	V.	.	.	.
12.683	0.0351	0.07	.Q	V.	.	.	.
12.700	0.0352	0.07	.Q	V.	.	.	.
12.717	0.0353	0.07	.Q	V.	.	.	.
12.733	0.0354	0.07	.Q	V	.	.	.
12.750	0.0355	0.07	.Q	V	.	.	.
12.767	0.0356	0.07	.Q	V	.	.	.
12.783	0.0357	0.07	.Q	V	.	.	.
12.800	0.0358	0.07	.Q	V	.	.	.
12.817	0.0359	0.07	.Q	V	.	.	.
12.833	0.0360	0.07	.Q	V	.	.	.
12.850	0.0361	0.07	.Q	V	.	.	.
12.867	0.0362	0.07	.Q	V	.	.	.
12.883	0.0363	0.07	.Q	V	.	.	.
12.900	0.0364	0.07	.Q	V	.	.	.
12.917	0.0365	0.07	.Q	V	.	.	.

12.933	0.0366	0.07	.Q	V	.	.	.
12.950	0.0367	0.07	.Q	V	.	.	.
12.967	0.0368	0.07	.Q	V	.	.	.
12.983	0.0369	0.07	.Q	V	.	.	.
13.000	0.0370	0.07	.Q	V	.	.	.
13.017	0.0371	0.07	.Q	V	.	.	.
13.033	0.0372	0.07	.Q	V	.	.	.
13.050	0.0373	0.07	.Q	V	.	.	.
13.067	0.0374	0.07	.Q	V	.	.	.
13.083	0.0375	0.07	.Q	V	.	.	.
13.100	0.0376	0.07	.Q	V	.	.	.
13.117	0.0377	0.08	.Q	V	.	.	.
13.133	0.0378	0.08	.Q	V	.	.	.
13.150	0.0379	0.08	.Q	V	.	.	.
13.167	0.0381	0.08	.Q	V	.	.	.
13.183	0.0382	0.08	.Q	V	.	.	.
13.200	0.0383	0.08	.Q	V	.	.	.
13.217	0.0384	0.08	.Q	V	.	.	.
13.233	0.0385	0.08	.Q	V	.	.	.
13.250	0.0386	0.08	.Q	V	.	.	.
13.267	0.0387	0.08	.Q	V	.	.	.
13.283	0.0388	0.08	.Q	V	.	.	.
13.300	0.0389	0.08	.Q	.V	.	.	.
13.317	0.0390	0.08	.Q	.V	.	.	.
13.333	0.0391	0.08	.Q	.V	.	.	.
13.350	0.0392	0.08	.Q	.V	.	.	.
13.367	0.0393	0.08	.Q	.V	.	.	.
13.383	0.0394	0.08	.Q	.V	.	.	.
13.400	0.0396	0.08	.Q	.V	.	.	.
13.417	0.0397	0.08	.Q	.V	.	.	.
13.433	0.0398	0.08	.Q	.V	.	.	.
13.450	0.0399	0.08	.Q	.V	.	.	.
13.467	0.0400	0.08	.Q	.V	.	.	.
13.483	0.0401	0.08	.Q	.V	.	.	.
13.500	0.0402	0.08	.Q	.V	.	.	.
13.517	0.0403	0.08	.Q	.V	.	.	.
13.533	0.0404	0.08	.Q	.V	.	.	.
13.550	0.0406	0.08	.Q	.V	.	.	.
13.567	0.0407	0.08	.Q	.V	.	.	.
13.583	0.0408	0.08	.Q	.V	.	.	.
13.600	0.0409	0.08	.Q	.V	.	.	.
13.617	0.0410	0.08	.Q	.V	.	.	.
13.633	0.0411	0.08	.Q	.V	.	.	.
13.650	0.0412	0.08	.Q	.V	.	.	.
13.667	0.0414	0.08	.Q	.V	.	.	.
13.683	0.0415	0.08	.Q	.V	.	.	.
13.700	0.0416	0.08	.Q	.V	.	.	.
13.717	0.0417	0.09	.Q	.V	.	.	.
13.733	0.0418	0.09	.Q	.V	.	.	.
13.750	0.0419	0.09	.Q	.V	.	.	.

13.767	0.0421	0.09	.Q	.V	.	.	.
13.783	0.0422	0.09	.Q	.V	.	.	.
13.800	0.0423	0.09	.Q	.V	.	.	.
13.817	0.0424	0.09	.Q	. V	.	.	.
13.833	0.0425	0.09	.Q	. V	.	.	.
13.850	0.0427	0.09	.Q	. V	.	.	.
13.867	0.0428	0.09	.Q	. V	.	.	.
13.883	0.0429	0.09	.Q	. V	.	.	.
13.900	0.0430	0.09	.Q	. V	.	.	.
13.917	0.0432	0.09	.Q	. V	.	.	.
13.933	0.0433	0.09	.Q	. V	.	.	.
13.950	0.0434	0.09	.Q	. V	.	.	.
13.967	0.0435	0.09	.Q	. V	.	.	.
13.983	0.0437	0.09	.Q	. V	.	.	.
14.000	0.0438	0.09	.Q	. V	.	.	.
14.017	0.0439	0.09	.Q	. V	.	.	.
14.033	0.0440	0.09	.Q	. V	.	.	.
14.050	0.0442	0.09	.Q	. V	.	.	.
14.067	0.0443	0.09	.Q	. V	.	.	.
14.083	0.0444	0.09	.Q	. V	.	.	.
14.100	0.0446	0.10	.Q	. V	.	.	.
14.117	0.0447	0.10	.Q	. V	.	.	.
14.133	0.0448	0.10	.Q	. V	.	.	.
14.150	0.0450	0.10	.Q	. V	.	.	.
14.167	0.0451	0.10	.Q	. V	.	.	.
14.183	0.0452	0.10	.Q	. V	.	.	.
14.200	0.0454	0.10	.Q	. V	.	.	.
14.217	0.0455	0.10	.Q	. V	.	.	.
14.233	0.0456	0.10	.Q	. V	.	.	.
14.250	0.0458	0.10	.Q	. V	.	.	.
14.267	0.0459	0.10	.Q	. V	.	.	.
14.283	0.0461	0.10	.Q	. V	.	.	.
14.300	0.0462	0.10	.Q	. V	.	.	.
14.317	0.0463	0.10	.Q	. V	.	.	.
14.333	0.0465	0.10	.Q	. V	.	.	.
14.350	0.0466	0.10	.Q	. V	.	.	.
14.367	0.0468	0.11	.Q	. V	.	.	.
14.383	0.0469	0.11	.Q	. V	.	.	.
14.400	0.0471	0.11	.Q	. V	.	.	.
14.417	0.0472	0.11	.Q	. V	.	.	.
14.433	0.0474	0.11	.Q	. V	.	.	.
14.450	0.0475	0.11	.Q	. V	.	.	.
14.467	0.0476	0.11	.Q	. V	.	.	.
14.483	0.0478	0.11	.Q	. V	.	.	.
14.500	0.0479	0.11	.Q	. V	.	.	.
14.517	0.0481	0.11	.Q	. V	.	.	.
14.533	0.0482	0.11	.Q	. V	.	.	.
14.550	0.0484	0.11	.Q	. V	.	.	.
14.567	0.0486	0.11	.Q	. V	.	.	.
14.583	0.0487	0.11	.Q	. V	.	.	.

14.600	0.0489	0.11	.Q	.	V	.	.	.
14.617	0.0490	0.11	.Q	.	V	.	.	.
14.633	0.0492	0.11	.Q	.	V	.	.	.
14.650	0.0493	0.12	.Q	.	V	.	.	.
14.667	0.0495	0.12	.Q	.	V	.	.	.
14.683	0.0497	0.12	.Q	.	V	.	.	.
14.700	0.0498	0.12	.Q	.	V	.	.	.
14.717	0.0500	0.12	.Q	.	V	.	.	.
14.733	0.0501	0.12	.Q	.	V	.	.	.
14.750	0.0503	0.12	.Q	.	V	.	.	.
14.767	0.0505	0.12	.Q	.	V	.	.	.
14.783	0.0506	0.12	.Q	.	V	.	.	.
14.800	0.0508	0.12	.Q	.	V	.	.	.
14.817	0.0510	0.12	.Q	.	V	.	.	.
14.833	0.0511	0.12	.Q	.	V	.	.	.
14.850	0.0513	0.12	.Q	.	V	.	.	.
14.867	0.0515	0.12	.Q	.	V	.	.	.
14.883	0.0516	0.13	.Q	.	V	.	.	.
14.900	0.0518	0.13	.Q	.	V	.	.	.
14.917	0.0520	0.13	.Q	.	V	.	.	.
14.933	0.0522	0.13	.Q	.	V	.	.	.
14.950	0.0524	0.13	.Q	.	V	.	.	.
14.967	0.0525	0.13	. Q	.	V	.	.	.
14.983	0.0527	0.13	. Q	.	V	.	.	.
15.000	0.0529	0.13	. Q	.	V	.	.	.
15.017	0.0531	0.13	. Q	.	V	.	.	.
15.033	0.0533	0.13	. Q	.	V	.	.	.
15.050	0.0535	0.14	. Q	.	V	.	.	.
15.067	0.0536	0.14	. Q	.	V	.	.	.
15.083	0.0538	0.14	. Q	.	V	.	.	.
15.100	0.0540	0.14	. Q	.	V	.	.	.
15.117	0.0542	0.14	. Q	.	V	.	.	.
15.133	0.0544	0.14	. Q	.	V	.	.	.
15.150	0.0546	0.14	. Q	.	V	.	.	.
15.167	0.0548	0.14	. Q	.	V	.	.	.
15.183	0.0550	0.15	. Q	.	V	.	.	.
15.200	0.0552	0.15	. Q	.	V	.	.	.
15.217	0.0554	0.15	. Q	.	V	.	.	.
15.233	0.0556	0.15	. Q	.	V	.	.	.
15.250	0.0558	0.15	. Q	.	V	.	.	.
15.267	0.0560	0.15	. Q	.	V	.	.	.
15.283	0.0563	0.16	. Q	.	V	.	.	.
15.300	0.0565	0.16	. Q	.	V	.	.	.
15.317	0.0567	0.16	. Q	.	V	.	.	.
15.333	0.0569	0.16	. Q	.	V	.	.	.
15.350	0.0571	0.16	. Q	.	V	.	.	.
15.367	0.0574	0.16	. Q	.	V	.	.	.
15.383	0.0576	0.16	. Q	.	V	.	.	.
15.400	0.0578	0.16	. Q	.	V	.	.	.
15.417	0.0580	0.17	. Q	.	V	.	.	.

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15.433      0.0583      0.17  . Q       .     V   .         .         .
15.450      0.0585      0.17  . Q       .     V   .         .         .
15.467      0.0587      0.17  . Q       .     V   .         .         .
15.483      0.0590      0.17  . Q       .     V   .         .         .
15.500      0.0592      0.17  . Q       .     V   .         .         .
15.517      0.0594      0.17  . Q       .     V   .         .         .
15.533      0.0597      0.17  . Q       .     V   .         .         .
15.550      0.0599      0.17  . Q       .     V   .         .         .
15.567      0.0601      0.17  . Q       .      V  .         .         .
15.583      0.0604      0.17  . Q       .      V  .         .         .
15.600      0.0606      0.18  . Q       .      V  .         .         .
15.617      0.0609      0.18  . Q       .      V  .         .         .
15.633      0.0611      0.18  . Q       .      V  .         .         .
15.650      0.0614      0.18  . Q       .      V  .         .         .
15.667      0.0616      0.19  . Q       .      V  .         .         .
15.683      0.0619      0.19  . Q       .      V  .         .         .
15.700      0.0621      0.19  . Q       .      V  .         .         .
15.717      0.0624      0.20  .  Q      .      V  .         .         .
15.733      0.0627      0.22  .  Q      .      V  .         .         .
15.750      0.0630      0.24  .  Q      .      V  .         .         .
15.767      0.0634      0.26  .   Q     .      V  .         .         .
15.783      0.0638      0.28  .   Q     .       V .         .         .
15.800      0.0642      0.31  .   Q     .       V .         .         .
15.817      0.0647      0.33  .    Q    .       V .         .         .
15.833      0.0652      0.35  .    Q    .       V .         .         .
15.850      0.0657      0.37  .    Q    .       V .         .         .
15.867      0.0662      0.40  .     Q   .       V .         .         .
15.883      0.0668      0.43  .     Q   .       V .         .         .
15.900      0.0674      0.46  .      Q  .        V.         .         .
15.917      0.0681      0.49  .      Q  .        V.         .         .
15.933      0.0688      0.52  .      Q  .        V.         .         .
15.950      0.0696      0.55  .       Q .        V.         .         .
15.967      0.0704      0.58  .       Q .        V.         .         .
15.983      0.0712      0.61  .        Q.         V         .         .
16.000      0.0721      0.64  .        Q.         V         .         .
16.017      0.0732      0.76  .         .Q        V         .         .
16.033      0.0745      0.99  .         .    Q    .V        .         .
16.050      0.0762      1.21  .         .       Q .V        .         .
16.067      0.0782      1.43  .         .         .QV       .         .
16.083      0.0804      1.66  .         .         . V  Q    .         .
16.100      0.0830      1.88  .         .         .  V    Q .         .
16.117      0.0859      2.10  .         .         .   V     . Q       .
16.133      0.0891      2.33  .         .         .    V    .    Q    .
16.150      0.0927      2.62  .         .         .     V   .         Q
16.167      0.0961      2.43  .         .         .      V  .      Q  .
16.183      0.0991      2.16  .         .         .       V .  Q      .
16.200      0.1017      1.89  .         .         .       Q .         .
16.217      0.1039      1.62  .         .         .   Q    V.         .
16.233      0.1058      1.35  .         .        Q        V.         .
16.250      0.1073      1.09  .         .     Q   .         V         .
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16.267      0.1084      0.82  .          . Q       .          V          .
16.283      0.1091      0.55  .        Q .         .          V          .
16.300      0.1096      0.30  .    Q     .         .          .V         .
16.317      0.1099      0.24  .   Q      .         .          .V         .
16.333      0.1102      0.23  .   Q      .         .          .V         .
16.350      0.1105      0.22  .   Q      .         .          .V         .
16.367      0.1108      0.21  .   Q      .         .          .V         .
16.383      0.1111      0.20  .   Q      .         .          .V         .
16.400      0.1113      0.19  . Q        .         .          .V         .
16.417      0.1116      0.18  . Q        .         .          .V         .
16.433      0.1118      0.17  . Q        .         .          .V         .
16.450      0.1120      0.16  . Q        .         .          .V         .
16.467      0.1123      0.16  . Q        .         .          .V         .
16.483      0.1125      0.16  . Q        .         .          .V         .
16.500      0.1127      0.15  . Q        .         .          .V         .
16.517      0.1129      0.15  . Q        .         .          .V         .
16.533      0.1131      0.15  . Q        .         .          . V        .
16.550      0.1133      0.15  . Q        .         .          . V        .
16.567      0.1135      0.15  . Q        .         .          . V        .
16.583      0.1137      0.15  . Q        .         .          . V        .
16.600      0.1139      0.15  . Q        .         .          . V        .
16.617      0.1141      0.14  . Q        .         .          . V        .
16.633      0.1143      0.14  . Q        .         .          . V        .
16.650      0.1145      0.14  . Q        .         .          . V        .
16.667      0.1147      0.14  . Q        .         .          . V        .
16.683      0.1149      0.13  . Q        .         .          . V        .
16.700      0.1151      0.13  . Q        .         .          . V        .
16.717      0.1152      0.13  .Q         .         .          . V        .
16.733      0.1154      0.13  .Q         .         .          . V        .
16.750      0.1156      0.13  .Q         .         .          . V        .
16.767      0.1158      0.12  .Q         .         .          . V        .
16.783      0.1159      0.12  .Q         .         .          . V        .
16.800      0.1161      0.12  .Q         .         .          . V        .
16.817      0.1163      0.12  .Q         .         .          . V        .
16.833      0.1164      0.12  .Q         .         .          . V        .
16.850      0.1166      0.12  .Q         .         .          . V        .
16.867      0.1168      0.12  .Q         .         .          .  V       .
16.883      0.1169      0.11  .Q         .         .          .  V       .
16.900      0.1171      0.11  .Q         .         .          .  V       .
16.917      0.1172      0.11  .Q         .         .          .  V       .
16.933      0.1174      0.11  .Q         .         .          .  V       .
16.950      0.1175      0.11  .Q         .         .          .  V       .
16.967      0.1177      0.11  .Q         .         .          .  V       .
16.983      0.1178      0.11  .Q         .         .          .  V       .
17.000      0.1180      0.11  .Q         .         .          .  V       .
17.017      0.1181      0.10  .Q         .         .          .  V       .
17.033      0.1182      0.10  .Q         .         .          .  V       .
17.050      0.1184      0.10  .Q         .         .          .  V       .
17.067      0.1185      0.10  .Q         .         .          .  V       .
17.083      0.1187      0.10  .Q         .         .          .  V       .
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17.100	0.1188	0.10	.Q	.	.	.	V	.
17.117	0.1189	0.10	.Q	.	.	.	V	.
17.133	0.1191	0.10	.Q	.	.	.	V	.
17.150	0.1192	0.09	.Q	.	.	.	V	.
17.167	0.1193	0.09	.Q	.	.	.	V	.
17.183	0.1194	0.09	.Q	.	.	.	V	.
17.200	0.1196	0.09	.Q	.	.	.	V	.
17.217	0.1197	0.09	.Q	.	.	.	V	.
17.233	0.1198	0.09	.Q	.	.	.	V	.
17.250	0.1199	0.09	.Q	.	.	.	V	.
17.267	0.1201	0.09	.Q	.	.	.	V	.
17.283	0.1202	0.09	.Q	.	.	.	V	.
17.300	0.1203	0.09	.Q	.	.	.	V	.
17.317	0.1204	0.09	.Q	.	.	.	V	.
17.333	0.1205	0.09	.Q	.	.	.	V	.
17.350	0.1207	0.08	.Q	.	.	.	V	.
17.367	0.1208	0.08	.Q	.	.	.	V	.
17.383	0.1209	0.08	.Q	.	.	.	V	.
17.400	0.1210	0.08	.Q	.	.	.	V	.
17.417	0.1211	0.08	.Q	.	.	.	V	.
17.433	0.1212	0.08	.Q	.	.	.	V	.
17.450	0.1213	0.08	.Q	.	.	.	V	.
17.467	0.1214	0.08	.Q	.	.	.	V	.
17.483	0.1216	0.08	.Q	.	.	.	V	.
17.500	0.1217	0.08	.Q	.	.	.	V	.
17.517	0.1218	0.08	.Q	.	.	.	V	.
17.533	0.1219	0.08	.Q	.	.	.	V	.
17.550	0.1220	0.08	.Q	.	.	.	V	.
17.567	0.1221	0.08	.Q	.	.	.	V	.
17.583	0.1222	0.08	.Q	.	.	.	V	.
17.600	0.1223	0.08	.Q	.	.	.	V	.
17.617	0.1224	0.08	.Q	.	.	.	V	.
17.633	0.1225	0.08	.Q	.	.	.	V	.
17.650	0.1226	0.08	.Q	.	.	.	V	.
17.667	0.1227	0.07	.Q	.	.	.	V	.
17.683	0.1228	0.07	.Q	.	.	.	V	.
17.700	0.1229	0.07	.Q	.	.	.	V	.
17.717	0.1230	0.07	.Q	.	.	.	V	.
17.733	0.1231	0.07	.Q	.	.	.	V	.
17.750	0.1232	0.07	.Q	.	.	.	V	.
17.767	0.1233	0.07	.Q	.	.	.	V	.
17.783	0.1234	0.07	.Q	.	.	.	V	.
17.800	0.1235	0.07	.Q	.	.	.	V	.
17.817	0.1236	0.07	.Q	.	.	.	V	.
17.833	0.1237	0.07	.Q	.	.	.	V	.
17.850	0.1238	0.07	.Q	.	.	.	V	.
17.867	0.1239	0.07	.Q	.	.	.	V	.
17.883	0.1240	0.07	.Q	.	.	.	V	.
17.900	0.1241	0.07	.Q	.	.	.	V	.
17.917	0.1242	0.07	.Q	.	.	.	V	.

17.933	0.1243	0.07	.Q	.	.	.	V	.
17.950	0.1244	0.07	.Q	.	.	.	V	.
17.967	0.1245	0.07	.Q	.	.	.	V	.
17.983	0.1246	0.07	.Q	.	.	.	V	.
18.000	0.1247	0.07	.Q	.	.	.	V	.
18.017	0.1248	0.07	.Q	.	.	.	V	.
18.033	0.1249	0.07	.Q	.	.	.	V	.
18.050	0.1249	0.07	.Q	.	.	.	V	.
18.067	0.1250	0.07	Q	.	.	.	V	.
18.083	0.1251	0.06	Q	.	.	.	V	.
18.100	0.1252	0.06	Q	.	.	.	V	.
18.117	0.1253	0.06	Q	.	.	.	V	.
18.133	0.1254	0.06	Q	.	.	.	V	.
18.150	0.1254	0.06	Q	.	.	.	V	.
18.167	0.1255	0.06	Q	.	.	.	V	.
18.183	0.1256	0.05	Q	.	.	.	V	.
18.200	0.1257	0.05	Q	.	.	.	V	.
18.217	0.1257	0.05	Q	.	.	.	V	.
18.233	0.1258	0.05	Q	.	.	.	V	.
18.250	0.1259	0.05	Q	.	.	.	V	.
18.267	0.1260	0.05	Q	.	.	.	V	.
18.283	0.1260	0.05	Q	.	.	.	V	.
18.300	0.1261	0.05	Q	.	.	.	V	.
18.317	0.1262	0.05	Q	.	.	.	V	.
18.333	0.1262	0.05	Q	.	.	.	V	.
18.350	0.1263	0.05	Q	.	.	.	V	.
18.367	0.1264	0.05	Q	.	.	.	V	.
18.383	0.1264	0.05	Q	.	.	.	V	.
18.400	0.1265	0.05	Q	.	.	.	V	.
18.417	0.1266	0.05	Q	.	.	.	V	.
18.433	0.1266	0.05	Q	.	.	.	V	.
18.450	0.1267	0.05	Q	.	.	.	V	.
18.467	0.1268	0.05	Q	.	.	.	V	.
18.483	0.1268	0.05	Q	.	.	.	V	.
18.500	0.1269	0.05	Q	.	.	.	V	.
18.517	0.1270	0.05	Q	.	.	.	V	.
18.533	0.1270	0.05	Q	.	.	.	V	.
18.550	0.1271	0.05	Q	.	.	.	V	.
18.567	0.1272	0.05	Q	.	.	.	V	.
18.583	0.1272	0.05	Q	.	.	.	V	.
18.600	0.1273	0.05	Q	.	.	.	V	.
18.617	0.1274	0.05	Q	.	.	.	V	.
18.633	0.1274	0.05	Q	.	.	.	V	.
18.650	0.1275	0.05	Q	.	.	.	V	.
18.667	0.1276	0.05	Q	.	.	.	V	.
18.683	0.1276	0.05	Q	.	.	.	V	.
18.700	0.1277	0.05	Q	.	.	.	V	.
18.717	0.1277	0.05	Q	.	.	.	V	.
18.733	0.1278	0.05	Q	.	.	.	V	.
18.750	0.1279	0.04	Q	.	.	.	V	.

18.767	0.1279	0.04	Q	.	.	.	V	.
18.783	0.1280	0.04	Q	.	.	.	V	.
18.800	0.1280	0.04	Q	.	.	.	V	.
18.817	0.1281	0.04	Q	.	.	.	V	.
18.833	0.1282	0.04	Q	.	.	.	V	.
18.850	0.1282	0.04	Q	.	.	.	V	.
18.867	0.1283	0.04	Q	.	.	.	V	.
18.883	0.1283	0.04	Q	.	.	.	V	.
18.900	0.1284	0.04	Q	.	.	.	V	.
18.917	0.1285	0.04	Q	.	.	.	V	.
18.933	0.1285	0.04	Q	.	.	.	V	.
18.950	0.1286	0.04	Q	.	.	.	V	.
18.967	0.1286	0.04	Q	.	.	.	V	.
18.983	0.1287	0.04	Q	.	.	.	V	.
19.000	0.1288	0.04	Q	.	.	.	V	.
19.017	0.1288	0.04	Q	.	.	.	V	.
19.033	0.1289	0.04	Q	.	.	.	V	.
19.050	0.1289	0.04	Q	.	.	.	V	.
19.067	0.1290	0.04	Q	.	.	.	V	.
19.083	0.1291	0.04	Q	.	.	.	V	.
19.100	0.1291	0.04	Q	.	.	.	V	.
19.117	0.1292	0.04	Q	.	.	.	V	.
19.133	0.1292	0.04	Q	.	.	.	V	.
19.150	0.1293	0.04	Q	.	.	.	V	.
19.167	0.1293	0.04	Q	.	.	.	V	.
19.183	0.1294	0.04	Q	.	.	.	V	.
19.200	0.1294	0.04	Q	.	.	.	V	.
19.217	0.1295	0.04	Q	.	.	.	V	.
19.233	0.1296	0.04	Q	.	.	.	V	.
19.250	0.1296	0.04	Q	.	.	.	V	.
19.267	0.1297	0.04	Q	.	.	.	V	.
19.283	0.1297	0.04	Q	.	.	.	V	.
19.300	0.1298	0.04	Q	.	.	.	V	.
19.317	0.1298	0.04	Q	.	.	.	V	.
19.333	0.1299	0.04	Q	.	.	.	V	.
19.350	0.1299	0.04	Q	.	.	.	V	.
19.367	0.1300	0.04	Q	.	.	.	V	.
19.383	0.1301	0.04	Q	.	.	.	V	.
19.400	0.1301	0.04	Q	.	.	.	V	.
19.417	0.1302	0.04	Q	.	.	.	V	.
19.433	0.1302	0.04	Q	.	.	.	V	.
19.450	0.1303	0.04	Q	.	.	.	V	.
19.467	0.1303	0.04	Q	.	.	.	V	.
19.483	0.1304	0.04	Q	.	.	.	V	.
19.500	0.1304	0.04	Q	.	.	.	V	.
19.517	0.1305	0.04	Q	.	.	.	V	.
19.533	0.1305	0.04	Q	.	.	.	V	.
19.550	0.1306	0.04	Q	.	.	.	V	.
19.567	0.1306	0.04	Q	.	.	.	V	.
19.583	0.1307	0.04	Q	.	.	.	V	.

19.600	0.1307	0.04	Q	.	.	.	V	.
19.617	0.1308	0.04	Q	.	.	.	V	.
19.633	0.1308	0.04	Q	.	.	.	V	.
19.650	0.1309	0.04	Q	.	.	.	V	.
19.667	0.1309	0.04	Q	.	.	.	V	.
19.683	0.1310	0.04	Q	.	.	.	V	.
19.700	0.1310	0.04	Q	.	.	.	V	.
19.717	0.1311	0.04	Q	.	.	.	V	.
19.733	0.1311	0.04	Q	.	.	.	V	.
19.750	0.1312	0.04	Q	.	.	.	V	.
19.767	0.1312	0.04	Q	.	.	.	V	.
19.783	0.1313	0.04	Q	.	.	.	V	.
19.800	0.1314	0.04	Q	.	.	.	V	.
19.817	0.1314	0.04	Q	.	.	.	V	.
19.833	0.1315	0.04	Q	.	.	.	V	.
19.850	0.1315	0.04	Q	.	.	.	V	.
19.867	0.1315	0.04	Q	.	.	.	V	.
19.883	0.1316	0.04	Q	.	.	.	V	.
19.900	0.1316	0.04	Q	.	.	.	V	.
19.917	0.1317	0.04	Q	.	.	.	V	.
19.933	0.1317	0.04	Q	.	.	.	V	.
19.950	0.1318	0.04	Q	.	.	.	V	.
19.967	0.1318	0.04	Q	.	.	.	V	.
19.983	0.1319	0.04	Q	.	.	.	V	.
20.000	0.1319	0.04	Q	.	.	.	V	.
20.017	0.1320	0.04	Q	.	.	.	V	.
20.033	0.1320	0.03	Q	.	.	.	V	.
20.050	0.1321	0.03	Q	.	.	.	V	.
20.067	0.1321	0.03	Q	.	.	.	V	.
20.083	0.1322	0.03	Q	.	.	.	V	.
20.100	0.1322	0.03	Q	.	.	.	V	.
20.117	0.1323	0.03	Q	.	.	.	V	.
20.133	0.1323	0.03	Q	.	.	.	V	.
20.150	0.1324	0.03	Q	.	.	.	V	.
20.167	0.1324	0.03	Q	.	.	.	V	.
20.183	0.1325	0.03	Q	.	.	.	V	.
20.200	0.1325	0.03	Q	.	.	.	V	.
20.217	0.1326	0.03	Q	.	.	.	V	.
20.233	0.1326	0.03	Q	.	.	.	V	.
20.250	0.1327	0.03	Q	.	.	.	V	.
20.267	0.1327	0.03	Q	.	.	.	V	.
20.283	0.1327	0.03	Q	.	.	.	V	.
20.300	0.1328	0.03	Q	.	.	.	V	.
20.317	0.1328	0.03	Q	.	.	.	V	.
20.333	0.1329	0.03	Q	.	.	.	V	.
20.350	0.1329	0.03	Q	.	.	.	V	.
20.367	0.1330	0.03	Q	.	.	.	V	.
20.383	0.1330	0.03	Q	.	.	.	V	.
20.400	0.1331	0.03	Q	.	.	.	V	.
20.417	0.1331	0.03	Q	.	.	.	V	.

20.433	0.1332	0.03	Q	.	.	.	V	.
20.450	0.1332	0.03	Q	.	.	.	V	.
20.467	0.1332	0.03	Q	.	.	.	V	.
20.483	0.1333	0.03	Q	.	.	.	V	.
20.500	0.1333	0.03	Q	.	.	.	V	.
20.517	0.1334	0.03	Q	.	.	.	V	.
20.533	0.1334	0.03	Q	.	.	.	V	.
20.550	0.1335	0.03	Q	.	.	.	V	.
20.567	0.1335	0.03	Q	.	.	.	V	.
20.583	0.1336	0.03	Q	.	.	.	V	.
20.600	0.1336	0.03	Q	.	.	.	V	.
20.617	0.1336	0.03	Q	.	.	.	V	.
20.633	0.1337	0.03	Q	.	.	.	V	.
20.650	0.1337	0.03	Q	.	.	.	V	.
20.667	0.1338	0.03	Q	.	.	.	V	.
20.683	0.1338	0.03	Q	.	.	.	V	.
20.700	0.1339	0.03	Q	.	.	.	V	.
20.717	0.1339	0.03	Q	.	.	.	V	.
20.733	0.1340	0.03	Q	.	.	.	V	.
20.750	0.1340	0.03	Q	.	.	.	V	.
20.767	0.1340	0.03	Q	.	.	.	V	.
20.783	0.1341	0.03	Q	.	.	.	V	.
20.800	0.1341	0.03	Q	.	.	.	V	.
20.817	0.1342	0.03	Q	.	.	.	V	.
20.833	0.1342	0.03	Q	.	.	.	V	.
20.850	0.1343	0.03	Q	.	.	.	V	.
20.867	0.1343	0.03	Q	.	.	.	V	.
20.883	0.1343	0.03	Q	.	.	.	V	.
20.900	0.1344	0.03	Q	.	.	.	V	.
20.917	0.1344	0.03	Q	.	.	.	V	.
20.933	0.1345	0.03	Q	.	.	.	V	.
20.950	0.1345	0.03	Q	.	.	.	V	.
20.967	0.1346	0.03	Q	.	.	.	V	.
20.983	0.1346	0.03	Q	.	.	.	V	.
21.000	0.1346	0.03	Q	.	.	.	V	.
21.017	0.1347	0.03	Q	.	.	.	V	.
21.033	0.1347	0.03	Q	.	.	.	V	.
21.050	0.1348	0.03	Q	.	.	.	V	.
21.067	0.1348	0.03	Q	.	.	.	V	.
21.083	0.1348	0.03	Q	.	.	.	V	.
21.100	0.1349	0.03	Q	.	.	.	V	.
21.117	0.1349	0.03	Q	.	.	.	V	.
21.133	0.1350	0.03	Q	.	.	.	V	.
21.150	0.1350	0.03	Q	.	.	.	V	.
21.167	0.1351	0.03	Q	.	.	.	V	.
21.183	0.1351	0.03	Q	.	.	.	V	.
21.200	0.1351	0.03	Q	.	.	.	V	.
21.217	0.1352	0.03	Q	.	.	.	V	.
21.233	0.1352	0.03	Q	.	.	.	V	.
21.250	0.1353	0.03	Q	.	.	.	V	.

21.267	0.1353	0.03	Q	.	.	.	V .
21.283	0.1353	0.03	Q	.	.	.	V .
21.300	0.1354	0.03	Q	.	.	.	V .
21.317	0.1354	0.03	Q	.	.	.	V .
21.333	0.1355	0.03	Q	.	.	.	V .
21.350	0.1355	0.03	Q	.	.	.	V .
21.367	0.1355	0.03	Q	.	.	.	V .
21.383	0.1356	0.03	Q	.	.	.	V .
21.400	0.1356	0.03	Q	.	.	.	V .
21.417	0.1357	0.03	Q	.	.	.	V .
21.433	0.1357	0.03	Q	.	.	.	V .
21.450	0.1357	0.03	Q	.	.	.	V .
21.467	0.1358	0.03	Q	.	.	.	V .
21.483	0.1358	0.03	Q	.	.	.	V .
21.500	0.1359	0.03	Q	.	.	.	V .
21.517	0.1359	0.03	Q	.	.	.	V .
21.533	0.1359	0.03	Q	.	.	.	V .
21.550	0.1360	0.03	Q	.	.	.	V .
21.567	0.1360	0.03	Q	.	.	.	V .
21.583	0.1361	0.03	Q	.	.	.	V .
21.600	0.1361	0.03	Q	.	.	.	V .
21.617	0.1361	0.03	Q	.	.	.	V .
21.633	0.1362	0.03	Q	.	.	.	V .
21.650	0.1362	0.03	Q	.	.	.	V .
21.667	0.1362	0.03	Q	.	.	.	V .
21.683	0.1363	0.03	Q	.	.	.	V .
21.700	0.1363	0.03	Q	.	.	.	V .
21.717	0.1364	0.03	Q	.	.	.	V .
21.733	0.1364	0.03	Q	.	.	.	V .
21.750	0.1364	0.03	Q	.	.	.	V .
21.767	0.1365	0.03	Q	.	.	.	V .
21.783	0.1365	0.03	Q	.	.	.	V .
21.800	0.1366	0.03	Q	.	.	.	V .
21.817	0.1366	0.03	Q	.	.	.	V .
21.833	0.1366	0.03	Q	.	.	.	V .
21.850	0.1367	0.03	Q	.	.	.	V .
21.867	0.1367	0.03	Q	.	.	.	V .
21.883	0.1367	0.03	Q	.	.	.	V .
21.900	0.1368	0.03	Q	.	.	.	V .
21.917	0.1368	0.03	Q	.	.	.	V .
21.933	0.1369	0.03	Q	.	.	.	V .
21.950	0.1369	0.03	Q	.	.	.	V .
21.967	0.1369	0.03	Q	.	.	.	V .
21.983	0.1370	0.03	Q	.	.	.	V .
22.000	0.1370	0.03	Q	.	.	.	V .
22.017	0.1370	0.03	Q	.	.	.	V .
22.033	0.1371	0.03	Q	.	.	.	V .
22.050	0.1371	0.03	Q	.	.	.	V .
22.067	0.1372	0.03	Q	.	.	.	V .
22.083	0.1372	0.03	Q	.	.	.	V .

22.100	0.1372	0.03	Q	.	.	.	V .
22.117	0.1373	0.03	Q	.	.	.	V .
22.133	0.1373	0.03	Q	.	.	.	V .
22.150	0.1373	0.03	Q	.	.	.	V .
22.167	0.1374	0.03	Q	.	.	.	V .
22.183	0.1374	0.03	Q	.	.	.	V .
22.200	0.1375	0.03	Q	.	.	.	V .
22.217	0.1375	0.03	Q	.	.	.	V .
22.233	0.1375	0.03	Q	.	.	.	V .
22.250	0.1376	0.03	Q	.	.	.	V .
22.267	0.1376	0.03	Q	.	.	.	V .
22.283	0.1376	0.03	Q	.	.	.	V .
22.300	0.1377	0.03	Q	.	.	.	V .
22.317	0.1377	0.03	Q	.	.	.	V .
22.333	0.1377	0.03	Q	.	.	.	V .
22.350	0.1378	0.03	Q	.	.	.	V .
22.367	0.1378	0.03	Q	.	.	.	V.
22.383	0.1378	0.03	Q	.	.	.	V.
22.400	0.1379	0.03	Q	.	.	.	V.
22.417	0.1379	0.03	Q	.	.	.	V.
22.433	0.1380	0.03	Q	.	.	.	V.
22.450	0.1380	0.03	Q	.	.	.	V.
22.467	0.1380	0.03	Q	.	.	.	V.
22.483	0.1381	0.03	Q	.	.	.	V.
22.500	0.1381	0.03	Q	.	.	.	V.
22.517	0.1381	0.03	Q	.	.	.	V.
22.533	0.1382	0.03	Q	.	.	.	V.
22.550	0.1382	0.03	Q	.	.	.	V.
22.567	0.1382	0.03	Q	.	.	.	V.
22.583	0.1383	0.03	Q	.	.	.	V.
22.600	0.1383	0.03	Q	.	.	.	V.
22.617	0.1383	0.03	Q	.	.	.	V.
22.633	0.1384	0.03	Q	.	.	.	V.
22.650	0.1384	0.03	Q	.	.	.	V.
22.667	0.1385	0.03	Q	.	.	.	V.
22.683	0.1385	0.03	Q	.	.	.	V.
22.700	0.1385	0.03	Q	.	.	.	V.
22.717	0.1386	0.03	Q	.	.	.	V.
22.733	0.1386	0.03	Q	.	.	.	V.
22.750	0.1386	0.03	Q	.	.	.	V.
22.767	0.1387	0.03	Q	.	.	.	V.
22.783	0.1387	0.03	Q	.	.	.	V.
22.800	0.1387	0.03	Q	.	.	.	V.
22.817	0.1388	0.02	Q	.	.	.	V.
22.833	0.1388	0.02	Q	.	.	.	V.
22.850	0.1388	0.02	Q	.	.	.	V.
22.867	0.1389	0.02	Q	.	.	.	V.
22.883	0.1389	0.02	Q	.	.	.	V.
22.900	0.1389	0.02	Q	.	.	.	V.
22.917	0.1390	0.02	Q	.	.	.	V.

22.933	0.1390	0.02	Q	.	.	.	V.
22.950	0.1390	0.02	Q	.	.	.	V.
22.967	0.1391	0.02	Q	.	.	.	V.
22.983	0.1391	0.02	Q	.	.	.	V.
23.000	0.1391	0.02	Q	.	.	.	V.
23.017	0.1392	0.02	Q	.	.	.	V.
23.033	0.1392	0.02	Q	.	.	.	V.
23.050	0.1392	0.02	Q	.	.	.	V.
23.067	0.1393	0.02	Q	.	.	.	V.
23.083	0.1393	0.02	Q	.	.	.	V.
23.100	0.1393	0.02	Q	.	.	.	V.
23.117	0.1394	0.02	Q	.	.	.	V.
23.133	0.1394	0.02	Q	.	.	.	V.
23.150	0.1394	0.02	Q	.	.	.	V.
23.167	0.1395	0.02	Q	.	.	.	V.
23.183	0.1395	0.02	Q	.	.	.	V.
23.200	0.1395	0.02	Q	.	.	.	V.
23.217	0.1396	0.02	Q	.	.	.	V.
23.233	0.1396	0.02	Q	.	.	.	V.
23.250	0.1396	0.02	Q	.	.	.	V.
23.267	0.1397	0.02	Q	.	.	.	V.
23.283	0.1397	0.02	Q	.	.	.	V.
23.300	0.1397	0.02	Q	.	.	.	V.
23.317	0.1398	0.02	Q	.	.	.	V.
23.333	0.1398	0.02	Q	.	.	.	V.
23.350	0.1398	0.02	Q	.	.	.	V.
23.367	0.1399	0.02	Q	.	.	.	V.
23.383	0.1399	0.02	Q	.	.	.	V.
23.400	0.1399	0.02	Q	.	.	.	V.
23.417	0.1400	0.02	Q	.	.	.	V.
23.433	0.1400	0.02	Q	.	.	.	V.
23.450	0.1400	0.02	Q	.	.	.	V.
23.467	0.1401	0.02	Q	.	.	.	V.
23.483	0.1401	0.02	Q	.	.	.	V.
23.500	0.1401	0.02	Q	.	.	.	V.
23.517	0.1402	0.02	Q	.	.	.	V.
23.533	0.1402	0.02	Q	.	.	.	V.
23.550	0.1402	0.02	Q	.	.	.	V.
23.567	0.1403	0.02	Q	.	.	.	V.
23.583	0.1403	0.02	Q	.	.	.	V.
23.600	0.1403	0.02	Q	.	.	.	V.
23.617	0.1404	0.02	Q	.	.	.	V.
23.633	0.1404	0.02	Q	.	.	.	V.
23.650	0.1404	0.02	Q	.	.	.	V.
23.667	0.1405	0.02	Q	.	.	.	V.
23.683	0.1405	0.02	Q	.	.	.	V.
23.700	0.1405	0.02	Q	.	.	.	V.
23.717	0.1405	0.02	Q	.	.	.	V.
23.733	0.1406	0.02	Q	.	.	.	V.
23.750	0.1406	0.02	Q	.	.	.	V.

23.767	0.1406	0.02	Q	.	.	.	V.
23.783	0.1407	0.02	Q	.	.	.	V.
23.800	0.1407	0.02	Q	.	.	.	V.
23.817	0.1407	0.02	Q	.	.	.	V.
23.833	0.1408	0.02	Q	.	.	.	V.
23.850	0.1408	0.02	Q	.	.	.	V.
23.867	0.1408	0.02	Q	.	.	.	V.
23.883	0.1409	0.02	Q	.	.	.	V.
23.900	0.1409	0.02	Q	.	.	.	V.
23.917	0.1409	0.02	Q	.	.	.	V.
23.933	0.1410	0.02	Q	.	.	.	V.
23.950	0.1410	0.02	Q	.	.	.	V.
23.967	0.1410	0.02	Q	.	.	.	V.
23.983	0.1410	0.02	Q	.	.	.	V.
24.000	0.1411	0.02	Q	.	.	.	V.
24.017	0.1411	0.02	Q	.	.	.	V.
24.033	0.1411	0.02	Q	.	.	.	V.
24.050	0.1412	0.02	Q	.	.	.	V.
24.067	0.1412	0.02	Q	.	.	.	V.
24.083	0.1412	0.02	Q	.	.	.	V.
24.100	0.1413	0.02	Q	.	.	.	V.
24.117	0.1413	0.02	Q	.	.	.	V.
24.133	0.1413	0.01	Q	.	.	.	V.
24.150	0.1413	0.01	Q	.	.	.	V.
24.167	0.1413	0.01	Q	.	.	.	V.

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
(Note: 100% of Peak Flow Rate estimate assumed to have
an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
0%	1450.0
10%	165.0
20%	105.0
30%	75.0
40%	65.0
50%	55.0
60%	45.0
70%	35.0
80%	25.0
90%	10.0

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END OF FLOODSCx ROUTING ANALYSIS

Appendix E

O&M

PRELIMINARY

Operation and maintenance of dry swale (grass swale)

Green Infrastructure: Dry swales can be an important tool for retention and detention of stormwater runoff. Depending on design and construction, swales may provide additional benefits, including cleaner air, carbon sequestration, improved biological habitat, and aesthetic value. See the section Green Infrastructure for stormwater management.

The most frequently cited maintenance concern for dry swales is surface soil/media and underdrain (https://stormwater.pca.state.mn.us/index.php?title=Glossary#U) clogging caused by organic matter, fine silts, hydrocarbons, and algal matter. Common operational problems include:

- standing water after required 48 hour drawdown time;
- clogged soil/media surface;
- clogged inlet, outlet or underdrains; and
- invasive plants that out-compete native vegetation.

Photo of a well-maintained dry swale. Courtesy of Limnotech.

Contents

- 1 Design phase maintenance
- 2 Construction phase maintenance
- 3 Post-construction operation and maintenance
- 4 Inspection and maintenance planning
  - 4.1 Summary of typical maintenance regime
- 5 Estimated hours to perform maintenance activities
- 6 Erosion protection and sediment monitoring, removal, and disposal
- 7 Seeding, planting, and landscaping maintenance
- 8 Sustainable service life
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- 10 Maintenance agreements
- 11 Maintenance inspection reports
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Design phase maintenance

Implicit in the design guidance is the fact that many design elements of infiltration (https://stormwater.pca.state.mn.us/index.php?title=Glossary#F) and filtration (https://stormwater.pca.state.mn.us/index.php?title=Glossary#F) systems can minimize the maintenance burden and maintain pollutant removal efficiency. Key examples include:

- limiting drainage area;
- providing easy site access (REQUIRED);
- providing pretreatment (REQUIRED); and
- utilizing native plantings (see Plants for Stormwater Design (https://www.pca.state.mn.us/water/plants-stormwater-design) and Minnesota plant lists).

For more information on design information for dry swales, link here (https://stormwater.pca.state.mn.us/index.php?title=Design_criteria_for_dry_swale_(grass_swale)).

Construction phase maintenance

Proper construction methods and sequencing play a significant role in reducing problems with operation and maintenance (O&M). In particular, with construction of filtration and infiltration practices the most important action for preventing operation and maintenance difficulties is to ensure that the contributing drainage area has been fully stabilized prior to bringing the practice on line.

Warning: It is required that the contributing drainage area has been fully stabilized prior to bringing the practice on line

Inspections during construction are needed to ensure that the filtration or infiltration practice is built in accordance with the approved design standards and specifications. Detailed inspection checklists should be used that include sign-offs by qualified individuals at critical stages of construction, to ensure that the contractor's interpretation of the plan is acceptable to the professional designer. An example construction phase inspection checklist is provided below.

Dry swale construction inspection checklist.
Link to this table
To access an Excel version of form (for field use), click here.

Project:
Location:
Site Status:
Date:
Time:
Inspector:

Construction Sequence	Satisfactory / Unsatisfactory	Comments
1. Pre-Construction		

Pre-construction meeting

Runoff diverted (Note type of bypass)

Facility area cleared

Soil tested for permeability

Soil tested for phosphorus content (include test method)

Verify site was not overdug

Project benchmark near site

Facility location staked out

Temporary erosion and sediment protection properly installed

2. Excavation

Lateral slopes completely level

Soils not compacted during excavation

Longitudinal slopes within design range

Stockpile location not adjacent to excavation area and stabilized with vegetation and/ or silt fence

Verify stockpile is not causing compaction and that it is not eroding

Was underlying soil ripped or loosened

Size, location, and inverts per plans

Side slopes stable

Groundwater / bedrock verified

3. Structural Components

Stone diaphragm installed per plans

Outlets installed pre plans

Check dams installed per plans

Underdrain installed to grade

Pretreatment devices installed per plans

Soil bed composition and texture conforms to specifications

Inlets installed per plans

Underdrain installed per plans

4. Vegetation

For native dry swales, plants and materials ordered 6 months prior to construction

For native dry swales, construction planned to allow for adequate planting and establishment of plant community

Complies with planting specs

Topsoil complies with specs in composition and placement

Soil properly stabilized for permanent erosion control

5. Final Inspection

Dimensions per plans

Pretreatment operational

Check dams operational

Inlet/outlet/underdrain operational

Soil/media/filter bed permeability verified

Effective stand of vegetation stabilized

Construction generated sediments removed

Contributing watershed stabilized before flow is diverted to the practice

Comments:

Actions to be taken:

Post-construction operation and maintenance

Proper maintenance is critical to the successful operation of a filtration or infiltration practice. Without regular maintenance, the soil or media of the filtration or infiltration systems can become clogged, losing its ability to conduct and infiltrate water at the designed rate. This can lead to stagnant water, mosquito breeding habitat, and reduction or elimination of pollutant removal capacity.

Warning: A maintenance plan clarifying maintenance responsibility is REQUIRED. Effective long-term operation of filtration and infiltration practices necessitates a dedicated and routine maintenance schedule with clear guidelines and schedules. Proper maintenance will not only increase the expected lifespan of the facility but will improve aesthetics and property value.

Inspection and maintenance planning

A maintenance plan clarifying maintenance responsibilities is REQUIRED. Effective long-term operation of filtration and infiltration practices necessitates a dedicated and routine maintenance schedule with clear guidelines and schedules. Proper maintenance will not only increase the expected lifespan of the facility but will improve aesthetics and property value. Some important post-construction considerations are provided below along with RECOMMENDED maintenance standards.

- A site-specific O&M plan that includes the following considerations should be prepared by the designer prior to putting the stormwater practice into operation:
  - Inspection and routine maintenance checklist (see below)
  - Operating instructions for any outlet components
  - Vegetation maintenance schedule (see item 2 in checklist below and section below (https://stormwater.pca.state.mn.us/index.php?title=Operation_and_maintenance_of_dry_swale_(grass_swale)#Summary_of_typical_maintenance_regime))
- A legally binding and enforceable maintenance agreement should be executed between the practice owner and the local review authority to ensure the following:
  - Sediment should be cleaned out of any sedimentation chamber when it accumulates to a depth equal to ½ the total depth to the outlet, or when greater than 1.5 feet, whichever is less. The sediment chamber outlet devices should be cleaned/repaired when drawdown times exceed 36 hours. Trash and debris should be removed as necessary; and
  - Silt/sediment should be removed from the swale bottom when the accumulation exceeds one inch. When the soil/media's infiltration capacity diminishes substantially (i.e., when water ponds in flat areas or subtle depressions for more than 48 hours), the top few inches of discolored material (visually different from the unclogged soil below) should be removed, core aeration or cultivation should be conducted as warranted, removed soil should be replaced with fresh soil/media, and appropriate vegetation should be installed (e.g., seed) and secured (e.g., erosion control blanket (https://stormwater.pca.state.mn.us/index.php?title=Erosion_prevention_practices_-_erosion_control_blankets_and_anchoring_devices)). Removed sediments should be disposed in an acceptable manner.
- Turf grass swales should be mowed as needed during the growing season to maintain grass heights between 4 and 12 inches.

- Adequate access must be provided for inspection, maintenance and landscaping upkeep, including appropriate equipment and vehicles.
- Maintenance activities should be careful not to cause compaction. No vehicles will be allowed within the footprint of the filtration or infiltration area. Foot traffic and stockpiling should be kept to a minimum.
- Dry swales generally should not be used as dedicated snow storage areas, but can be with the following considerations.
    - Snow storage should not occur in areas designated as potential stormwater hotspots (https://stormwater.pca.state.mn.us/index.php?title=Potential_stormwater_hotspots) for road salt.
    - Areas designed for infiltration should be protected from excessive snow storage where sand and salt is applied.
    - Specific snow storage areas should be assigned that will provide some filtration before the stormwater reaches the BMP areas. NOTE: Chloride will not be attenuated in filtration or infiltration BMPs such as dry swales.
    - When used for snow storage, or if used to treat parking lot runoff, the BMP area should be planted with salt tolerant and non-woody plant species (https://stormwater.pca.state.mn.us/index.php?title=Minnesota_plant_lists#Salt_tolerance).
    - BMPs should always be inspected for sand build-up on the surface following the spring melt event.
    - General maintenance activities and schedule are provided below.

Dry swale operation and maintenance checklist.
Link to this table
To access an Excel version of form (for field use), click here.

Project:
Location:
Site Status:
Date:
Time:
Inspector:

Maintenance Item	Satisfactory / Unsatisfactory	Comments
1. Debris Cleanout (Monthly)		
Contributing areas clean of litter and vegetative debris		
Filtration or infiltration facility clean		
Inlets and outlets clear		
2. Vegetation (Monthly)		
Vegetation maintenance complies with O&M plan		
Vegetation meets performance standards (including control of specified invasive species)		
Plant composition according to O&M plan		
Minimum mowing depth not exceeded		
No evidence of erosion		
3. Dewatering (monthly)		
Dewaters between storms within 48 hours		
4. Sediment Deposition (Annual)		
Area clean of sediment		
Contributing drainage area stabilized and free of erosion		
Winter accumulation of sand removed each spring		
5. Outlet/Overflow Spillway (Annual, After Major Storms)		

Good condition, no need for repair
No evidence of erosion
No evidence of any blockages
No evidence of structural deterioration

6. Other (Monthly)

Encroachment on easement area (if applicable)
Complaints from residents (if applicable)
Any public hazards (specify)
Comments:
Actions to be taken:

Summary of typical maintenance regime

The list below highlights the assumed maintenance regime for a dry swale.

- First year after planting
  - Adequate water is crucial to plant survival and temporary irrigation may be needed unless rainfall is adequate until plants mature
  - Inspect after significant rain events (e.g. >0.5 inch)
- As needed
  - Prune and weed to maintain appearance
  - Remove trash and debris
  - Mow filter strip/grass channel (if present)
  - Replace vegetation whenever the percent cover of acceptable vegetation falls below 90 percent or project specific performance requirements are not met. If vegetation suffers for no apparent reason, consult with horticulturist and/or test soil as needed
  - Repair any structural damage to check dams (https://stormwater.pca.state.mn.us/index.php?title=Check_dams_for_stormwater_swales) or tie-in to downstream channel
- Semi-annually
  - Inspect inflow and pretreatment systems for clogging (off-line systems) and remove any sediment
  - Inspect filter strip/grass channel for erosion or gullying. Sod as necessary
  - Herbaceous vegetation, trees and shrubs should be inspected to evaluate their health and replanted as appropriate to meet project goals
  - Remove any dead or severely diseased vegetation
- Annually in fall
  - Inspect and remove any sediment and debris build-up in pretreatment areas
  - Inspect inflow points and infiltration surface for buildup of road sand associated with spring melt period, remove as necessary to maintain infiltration rates and volume capacity, and replant areas that have been impacted by sand/salt build up
  - Check structural stability of check dams
- Annually in spring
  - Cut back and remove previous year's plant material and remove accumulated leaves if needed (or conduct controlled burn where appropriate)

Estimated hours to perform maintenance activities

All estimated hours listed below would be to perform maintenance on a dry swale system approximately 1,000 square feet in size that has adequate pretreatment and where seed and/or live plants have been installed appropriately. The times do not include travel times.

- Plant Establishment Period (First two years)
  - Monthly weeding – 12 visits (6 per year) at 1 hour per visit
  - Vegetation replacement – 1 overseeding or replanting effort, 2 hours (assuming 10 percent warrants replacement)
  - Spring cleanup (cut back of previous years vegetation) – 2 cleanups (1 per year) at 2 hours each
  - Erosion, sediment, and pretreatment cleanout – 2 cleanouts (1 per year) at 1 hour each (assuming vacuum truck clean-out of any sump catch basins)
- Regular Maintenance (After first two years)
  - Bi-monthly (every other month) weeding – 3 visits per year at 1 hour per visit
  - Vegetation replacement – 1 overseeding or replanting effort per year on average, 1 hour (assuming 5 percent warrants replacement)
  - Spring cleanup (cut back of previous years vegetation) – 1 per year at 2 hours
  - Erosion, sediment, and pretreatment cleanout – 2 hours per year on average (assuming vacuum truck clean-out of any sump catch basins once per year, and at least one bi-yearly (every other year) sediment removal from the bottom of the swale)

Erosion protection and sediment monitoring, removal, and disposal

Regular inspection of not only the BMP but also the immediate surrounding catchment area is necessary to ensure a long lifespan of the water quality improvement feature. Erosion should be identified as soon as possible to avoid the contribution of significant sediment to the BMP.

Pretreatment devices need to be maintained for long-term functionality of the entire BMP. Accumulated sediment in filter strips, rock diaphragms, water quality sump catch basins, or any pretreatment features will need to be inspected yearly.

Timing of cleaning of these features is dependent on their design and sediment storage capabilities. In watersheds with erosion or high sediment loadings, the frequency of clean out will likely be increased. A vacuum truck is typically used for sediment removal. It is possible that any sediment removed from pretreatment devices or from the bottom of a dry swale may contain high levels of pollutants. All sediments, similar to those retrieved from a stormwater pond during dredging, may be subjected to the MPCA's guidance for reuse and disposal (https://www.pca.state.mn.us/sites/default/files/wq-strm4-16.pdf).

Sediment loading can potentially lead to a drop in infiltration or filtration rates. It is recommended that infiltration performance evaluations follow the four level assessment systems in Stormwater Treatment: Assessment and Maintenance (http://stormwaterbook.safl.umn.edu/) (Gulliver et al., 2010). See Assessing the performance of dry swale (grass swale) for a summary of assessment methods.

Seeding, planting, and landscaping maintenance

Plant selection during the design process is essential to limit the amount of maintenance required. It is also critical to identify who will be maintaining the BMP in perpetuity and to design the plantings or seedings accordingly. The decision to install containerized plants or to seed will dictate the appearance of the BMP for years to come. If the BMP is designed to be seeded with an appropriate native plant based seed mix, it is essential the owner have trained staff or the ability to hire specialized management professionals. Seedings can provide plant diversity and dense coverage that helps maintain drawdown rates, but landscape management professionals that have not been trained to identify and appropriately manage weeds within the seeding may inadvertently allow the BMP to become infested and the designed plant diversity be lost. The following are minimum requirements for seed establishment and plant coverage.

- At least 50 percent of specified vegetation cover at end of the first growing season, not including REQUIRED cover crop

- At least 90 percent of specified vegetation cover at end of the third growing season, not including REQUIRED cover crop
- Supplement seeding/plantings to meet project specifications if cover requirements are not met
- Tailor percent coverage requirements to project goals and vegetation. For example, percent cover required for turf after one growing season would likely be 100 percent, whereas it would be lower for other vegetation types.

For information on plant selection, link here (https://stormwater.pca.state.mn.us/index.php/Minnesota_plant_lists) or link here (https://stormwater.pca.state.mn.us/index.php?title=Plants_for_swales).

For proper nutrient control, swales must not be fertilized unless a soil test from a certified lab indicates nutrient deficiency. If this is the case, apply the minimum rate of appropriate nutrients to provide a suitable environment for vegetation establishment while also minimizing the mobilization (and loss) of nutrients to downstream receiving waters. Irrigation may be needed during establishment, depending on soils, precipitation, and if stormwater flows are kept off-line during establishment.

Weeding is especially important during the plant establishment period, when vegetation cover is not 100 percent yet. Some weeding will always be needed. It is also important to budget for some plant replacement (at least 5 to 10 percent of the original plantings or seedings) during the first few years in case some of the plants or seed that were originally installed don't become vigorous. It is HIGHLY RECOMMENDED that the install contractor be responsible for a plant warranty period. Typically, plant warranty periods can be 60 days or up to one year from preliminary acceptance through final inspections. If budget allows, installing larger plants (#1 container vs. 4" pot) during construction can decrease replacement rates if properly cared for during the establishment period.

Weeding in years after initial establishment should be targeted and thorough. Total eradication of aggressive weeds at each maintenance visit will ultimately reduce the overall effort required to keep the BMP weed free. Mulch is generally not recommended for use in swales since flowing water typically washes it downstream; however, mulch may be appropriate in planting beds or around individual trees on upper sideslopes and adjacent areas.

Rubbish and trash removal will likely be needed more frequently than in the adjacent landscape. Trash removal is important for prevention of mosquitoes and for the overall appearance of the BMP.

Sustainable service life

The service life of swales depends upon the pollutant of concern.

Infiltration rate service life before clogging

It is known that plant roots are essential in macropore formation, which helps maintain infiltration into soil. If proper pretreatment is present, service life for infiltration should be unlimited. However, if construction site runoff (or another source of fines) is not prevented from entering the swale, clogging will occur, limiting or eliminating the infiltration function of the system, thus requiring restorative maintenance or repair (Brown and Hunt, 2010).

Nitrogen reduction

Nitrogen removal is not a primary function of dry swales.

Phosphorus reduction

Phosphorus (P) removal in swales is achieved primarily through infiltration and sorption of phosphorus to trapped sediments. Sediment bound phosphorus is removed through sedimentation, while removal of soluble phosphorus depends on the type of soil/media used. If the soil/media is already saturated with P (i.e., its P binding sites are full), it will not be able to retain additional dissolved P and the P in stormwater will tend to leach from the soil/media as it passes through the biofilter (Hunt et al., 2006). It is highly recommended that the P-index of the media at installation be below 30, which equates to less than 36 milligrams per kilogram P, to ensure P removal capacity. Laboratory research has suggested an oxalate extractable P concentration of 20 to 40 milligrams per liter will provide consistent removal of P (O'Neill and Davis, 2012). Leaching of phosphorus from soil or media is a concern for filtration swales (those having an underdrain). For information on phosphorus leaching from bioretention media, link here (https://stormwater.pca.state.mn.us/index.php?title=Design_criteria_for_bioretention#Addressing_phosphorus_leaching_concerns_with_media_mixes).

Heavy metals retention

Metals are typically retained in infiltration systems (including dry swales) through sedimentation and adsorption processes. Since there are a finite amount of sorption sites for metals in a particular soil/media, there will be a finite service life for the removal of dissolved metals. Morgan et al. (2011) investigated cadmium, copper, and zinc removal and retention with batch and column experiments. Using synthetic stormwater at typical stormwater concentrations, they found that 6 inches of filter media composed of 30 percent compost and 70 percent sand will last 95 years until breakthrough (i.e., when the effluent concentration is 10 percent of the influent concentration). They also found that increasing compost from 0 percent to 10 percent more than doubles the expected lifespan for 10 percent breakthrough in 6 inches of filter media for retainage of cadmium and zinc. Using accelerated dosing laboratory experiments, Hatt et al. (2011) found that breakthrough of Zn was observed after 2000 pore volumes, but did not observe breakthrough for Cd, Cu, and Pb after 15 years of synthetic stormwater passed through the media. However, concentrations of Cd, Cu, and Pb on soil/media particles exceeded human and/or ecological health levels, which could have an impact on disposal if the soil/media needed replacement. Since the majority of metals retainage occurs in the upper 2 to 4 inches of the soil/media (Li and Davis, 2008), long-term metals capture may only require rejuvenation of the upper portion of the media.

Polycyclic aromatic hydrocarbons (PAHs) reduction

Accumulation of polycyclic aromatic hydrocarbons (PAHs) in sediments has been found to be so high in some stormwater retention ponds that disposal costs for the dredging spoils were prohibitively high. Research has shown that rain gardens, on the other hand, are "a viable solution for sustainable petroleum hydrocarbon removal from stormwater, and that vegetation can enhance overall performance and stimulate biodegradation." (Lefevre et al., 2012). Dry swales provide some of the same functions as rain gardens, and therefore would be expected to provide some PAH management. However, swale performance in PAH management has not been the focus of any identified studies.

Typical maintenance problems and activities

The following table summarizes common maintenance concerns, suggested actions, and recommended maintenance schedule.

Typical maintenance problems and activities for dry swales
Link to this table

Inspection Focus	Common Maintenance Problems	Maintenance Activity	Recommended Maintenance Schedule

Inspection Focus	Common Maintenance Problems	Maintenance Activity	Recommended Maintenance Schedule
Drainage Area and Drawdown Time	Clogging, sediment deposition	Ensure that contributing catchment areas to practice, and inlets are clear of debris	Monthly
	Erosion of catchment area contributing significant amount of sediment	In case of severely reduced drawdown time, scrape bottom of basin and remove sediment. Disc or otherwise aerate/scarify basin bottom. De-thatch if basin bottom is turf grass. Restore original design cross section or revise section to increase infiltration rate and restore with vegetation as necessary.	Upon identification of drawdown times longer than 48 hours or upon complete failure
Site Erosion	Scouring at inlets	Correct earthwork to promote non-erosive flows that are evenly distributed	As necessary
	Unexpected flow paths into practice	Correct earthwork to eliminate unexpected drainage or created additional stable inlets as necessary	As necessary
Vegetation	Reduced drawdown time damaging plants	Correct drainage issues as described above	Replace with appropriate plants after correction of drainage issues
	Severe weed establishment	Limit the ability for noxious weed establishment by properly mowing, mulching or timely herbicide or hand weeding. Refer to the MDA Noxious Weed List (http://www.mda.state.mn.us/plants/pestmanagement/weedcontrol/noxiouslist.aspx)	Bi-monthly April through October
	Vegetative cover	Add seed/plants to maintain ≥95% vegetative cover.	Bi-monthly April through October

Maintenance agreements

A Maintenance Agreement is a legally binding agreement between two parties, and is defined as ”a nonpossessory right to use and/or enter onto the real property of another without possessing it.“ Maintenance Agreements are often required for the issuance of a permit for construction of a stormwater management feature and are written and approved by legal counsel. Maintenance Agreements are often similar to Construction Easements. A Maintenance Agreement is required for one party to define and enforce maintenance by another party. The Agreement also defines site access and maintenance of any features or infrastructure if the property owner fails to perform the required maintenance.

Maintenance Agreements are commonly established for a defined period such as five years for a residential site or 10 to 20 years for a commercial/governmental site after construction of the infiltration or filtration practice. Maintenance agreements often define the types of inspection and maintenance that would be required for that infiltration or filtration practice and what the timing and duration of the inspections and maintenance may be. Essential inspection and maintenance activities include but are not limited to drawdown time, sediment removal, erosion monitoring and correction, and vegetative maintenance and weeding. If maintenance is required to be performed due to failure of the site owner to properly maintain the infiltration or filtration practices, payment or reimbursement terms of the maintenance work are defined in the Agreement. Below is an example list of maintenance standards from an actual Maintenance Agreement.

1. Live plantings and seeding areas shall be watered as necessary to achieve performance standards.

2. Weeding and vegetation management (e.g., mowing, spot spraying) shall be conducted as necessary to achieve performance standards.
3. Dead plant material, garbage, and other debris shall be removed from the swale at least annually.
4. Silt/sediment should be removed from the swale bottom when the accumulation exceeds one inch.
5. Side slopes must be inspected for erosion and the formation of rills or gullies at least annually, and erosion problems must be corrected immediately.
6. If properly planned, designed, constructed, and maintained (including protected from sediment and compaction and incorporating sufficient pretreatment), a dry swale is likely to retain its effectiveness for well over 20 years. After that time, inspection will reveal whether sedimentation warrants scraping out the swale bottom and replanting it.

In some project areas, a drainage easement may be required. Having an easement provides a mechanism for enforcement of maintenance agreements to help ensure swales are maintained and functioning. Drainage easements also require that the land use not be altered in the future. Drainage easements exist in perpetuity and are required property deed amendment to be passed down to all future property owners.

As defined by the Maintenance Agreement, the landowner should agree to provide notification immediately upon any change of the legal status or ownership of the property. Copies of all duly executed property transfer documents should be submitted as soon as a property transfer is made final.

- Example Maintenance Agreement 1 (https://stormwater.pca.state.mn.us/index.php?title=Example_Maintenance_Agreement_1)
- Example Maintenance Agreement 2 (https://stormwater.pca.state.mn.us/index.php?title=Example_Maintenance_Agreement_2)
- Example Maintenance Agreement 3 (https://stormwater.pca.state.mn.us/index.php?title=Example_Maintenance_Agreement_3)

Maintenance inspection reports

To link to the maintenance inspection report, click here. The contents of the inspection form are provided below. For another source of information on visual indicators, see Chesapeake Stormwater visual indicators form (http://chesapeakestormwater.net/wp-content/uploads/downloads/2012/06/Visual-Indicators-Form.pdf).

Maintenance Inspection Report for Dry Swale with Check Dams and Stormwater Step Pool. Can be used for wet swales with exceptions, as noted in footnotes.

Date: _____

Inspector Name/Address/Phone Number: _____

Site Address: _____

Owner Name/Address/Phone Number: _____

Drainage Area Stabilization (Inspect after large storms for first two years, Inspect yearly in spring or after large storms after first two years)

- Erosion control/planting/seeding necessary: _____
- Mowing, pruning and debris removal necessary: _____
- Observations:

_____

_____

Inlets & Pretreatment Structures (Inspect in Spring and Fall)

- Repair needed: _____
- Debris & sediment removal required: _____
- Erosion evident: _____
- Water by-passing inlet: _____
- Vegetation control necessary: _____
- Observations:

_____

_____

Swale (Inspect after large storms for first two years, Inspect yearly in spring or after large storms after first two years)

- Condition of infiltration area[1]: _____
- Condition of check dams: _____
- Surface erosion evident: _____
- Debris/sediment removal required: _____
- Adequate drawdown/standing water[2]: _____
- Weeding and pruning necessary: _____
- Mulch replacement necessary[3]: _____
- Observations:

_____

_____

Outlet/Emergency Overflow (Inspect in Spring and Fall)

- Overflow type: _____
- Debris/sediment removal required: _____
- Repair needed: _____
- Observations:

_____

_____

[1]For wet swale, check condition of inundated area

[2]For wet swale with check dam, drawdown applies to the water elevation at the botton of weir

[3]Not applicable for wet swale

Related pages

- Terminology for swales (grass channels)
- Overview for dry swale (grass swale)
- Types of infiltration
- Types of filtration
- Design criteria for dry swale (grass swale)
- Construction specifications for dry swale (grass swale)
- Operation and maintenance of dry swale (grass swale)
- Assessing the performance of dry swale (grass swale)

- Calculating credits for dry swale (grass swale)
- Cost considerations for dry swale (grass swale)
- Case studies for dry swale (grass swale)
- Plants for swales
- Check dams for stormwater swales
- External resources for dry swale (grass swale)
- References for dry swale (grass swale)
- Requirements, recommendations and information for using dry swale (grass swale) without an underdrain in the MIDS calculator (https://stormwater.pca.state.mn.us/index.php?title=Requirements,_recommendations_and_information_for_using_swale_without_an_underdrain_as_a_BMP_in_the_MIDS_calculator)
- Requirements, recommendations and information for using dry swale (grass swale) with an underdrain in the MIDS calculator (https://stormwater.pca.state.mn.us/index.php?title=Requirements,_recommendations_and_information_for_using_swale_with_an_underdrain_as_a_BMP_in_the_MIDS_calculator)
- Requirements, recommendations and information for using swale side slope as a BMP in the MIDS calculator
- Dry swale (grass swale) and interesting websites

Retrieved from "https://stormwater.pca.state.mn.us/index.php?title=Operation_and_maintenance_of_dry_swale_(grass_swale)&oldid=37773"

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Appendix F

Encumbrance Map

PRELIMINARY

LEGAL DESCRIPTION

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE CITY OF LAKE FOREST IN THE COUNTY OF ORANGE, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

PARCEL 1:

PARCEL A OF PARCEL MAP NO. 86–133, IN THE CITY OF LAKE FOREST, COUNTY OF ORANGE, STATE OF CALIFORNIA, AS PER MAP ON FILE IN BOOK 225 PAGES 7 TO 13 INCLUSIVE OF PARCEL MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

EXCEPT ONE–HALF OF ALL MINERALS, OIL, AND/OR ASPHALTUM OF EVERY KIND OR CHARACTER IN OR UNDER SAID PROPERTY, AND ONE–HALF OF EVERY MINERAL OR OIL RIGHT THEREIN, THEREUNTO AND THEREUNDER, AS EXCEPTED IN THE DEED FROM THE WHITING COMPANY TO BENNIE W. OSTERMAN AND CYNTHIA A. OSTERMAN, RECORDED APRIL 30, 1928, IN BOOK 153 PAGE 320 OF OFFICIAL RECORDS.

PARCEL 2:

PARCEL A: (FEE PARCEL)

THAT PORTION OF LOT(S) F OF TRACT NO. 695, IN THE CITY OF LAKE FOREST, COUNTY OF ORANGE, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 25 PAGE(S) 1 OF MISCELLANEOUS MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT 615.77 FEET NORTH 23°03'40" WEST FROM THE MOST WESTERLY CORNER OF LOT G OF TRACT NO. 695; THENCE NORTH 53°25'30" EAST 160.00 FEET; THENCE NORTH 36°34'30" WEST 167.00 FEET; THENCE SOUTH 56°25'30" WEST 60.00 FEET; THENCE SOUTH 15°36'45" WEST 135.57 FEET; THENCE SOUTH 46°14'30" EAST 95.00 FEET TO THE POINT OF BEGINNING.

EXCEPT THEREFROM ONE–HALF OF ALL MINERALS, OILS AND/OR ASPHALTUM OF EVERY KIND OR CHARACTER IN OR UNDER SAID PROPERTY, AND ONE–HALF OF EVERY MINERAL OR OIL RIGHT THEREIN, THEREUNTO AND THEREUNDER, AND THE RIGHTS AND EASEMENTS IN CONNECTION WITH SAID SUBSTANCES, AS RESERVED BY THE WHITING COMPANY IN THE DEED RECORDED IN BOOK 153 PAGE 320 OF OFFICIAL RECORDS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID ORANGE COUNTY.

ALSO EXCEPTING WATER AND WATER RIGHTS AS RESERVED BY THE WHITING COMPANY, IN DEED RECORDED IN BOOK 153 PAGE 320 OF OFFICIAL RECORDS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID ORANGE COUNTY.

PARCEL B: (FEE PARCEL)

THAT PORTION OF LOT(S) F OF TRACT NO. 695, IN THE CITY OF LAKE FOREST, COUNTY OF ORANGE, STATE OF CALIFORNIA, ACCORDING TO THE MAP FILED IN BOOK 25 PAGE(S) 1 OF MISCELLANEOUS MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY BEING ALSO SHOWN AS A PORTION OF A REMAINDER OF PARCEL OF TRACT NO. 11397, ACCORDING TO THE MAP FILED IN BOOK 502 PAGES 44 THROUGH 47 INCLUSIVE OF MISCELLANEOUS MAPS, RECORDS OF ORANGE COUNTY, DESCRIBED AS FOLLOWS:

BEGINNING AT THE MOST EASTERLY CORNER OF THE LAND DESCRIBED IN THE DEED TO RALSTON ANDERSON AND MAXINE E. ANDERSON, RECORDED IN BOOK 2474 PAGE 461, OFFICIAL RECORDS OF SAID ORANGE COUNTY; THENCE NORTH 53°25'30" EAST 69.42 FEET ALONG THE NORTHEASTERLY PROLONGATION OF THE SOUTHEASTERLY LINE OF SAID LAND; THENCE NORTH 36°19'50" WEST 47.29 FEET ALONG A LINE THAT IS PARALLEL WITH AND 5.00 FEET NORTHEASTERLY FROM THE NORTHEASTERLY FACE OF AN EXISTING BAM; THENCE NORTH 53°40'10" EAST 6.60 FEET TO A POINT WHICH IS 5.00 FEET SOUTHEASTERLY AND 1.00 FOOT NORTHEASTERLY FROM THE EASTERLY CORNER OF A 4' X 8' CONCRETE BASE OF A WATER WELL; THENCE NORTH 36°19'50" WEST, 18.00 FEET TO A POINT WHICH IS 5.00 FEET NORTHWESTERLY AND 1.00 FOOT NORTHWESTERLY FROM THE NORTHERLY CORNER OF THE CONCRETE BASE; THENCE SOUTH 53°40'10" WEST, 6.60 FEET TO A POINT THAT IS 5.00 FEET NORTHEASTERLY OF SAID BAM; THENCE NORTH 36°19'50" WEST, 108.71 FEET, PARALLEL WITH THE NORTHWESTERLY PROLONGATION OF THE NORTHEASTERLY FACE OF SAID BAM; THENCE SOUTH 47°43'44" WEST, 70.51 FEET TO THE MOST NORTHERLY COMER OF THE LAND DESCRIBED IN SAID DEED TO RALSTON ANDERSON AND MAXINE E. ANDERSON, THENCE SOUTH 36°34'30" EAST, 167.00 FEET ALONG THE NORTHEASTERLY LINE OF SAID LAND TO THE POINT OF BEGINNING.

EXCEPT THEREFROM ONE–HALF OF ALL MINERALS, OILS AND/OR ASPHALTUM OF EVERY KIND OR CHARACTER IN OR UNDER SAID PROPERTY, AND ONE–HALF OF EVERY MINERAL OR OIL RIGHT THEREIN, THEREUNTO AND THEREUNDER, AND THE RIGHTS AND EASEMENTS IN CONNECTION WITH SAID SUBSTANCES, AS RESERVED BY THE WHITING COMPANY IN THE DEED RECORDED IN BOOK 153 PAGE 320 OF OFFICIAL RECORDS.

ALSO EXCEPTING WATER AND WATER RIGHTS AS RESERVED BY THE WHITING COMPANY, IN DEED RECORDED IN BOOK 153 PAGE 320 OF OFFICIAL RECORDS.

NOTE: PARCELS A AND B ABOVE DESCRIBED ARE SHOWN AS PARCEL 1 ON THE LOT LINE ADJUSTMENT LL 82–30 RECORDED DECEMBER 22, 1982 AS INSTRUMENT NO. 82–449842, OFFICIAL RECORDS.

PARCEL C: (APPURTENANT EASEMENT PARCEL)

A NON–EXCLUSIVE EASEMENT FOR INGRESS AND EGRESS OVER THAT PORTION OF LOT F OF TRACT NO. 695, IN UNINCORPORATED TERRITORY OF THE COUNTY OF ORANGE, STATE OF CALIFORNIA, AS SHOWN ON A MAP RECORDED IN BOOK 25 PAGE 1 OF MISCELLANEOUS MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY INCLUDED WITHIN A STRIP OF LAND, 30.00 FEET IN WIDTH THE CENTERLINE OF SAID STRIP BEING DESCRIBED AS FOLLOWS:

BEGINNING AT THE MOST EASTERLY CORNER OF LOT 1 OF TRACT NO. 11397, AS SHOWN ON A MAP RECORDED IN BOOK 502 PAGES 44 THROUGH 47 INCLUSIVE OF MISCELLANEOUS MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, SAID COMER BEING ALSO THE NORTHWESTERLY LINE OF CANADA ROAD AS SHOWN ON SAID TRACT NO. 11397; THENCE NORTH 39°25'28" EAST 42.00 FEET ALONG SAID NORTHWESTERLY LINE TO THE TRUE POINT OF BEGINNING; THENCE NORTH 50°34'32" WEST 15.81 FEET TO THE BEGINNING OF A TANGENT CURVE CONCAVE SOUTHWESTERLY, HAVING A RADIUS OF 100.00 FEET; THENCE NORTHWESTERLY 73.23 FEEL ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 41°57'24"; THENCE SOUTH 87°28'04" WEST 96.78 FEET TO THE BEGINNING OF A TANGENT CURVE CONCAVE NORTHEASTERLY, HAVING A RADIUS OF 68.00 FEET; THENCE NORTHWESTERLY

LEGAL DESCRIPTION (CONTINUED)

49.52 FEET ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 41°43'42" TO THE BEGINNING OF A REVERSE CURVE, CONCAVE SOUTHWESTERLY, HAVING A RECORD OF 68.00 FEET; THENCE NORTHWESTERLY 49.52 FEET ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 41°43'42" TO A LINE PARALLEL WITH AND NORTHERLY 15.00 FEET FROM THAT CERTAIN COURSE SHOWN AS "NORTH 87°28'04" EAST 172.53 FEET" FOR A PORTION OF THE NORTHERLY LINE OF SAID LOT 1; THENCE SOUTH 87°28'04" WEST 172.53 FEET ALONG SAID PARALLEL LINE TO THE BEGINNING OF A TANGENT CURVE CONCAVE SOUTHEASTERLY, HAVING A RADIUS OF 68.00 FEET; THENCE SOUTHWESTERLY 41.99 FEET ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 35°22'46" TO THE BEGINNING OF A REVERSE CURVE, CONCAVE NORTHERLY, HAVING A RADIUS OF 68.00 FEET; THENCE WESTERLY 99.49 FEET ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 8349'42" TO A LINE PARALLEL WITH AND NORTHEASTERLY 45.00 FEET FROM THAT CERTAIN COURSE SHOWN AS "NORTH 44°05'00" WEST 142.84 FEET FOR A PORTION OF THE NORTHEASTERLY LINE OF SAID LOT 1; THENCE NORTH 44°05'00" WEST 101.68 FEET ALONG SAID LAST MENTIONED PARALLEL LINE TO A LINE PARALLEL WITH AND SOUTHEASTERLY 15.00 FEET FROM THE SOUTHEASTERLY LINE OF THE LAND DESCRIBED IN THE DEED TO DENVER A. NUTTER AND SADIE M. NUTTER RECORDED IN BOOK 247 PAGE 460 OF OFFICIAL RECORDS IN THE OFFICE OF THE COUNTY RECORDER; THENCE NORTH 53°25'30" EAST 257 98 FEET ALONG SAID LAST ABOVE MENTIONED PARALLEL LINE.

PARCEL D: (APPURTENANT EASEMENT PARCEL)

A NON–EXCLUSIVE EASEMENT FOR UTILITY PURPOSES AND INCIDENTAL PURPOSES THERETO OVER THAT PORTION OF LOT F OF TRACT NO. 695, IN THE UNINCORPORATED TERRITORY OF THE COUNTY OF ORANGE, STATE OF CALIFORNIA, AS SHOWN ON THE TERRITORY OF THE COUNTY OF ORANGE, STATE OF CALIFORNIA, AS SHOWN ON A MAP RECORDED IN BOOK 25 PAGE 1 OF MISCELLANEOUS MAPS IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY INCLUDED WITHIN A STRIP OF LAND, 30.00 FEET IN WIDTH, THE CENTERLINE OF SAID STRIP BEING DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHEASTERLY TERMINUS OF THAT CERTAIN COURSE SHOWN AS "NORTH 44°05*00" WEST 142.84 FEET" FOR A PORTION OF THE NORTHEASTERLY LINE OF LOT 1 OF TRACT NO. 11397, AS SHOWN ON A MAP RECORDED IN BOOK 502 PAGES 44 THROUGH 47 INCLUSIVE OF MISCELLANEOUS MAPS, IN THE OFFICE OF THE COUNTY RECORDER; THENCE NORTH 45°36'44" EAST 15.00 FEET ALONG THE NORTHWESTERLY LINE OF SAID LOT 1 TO THE TRUE POINT OF BEGINNING, SAID POINT BEING ON LINE PARALLEL WITH AND NORTHEASTERLY 15.00 FEET FROM SAID NORTHEASTERLY LINE; THENCE NORTH 44°05'00" WEST 201.81 FEET ALONG SAID PARALLEL LINE TO A LINE PARALLEL WITH AND SOUTHEASTERLY 15.00 FEET FROM THE SOUTHEASTERLY LINE OF THE LAND DESCRIBED IN THE DEED TO DENVER A. NUTTER AND SADIE M. NUTTER RECORDED IN BOOK 2474 PAGE 460 OF OFFICIAL RECORDS, IN THE OFFICE OF THE COUNTY RECORDER; THENCE NORTH 53°25'30" EAST 288.24 FEET ALONG SAID LAST MENTIONED PARALLEL LINE.

THE SIDELINES OF SAID STRIP TO BE PROLONGED OR SHORTENED TO TERMINATE SOUTHEASTERLY IN SAID NORTHWESTERLY LINE.

PARCEL 3:

PARCEL A: (FEE PARCEL)

THAT PORTION OF LOT F OF TRACT NO. 695, IN THE CITY OF LAKE FOREST, COUNTY OF ORANGE, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 25, PAGE 1 OF MISCELLANEOUS MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID ORANGE COUNTY, CALIFORNIA.

BEGINNING AT A POINT 615.77 FEET NORTH 23°03'40" WEST AND 275.00 FEET NORTH 53°25'30" EAST FROM THE MOST WESTERLY CORNER OF LOT G OF SAID TRACT NO. 695; THENCE NORTH 53°25'30" EAST 132.00 FEET; THENCE NORTH 33°34'30" WEST 90.00 FEET; THENCE SOUTH 53°25'30" WEST 132.00 FEET; THENCE SOUTH 33°34'30" EAST 90.00 FEET TO THE POINT OF BEGINNING.

EXCEPT ONE–HALF OF ALL MINERALS, OIL, AND/OR ASPHALTUM OF EVERY KIND OR CHARACTER IN OR UNDER SAID PROPERTY, AND ONE–HALF OF EVERY MINERAL OR OIL RIGHT THEREIN, THEREUNTO AND THEREUNDER, AS RESERVED BY THE WHITING COMPANY IN DEED RECORDED APRIL 30, 1928 IN BOOK 153, PAGE 320 OF OFFICIAL RECORDS.

PARCEL B: (APPURTENANT EASEMENT PARCEL)

A NON–EXCLUSIVE EASEMENT TO BE USED IN COMMON WITH OTHERS FOR INGRESS AND EGRESS, OVER THAT PORTION OF SAID LAND, INCLUDED WITHIN A STRIP OF LAND 30.00 FEET IN WIDTH, THE SOUTHWESTERLY AND NORTHWESTERLY LINES OF WHICH ARE DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT IN THE CENTERLINE OF CANADA ROAD, AS CONVEYED TO THE COUNTY OF ORANGE BY DEED RECORDED SEPTEMBER 26, 1938 IN BOOK 960, PAGES 514 OF OFFICIAL RECORDS OF ORANGE COUNTY, CALIFORNIA, SAID POINT BEING LOCATED 190.03 FEET NORTH 45°34'45" EAST AND 66.42 FEET SOUTH 44°05' EAST FROM THE MOST WESTERLY CORNER OF LOT G, TRACT NO. 695, AS PER MAP RECORDED IN BOOK 25, PAGE 1 OF MISCELLANEOUS MAPS, RECORDS OF ORANGE COUNTY, CALIFORNIA, RUNNING FROM SAID POINT OF BEGINNING NORTH 44°05' WEST 644.00 FEET; THENCE 53°25'30" EAST 438.00 FEET, AS SHOWN BY DEED RECORDED APRIL 25, 1961 IN BOOK 5700, PAGE 204 OF OFFICIAL RECORDS.

PARCEL C: (FEE PARCEL)

THE PARCEL OF LAND IN THE COUNTY OF ORANGE, STATE OF CALIFORNIA, DESCRIBED IN DEED RECORDED MARCH 24, 1953 IN BOOK 2474, PAGE 460 OF OFFICIAL RECORDS OF SAID COUNTY, TOGETHER WITH THAT PORTION OF LOT "F", TRACT NO. 695, AS SHOWN ON MAP RECORDED IN BOOK 25, PAGE 1 OF MISCELLANEOUS MAPS, RECORDS OF SAID COUNTY (MORE PARTICULARLY SHOWN AS "REMAINDER PARCEL" ON MAP OF SAID TRACT NO. 11397 RECORDED IN BOOK 502, PAGES 44 THROUGH 47 INCLUSIVE OF MISCELLANEOUS MAPS), DESCRIBED AS FOLLOWS:

BEGINNING AT THE WESTERLY CORNER OF SAID LAND DESCRIBED IN SAID DEED RECORDED MARCH 24, 1953 IN BOOK 2474, PAGE 460 OF OFFICIAL RECORDS; THENCE NORTH 33°34'30" WEST ALONG THE NORTHWESTERLY PROLONGATION OF THE SOUTHWESTERLY LINE OF SAID LAND 50.00 FEET; THENCE NORTH 74°31'39" EAST 138.68 FEET TO THE NORTHERLY CORNER OF SAID LAND; THENCE SOUTH 53°25'30" WEST ALONG THE NORTHWESTERLY LINE OF SAID LAND 132.00 FEET TO THE POINT OF BEGINNING OF THIS DESCRIPTION.

TITLE REPORT INFORMATION

ITEM NUMBERS AND LEGAL DESCRIPTION SHOWN HEREON CORRESPOND TO FIDELITY NATIONAL TITLE INSURANCE COMPANY PRELIMINARY TITLE REPORT NO. 989–30062340–A–BAM, DATED APRIL 19, 2021; AMENDED APRIL 27, 2021, AMENDMENT NO. A

NO RESPONSIBILITY FOR COMPLETENESS, ACCURACY OR CONTENT OF SAID REPORT IS ASSUMED BY THIS MAP.

ITEM NUMBERS INDICATED WITH A HEXAGON (⬡) REFLECT ITEMS WHICH ARE PLOTTED HEREON:

A TAXES.

B THE HEREIN DESCRIBED PROPERTY LIES WITHIN THE BOUNDARIES OF A MELLO–ROOS COMMUNITY FACILITIES DISTRICT (CFD).

C THE LIEN OF SUPPLEMENTAL OR ESCAPED ASSESSMENTS OF PROPERTY TAXES, IF ANY.

1 WATER RIGHTS, CLAIMS OR TITLE TO WATER, WHETHER OR NOT DISCLOSED BY THE PUBLIC RECORDS.

2 AN EASEMENT FOR ROAD, INGRESS AND EGRESS PURPOSES AS RESERVED IN THE GRANT DEED RECORDED APRIL 30, 1928, IN BOOK 153 PAGE 320, OFFICIAL RECORDS (EASEMENT NOT LOCATABLE FROM RECORD).

⟨3⟩ AN EASEMENT FOR PUBLIC UTILITY PURPOSES IN FAVOR OF SOUTHERN CALIFORNIA EDISON COMPANY RECORDED FEBRUARY 19, 1958, IN BOOK 4201 PAGE 456, OFFICIAL RECORDS.

4 AN EASEMENT FOR PUMPING STATION AND DISTRIBUTION SYSTEM PURPOSES IN FAVOR OF LOS ALISOS WATER DISTRICT RECORDED NOVEMBER 5, 1963, IN BOOK 6792, PAGE 419, OFFICIAL RECORDS (DOES NOT AFFECT SUBJECT FEE PROPERTY).

5 EXCEPTIONS AND RESERVATIONS IN THE GRANT OF EASEMENT RECORDED NOVEMBER 5, 1963, IN BOOK 6792, PAGE 419, OFFICIAL RECORDS.

⟨6⟩ AN EASEMENT FOR PUBLIC UTILITY PURPOSES IN FAVOR OF SOUTHERN CALIFORNIA EDISON COMPANY RECORDED MAY 20, 1982, AS INSTRUMENT NO. 82–174560, OFFICIAL RECORDS, AND RE–RECORDED MAY 20, 1981, AS INSTRUMENT NO. 82–423781, OFFICIAL RECORDS.

7 AN EASEMENT FOR WATER AND SEWAGE PURPOSES IN FAVOR OF LOS ALISOS WATER DISTRICT RECORDED JUNE 24, 1982, AS INSTRUMENT NO. 82–217506, OFFICIAL RECORDS (DOES NOT AFFECT SUBJECT FEE PROPERTY).

8 AN EASEMENT FOR WATER AND SEWAGE PURPOSES IN FAVOR OF LOS ALISOS WATER DISTRICT RECORDED JULY 7, 1982, AS INSTRUMENT NO. 82–234280, OFFICIAL RECORDS (DOES NOT AFFECT SUBJECT FEE PROPERTY).

9 AN EASEMENT FOR INGRESS AND EGRESS AND UTILITY PURPOSES IN FAVOR OF GEORGE SALATA AND LINDA LEE SALATA RECORDED AUGUST 9, 1982, AS INSTRUMENT NO. 82–275009, OFFICIAL RECORDS (DOES NOT AFFECT SUBJECT FEE PROPERTY).

⟨10⟩ AN EASEMENT FOR INGRESS AND EGRESS AND UTILITY PURPOSES IN FAVOR OF MICHAEL E. BROOKS AND DONNA V. BROOKS RECORDED SEPTEMBER 13, 1982, AS INSTRUMENT NO. 82–320345, OFFICIAL RECORDS.

⟨11⟩ AN EASEMENT FOR PUBLIC UTILITY PURPOSES IN FAVOR OF THE PACIFIC TELEPHONE AND TELEGRAPH COMPANY RECORDED OCTOBER 7, 1982, AS INSTRUMENT NO. 82–352902, OFFICIAL RECORDS.

12 AN EASEMENT FOR INGRESS AND EGRESS AND UTILITY PURPOSES IN FAVOR OF JAMES E. JOHNSON RECORDED NOVEMBER 24, 1982, AS INSTRUMENT NO. 82–414655, OFFICIAL RECORDS (DOES NOT AFFECT SUBJECT FEE PROPERTY).

13 AN EASEMENT FOR INGRESS AND EGRESS AND UTILITY PURPOSES IN FAVOR OF DONALD G. HESS AND JANICE C. HESS RECORDED MARCH 9, 1983, AS INSTRUMENT NO. 83–102136, OFFICIAL RECORDS (DOES NOT AFFECT SUBJECT FEE PROPERTY).

⟨14⟩ AN EASEMENT FOR SEWER PURPOSES IN FAVOR OF LOS ALISOS WATER DISTRICT RECORDED JUNE 25, 1987, AS INSTRUMENT NO. 87–36172, OFFICIAL RECORDS.

⟨15⟩ AN EASEMENT FOR STORM DRAIN PURPOSES DEDICATED TO THE COUNTY OF ORANGE ON PARCEL MAP NO. 86–133, P.M.B. 225/7–13.

⟨16⟩ AN EASEMENT FOR RECREATION RIDING AND HIKING TRAIL PURPOSES DEDICATED TO AND NOT ACCEPTED BY THE COUNTY OF ORANGE ON PARCEL MAP NO. 86–133, P.M.B. 225/7–13.

⟨17⟩ AN EASEMENT FOR STORM DRAIN PURPOSES DEDICATED TO THE COUNTY OF ORANGE ON PARCEL MAP NO. 86–133, P.M.B. 225/7–13.

18 AN EASEMENT FOR AVIGATION PURPOSES DEDICATED TO THE COUNTY OF ORANGE ON PARCEL MAP NO. 86–133, P.M.B. 225/7–13 (EASEMENT IS BLANKET IN NATURE).

⟨19⟩ AN EASEMENT FOR FLOOD PLAIN PURPOSES DEDICATED TO THE ORANGE COUNTY FLOOD CONTROL DISTRICT ON PARCEL MAP NO. 86–133, P.M.B. 225/7–13.

20 MATTERS CONTAINED IN THE DOCUMENT ENTITLED "AGREEMENT FOR DRAINAGE ENCUMBRANCE" RECORDED MARCH 31, 1988, AS INSTRUMENT NO. 88–149591, OFFICIAL RECORDS (CONTAINS AN AGREEMENT TO ACCEPT SURFACE DRAINAGE).

21 COVENANTS, CONDITIONS, RESTRICTIONS AND EASEMENTS PER DOCUMENT RECORDED JANUARY 19, 1989, AS INSTRUMENT NO. 89–033395, OFFICIAL RECORDS AND MODIFIED BY DOCUMENT RECORDED JANUARY 19, 1989, AS INSTRUMENT NO. 89–033395, OFFICIAL RECORDS (DOCUMENT CONTAINS EASEMENTS FOR INGRESS, EGRESS, CONSTRUCTION AND MAINTENANCE PURPOSES, EASEMENTS ARE BLANKET IN NATURE).

22 AN EASEMENT FOR INGRESS, EGRESS, CONSTRUCTION AND MAINTENANCE PURPOSES IN FAVOR OF DIMENSION BUSINESS PARK ASSOCIATION, RECORDED JULY 19, 1994, AS INSTRUMENT NO. 94–0448986, OFFICIAL RECORDS (EASEMENTS ARE BLANKET IN NATURE).

TITLE REPORT INFORMATION (CONTINUED)

23 STANDARD TITLE COMPANY NOTE.

⟨24⟩ ITEM IS IDENTICAL TO ITEM NO. 2 ABOVE.

25 STANDARD TITLE COMPANY NOTE.

26 THE RIGHT TO BORE AND SINK WELLS ON THIS, AND OTHER LAND, AND EASEMENTS FOR PIPE LINES, CONDUITS, DITCHES AND OTHER INCIDENTAL PURPOSES, TOGETHER WITH THE RIGHT TO BORE AND SINK WELLS IN CONNECTION WITH SAID WELLS, AS RESERVED.

27 A RIGHT OF WAY TO A WELL AND PUMPING PLANT RESERVED IN GRANT DEED RECORDED JULY 25, 1934, IN BOOK 690, PAGE 313, OFFICIAL RECORDS (RIGHT OF WAY NOT LOCATABLE FROM RECORD).

28 EASEMENTS AND RIGHTS OF WAY FOR ROAD AND PUBLIC UTILITIES, AND APPURTENANCES THERETO, AS RESERVED AND CONVEYED BY VARIOUS DEEDS OF RECORD.

⟨29⟩ ITEM IS IDENTICAL TO ITEM NO. 6 ABOVE.

30 ITEM IS IDENTICAL TO ITEM NO. 7 ABOVE.

31 ITEM IS IDENTICAL TO ITEM NO. 8 ABOVE.

32 ITEM IS IDENTICAL TO ITEM NO. 9 ABOVE.

33 ITEM IS IDENTICAL TO ITEM NO. 9 ABOVE.

⟨34⟩ ITEM IS IDENTICAL TO ITEM NO. 11 ABOVE.

35 ITEM IS IDENTICAL TO ITEM NO. 12 ABOVE.

⟨36⟩ ITEM IS IDENTICAL TO ITEM NO. 10 ABOVE.

37 AN EASEMENT FOR DRAINAGE AND RIDING AND HIKING TRAIL PURPOSES RESERVED IN THE GRANT DEED RECORDED MARCH 9, 1983, AS INSTRUMENT NO. 83–102135, OFFICIAL RECORDS (DRAINAGE EASEMENT IS NOT LOCATABLE FROM RECORD; RIDING AND HIKING TRAIL EASEMENT IS BLANKET IN NATURE).

38 STANDARD TITLE COMPANY NOTE.

39 ITEM IS IDENTICAL TO ITEM NO. 13 ABOVE.

40 DISCREPANCIES, CONFLICTS IN BOUNDARY LINES, SHORTAGE IN AREA, ENCROACHMENTS, OR ANY OTHER MATTERS SHOWN ON RECORD OF SURVEY 86–1057, R.S.B. 113/48–49.

41 STANDARD TITLE COMPANY NOTE.

42 ITEM IS IDENTICAL TO ITEM NO. 2 ABOVE.

43 ITEM IS IDENTICAL TO ITEM NO. 2 ABOVE.

44 ITEM IS IDENTICAL TO ITEM NO. 2 ABOVE.

45 THE AFFECT OF A WAIVER.

46 ITEM IS IDENTICAL TO ITEM NO. 27 ABOVE.

47 A RIGHT OF WAY TO A WELL AND PUMPING PLANT RESERVED IN GRANT DEED RECORDED JANUARY 4, 1951, IN BOOK 2124, PAGE 240, OFFICIAL RECORDS (RIGHT OF WAY NOT LOCATABLE FROM RECORD).

48 AN EASEMENT FOR PUBLIC UTILITY PURPOSES IN FAVOR OF SOUTHERN CALIFORNIA EDISON COMPANY RECORDED SEPTEMBER 26, 1951, IN BOOK 2234 PAGE 520, OFFICIAL RECORDS (EASEMENT IS NOT LOCATABLE FROM RECORD).

49 ITEM IS IDENTICAL TO ITEM NO. 40 ABOVE.

50 A DEED OF TRUST.

51 ANY EASEMENTS NOT DISCLOSED BY THE PUBLIC RECORDS AS TO MATTERS AFFECTING TITLE TO REAL PROPERTY, WHETHER OR NOT SAID EASEMENTS ARE VISIBLE AND APPARENT.

52 MATTERS WHICH MAY BE DISCLOSED BY AN INSPECTION AND/OR BY A CORRECT ALTA/NSPS LAND TITLE SURVEY OF SAID LAND, AND/OR BY INQUIRY OF THE PARTIES IN POSSESSION THEREOF.

53 ANY RIGHTS OF THE PARTIES IN POSSESSION OF A PORTION OF, OR ALL OF, SAID LAND, WHICH RIGHTS ARE NOT DISCLOSED BY THE PUBLIC RECORDS.

54 AN EASEMENT FOR SCENIC PRESERVATION AND OPEN SPACE DEDICATED TO THE COUNTY OF ORANGE ON PARCEL MAP NO. 86–133, P.M.B. 225/7–13 (EASEMENT IS BLANKET IN NATURE OVER PARCEL 1 OF THE LEGAL DESCRIPTION).

AN EASEMENT FOR FLOOD PLAIN PURPOSES DEDICATED TO THE ORANGE COUNTY FLOOD CONTROL DISTRICT ON PARCEL MAP NO. 86–133, P.M.B. 225/7–13 (SHOWN HEREON AS ITEM NO. 19).

NOTES

1. BASIS OF BEARINGS: BEARINGS SHOWN HEREON ARE BASED ON THE CENTERLINE OF LINEAR LANE BEING NORTH 22°19'33" EAST ON PARCEL MAP NO. 86–133, P.M.B. 225/7–13.
2. ASSESSOR'S PARCEL NO. = 610–301–07, 610–301–20, & 610–301–21 (ASSESSOR'S PARCEL NUMBERS SHOWN HEREON ARE PER THE CURRENT TAX ASSESSOR'S ROLLS AS PROVIDED BY FIDELITY NATIONAL TITLE INSURANCE COMPANY.
3. AERIAL PHOTOGRAPHY WAS COMPILED BY ROBERT J. LUNG & ASSOCIATES, DATED FEBRUARY 8, 2019, AND COMPLIES WITH NATIONAL MAPPING ACCURACY STANDARDS.
4. PARCEL B OF PARCEL 3 OF THE LEGAL DESCRIPTION IS AN APPURTENANT EASEMENT THAT, AS DESCRIBED, RUNS THROUGH AN EXISTING CONDOMINIUM COMPLEX.
5. BOUNDARY INFORMATION SHOWN HEREON WAS COMPILED FROM RECORD DATA AND DOES NOT REPRESENT A FIELD SURVEY.

DIGALERT
DIAL TOLL FREE
1-800-277-2600
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

CLIENT

Great Scott Tree Care

20865 Canada Road Lake Forest

PROJECT NAME

PROJECT NUMBER

R308444.01

BUILDER

DESIGN CONSULTANT

HUITT-ZOLLARS
Huitt-Zollars, Inc. Irvine
2603 Main Street, Suite 400
Irvine, California 92614
Phone (949) 988-5815 Fax (949) 988-5820

REGISTRATION STAMP

PROFESSIONAL LAND SURVEYOR
RUSSELL H. HANSON
NO. 8873
STATE OF CALIFORNIA

AGENCY APPROVAL

DIVISION OF THE STATE ARCHITECT
APPL #
FILE #
AC FLS
SSS DATE
IDENTIFICATION STAMP

ISSUE

MARK	DATE	DESCRIPTION
1	4-28-21	REVISED TO REFLECT AMENDED TITLE COMMITMENT; ADDED ESMT ITEM NO. 54

DESIGNER PROJ. NO. R308444.01
DRAWN BY:
CHECKED BY:
SCALE:

KEY PLAN

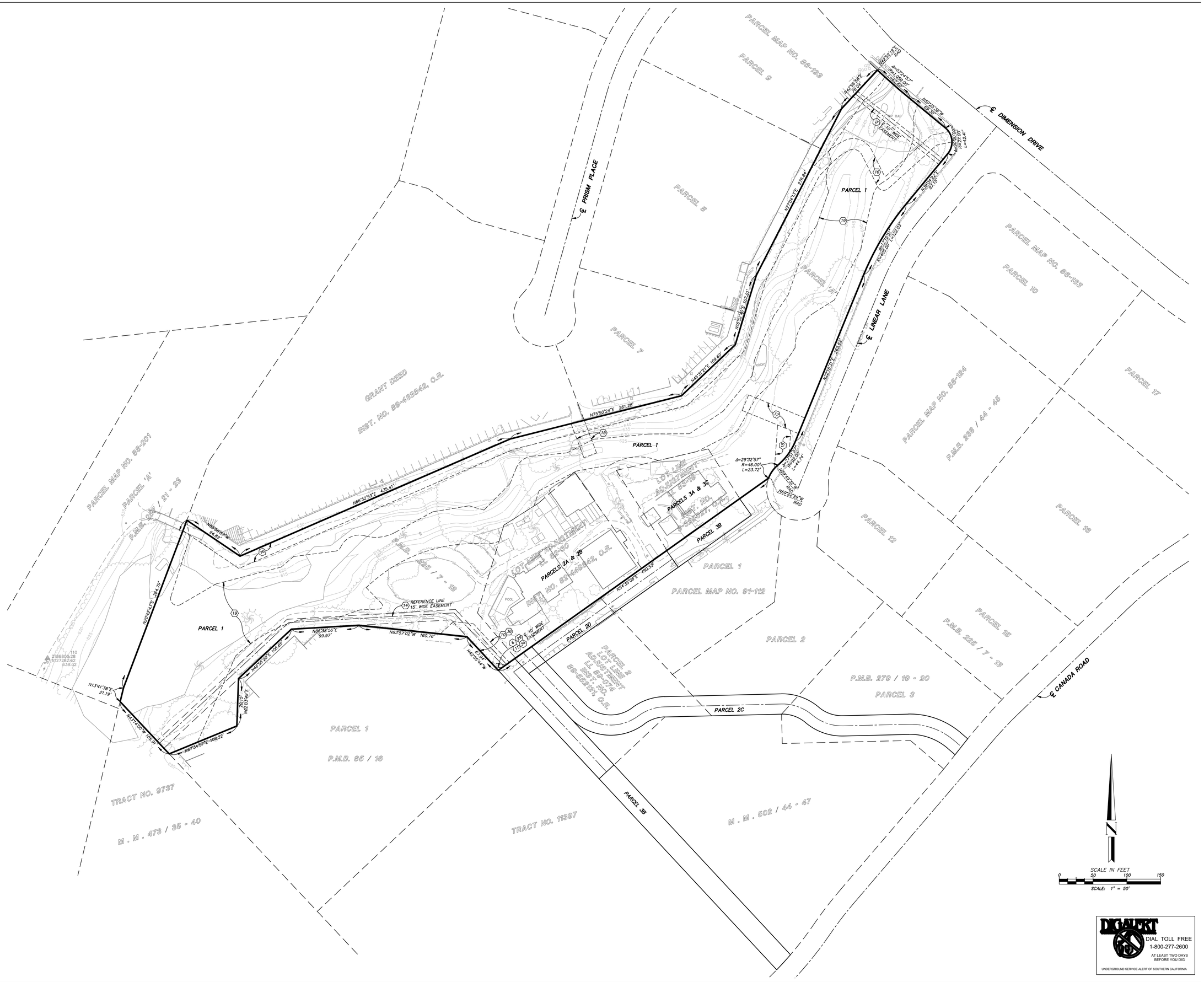
SHEET TITLE

ENCUMBRANCE MAP
GREAT SCOTT
PROPERTY

SHEET NUMBER

C2.0

Q:\R308444.01 - 20865 Canada Road Lake Forest Engr\10 CADD & BIM\10.15 Mapping\Dwg\EM\30844401JEM01.dwg
4/28/21 DMACKEY
©2009 LACCD Rev. 3



CLIENT

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MARK	DATE	DESCRIPTION

DESIGNER PROJ. NO. R308444.01
DRAWN BY:
CHECKED BY:
SCALE:

KEY PLAN

SHEET TITLE

ENCUMBRANCE MAP
GREAT SCOTT
PROPERTY

SHEET NUMBER

C2.1

03/31/21

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4/28/21 DMACKEY
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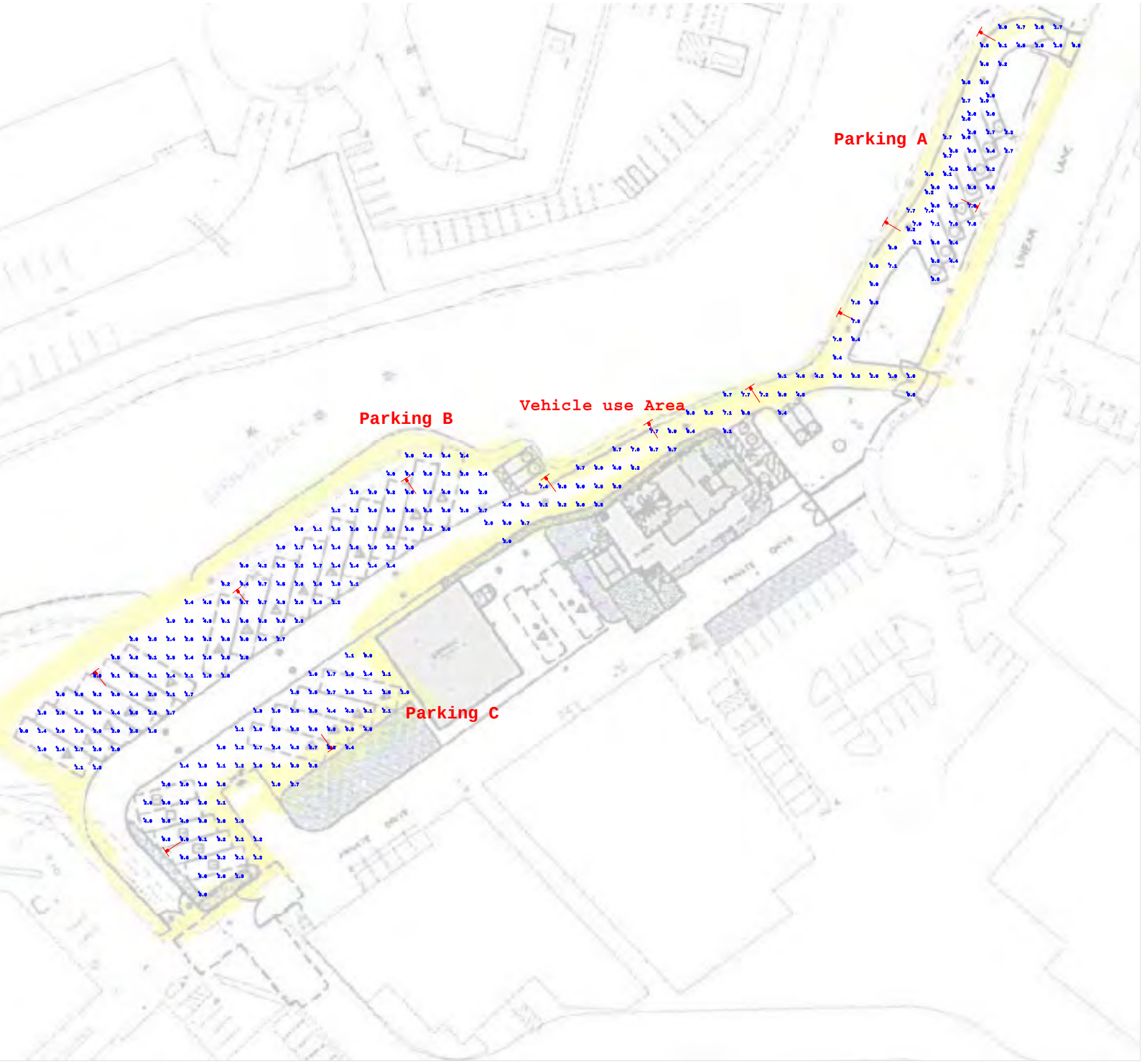
Viewpoint



Great Scott Lighting	Drawn By: F10	Revisions	#	Date	Comments	naturaled®
Outdoor Parking, CA	Checked By:					
	Date: 9/1. /2023					
	Scale:					

naturaled offers a visual Lighting Analysis of different lighting scenarios based on project information provided by others and has not been field verified. The Lighting calculation is a prediction based on system performance and using the photometric data from the manufacture catalog and in accordance with Illuminating Engineering Society approved methods. The Lighting Analysis is property of naturaled and the information is consider confidential and for the use of person(s) for which the Analysis is created, No substitution, modifications, alterations, or transferring of data to our competitors is permitted without naturaled written permission. The outcome may differ due to environment conditions, surroundings, incorrect or missing data, and/or improper installations. naturaled has no control and assume no responsibility for architect and/or engineer, owner, or owners representatives providing insufficient and/or incorrect data such as room dimensions, reflectance, architectural elements within the space that may significantly affect calculations. The engineer and/or architect must determine applicability of the layout to existing or future field conditions. The Lighting Analysis is for information purposes only.
We may update our Policy from time to time.

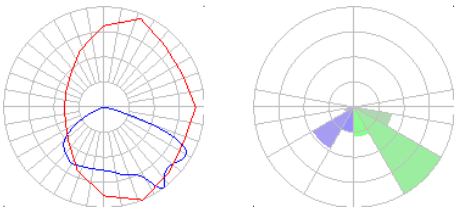
Luminaire Summary

Luminaire Schedule						
Symbol	**Qty**	**Label**	**Arrangement**	**Total Lamp Lumens**	**LLF**	**Description**
	12	9609 FXSAL150-850-BZ-T3	SINGLE	21162.5	0.950	9609 FXSAL150_850_BZ_T3

Calculation Summary

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
CalcPts_Parking A	Illuminance	Fc	5.28	8.2	2.2	2.40	3.73
CalcPts_Parking B	Illuminance	Fc	3.23	6.9	0.8	4.04	8.63
CalcPts_Parking C	Illuminance	Fc	2.93	6.8	0.9	3.26	7.56
CalcPts_Vehicle Use Area	Illuminance	Fc	5.09	8.2	0.6	8.48	13.67

Luminaire Images



Render View

naturaled®

PROJECT:

SCHEDULE: **DATE:**

PREPARE BY:

NOTES:

SAL Slim Area Light (40K,50K, CCT3)

DESCRIPTION

naturaLED® Slim Area Light is constructed with a durable, die-cast aluminum housing and excellent thermal design and is the perfect lighting solution for your parking lot, street, walkway, building flood up/down light and/or as a sign lighter. It provides uniform, consistent color with a wide range of wattage selections to replace from 100W to 1500W HID fixtures. Our fixtures are DLC Premium certified and IP66 rated with four types of mounting options available: Pole Mount, Slip Fitter, Wall Mount, and Yoke Mount. Compatible integrated autonomous and photocell motion sensors are available as options to address your energy savings. Energy savings can be as much as 85% while eliminating maintenance costs in labor and lamp and ballast replacement.

Rated Life 50,000 Hours
Warranty 7 Years*

APPLICATIONS

Area/ Parking, Security, Pathway, Perimeter, Wall Lighting

FEATURES

- DLC Premium
- IP66 Rated
- ETL Listed/ cETL Listed
- IK08
- Selectable Wattages
- Color Temp: 3CCT (30K/40K/50K), 4000K, 5000K
- Voltage: 120-277V, 277-480V
- Power Factor: >0.9
- Surge Protection: 10KV
- Dimmable: 0-10V
- CRI: 80
- Operating temperature: - 40°F~122°F (- 40°C~50°C)
- Low Voltage Output for Sensors
- Contractor Friendly Mounting Options
- Material: Aluminum Die-Cast
- Finish: Epoxy Powder Coat
- Colors: Bronze, White, Black
- 7 Year Warranty
- Optional for Purchase: Lens, Photocell, Mountings, Sensors

ACCESSORIES

Pole Mount Arm

Shorting Cap

Slip Fitter

Photocell

Yoke Mount

Lens- Type 3 or 4

Receptacle

Pole Brackets

Sensors

Wall Mount

Surge Protection

Glass Shield

SAMPLE NUMBER **FXSAL75SW/8CCT3/BZ/T3**

FAMILY	SERIES	WATTAGE	CRI/COLOR TEMP	COLOR	LENS
FX Fixture	SAL Slim Area Light	75SW, 100W 75 Selectable Wattage 100 Watt	8CCT3, 850 CRI 80 Selectable Color Temp (3000, 4000, 5000K) CRI 80 / 5000K	BZ, BK, WH (BZ) Bronze (BK) Black (WH) White	T3 Type III

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www.naturaLED.com Toll-Free: 855.758.7009

1/12

* Extended 10 year limited warranty available. Contact your sales rep for more information

ORDERING

*P= Premium DLC / *S = Standard DLC

Watts (W)	Ordering Code	Description	CCT (K)	Lumens (Lm)	Equiv. Wattage (W)	Color	IP66 Rated	DLC (S/P)
25	**9605**	FXSAL75SW/8CCT3/BZ/T3*	3CCT	3,500	100-400	Bronze	•	P
50			(3K/4K/5K)	7,000				
75				10,555				
90	**7647**	FXSAL150SW/830/BZ/T3*	3000K	12,649	400-575	Bronze	•	P
120				16,800				
150				21,163				
90	**9639**	FXSAL150SW/840/BZ/T3*	4000K	12,649	400-575	Bronze	•	P
120				16,800				
150				21,163				
90	**9640**	FXSAL150SW/850/BZ/T3*	5000K	12,649	400-575	Bronze	•	P
120				16,800				
150				21,118				
160	**7648**	FXSAL240SW/830/BZ/T3*	3000K	22,400	400-1000	Bronze	•	P
190				26,600				
240				34,829				
160	**9610**	FXSAL240SW/840/BZ/T3	4000K	22,400	400-1000	Bronze	•	P
190				26,600				
240				34,829				
160	**9611**	FXSAL240SW/850/BZ/T3	5000K	22,500	400-1000	Bronze	•	P
190				30,000				
240				34,680				
25	**9647**	FXSAL75SW/8CCT3/BZ/T3/480*	3CCT	3,500	400	Bronze	•	P
50			(3K/4K/5K)	7,000				
75				10,555				
90	**7649**	FXSAL150SW/830/BZ/T3/480*	3000K	12,888	400-575	Bronze	•	P
120				16,800				
150				21,535				
90	**7650**	FXSAL150SW/840/BZ/T3/480*	4000K	12,888	400-575	Bronze	•	P
120				16,800				
150				21,417				
90	**9641**	FXSAL150SW/850/BZ/T3/480*	5000K	12,914	400-575	Bronze	•	P
120				16,800				
150				21,535				
160	**7651**	FXSAL240SW/830/BZ/T3/480*	3000K	22,400	400-1000	Bronze	•	P
190				26,600				
240				34,829				
160	**9618**	FXSAL240SW/840/BZ/T3/480*	4000K	22,400	400-1000	Bronze	•	P
190				26,600				
240				34,829				
160	**9619**	FXSAL240SW/850/BZ/T3/480*	5000K	22,500	400-1000	Bronze	•	P
190				30,000				
240				34,680				

277-480V Bronze

*Made to order

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ORDERING

*P= Premium DLC / *S = Standard DLC

Watts (W)	Ordering Code	Description	CCT (K)	Lumens (Lm)	Equiv. Wattage (W)	Color	IP66 Rated	DLC (S/P)
25	**9622**	FXSAL75SW/8CCT3/WH/T3	3CCT	3,500	100-400	White	•	P
50			(3K/4K/5K)	7,000				
75				10,555				
90	**7652**	FXSAL150SW/830/WH/T3*	3000K	12,649	400-575	White	•	P
120				16,800				
150				21,163				
90	**7653**	FXSAL150SW/840/WH/T3*	4000K	12,649	400-575	White	•	P
120				16,800				
150				21,163				
90	**7654**	FXSAL150SW/850/WH/T3*	5000K	12,649	400-575	White	•	P
120				16,800				
150				21,118				
160	**7655**	FXSAL240SW/830/WH/T3*	3000K	22,400	400-1000	White	•	P
190				26,600				
240				34,829				
160	**9627**	FXSAL240SW/840/WH/T3	4000K	22,400	400-1000	White	•	P
190				26,600				
240				34,829				
160	**9628**	FXSAL240SW/850/WH/T3	5000K	22,500	400-1000	White	•	P
190				30,000				
240				34,680				
25	**7656**	FXSAL75SW/8CCT3/WH/T3/480*	3CCT	3,500	400	White	•	P
50			(3K/4K/5K)	7,000				
75				10,555				
90	**7657**	FXSAL150SW/830/WH/T3/480*	3000K	12,888	400-575	White	•	P
120				16,800				
150				21,535				
90	**7658**	FXSAL150SW/840/WH/T3/480*	4000K	12,888	400-575	White	•	P
120				16,800				
150				21,417				
90	**7659**	FXSAL150SW/850/WH/T3/480*	5000K	12,914	400-575	White	•	P
120				16,800				
150				21,535				
160	**7660**	FXSAL240SW/830/WH/T3/480*	3000K	22,400	400-1000	White	•	P
190				26,600				
240				34,829				
160	**9627**	FXSAL240SW/840/WH/T3/480*	4000K	22,400	400-1000	White	•	P
190				26,600				
240				34,829				
160	**9628**	FXSAL240SW/850/WH/T3/480*	5000K	22,500	400-1000	White	•	P
190				30,000				
240				34,680				

277-480V White

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ORDERING

*P= Premium DLC / *S = Standard DLC

Watts (W)	Ordering Code	Description	CCT (K)	Lumens (Lm)	Equiv. Wattage (W)	Color	IP66 Rated	DLC (S/P)
25	**9649**	FXSAL75SW/8CCT3/BK/T3	3CCT	3,500	100-400	Black	•	P
50			(3K/4K/5K)	7,000				
75				11,224				
90	**7661**	FXSAL150SW/830/BK/T3*	3000K	12,649	400-575	Black	•	P
120				16,800				
150				21,163				
90	**7662**	FXSAL150SW/840/BK/T3*	4000K	12,649	400-575	Black	•	P
120				16,800				
150				21,163				
90	**7663**	FXSAL150SW/850/BK/T3*	5000K	12,649	400-575	Black	•	P
120				16,800				
150				21,118				
160	**7664**	FXSAL240SW/830/BK/T3*	3000K	22,400	400-1000	Black	•	P
190				26,600				
240				34,829				
160	**7665**	FXSAL240SW/840/BK/T3	4000K	22,400	400-1000	Black	•	P
190				26,600				
240				34,829				
160	**7666**	FXSAL240SW/850/BK/T3	5000K	22,500	400-1000	Black	•	P
190				30,000				
240				34,680				
25	**9657**	FXSAL25/8CCT3/BZ/T3*	3CCT (3K/4K/5K)	3,500	75	Bronze	•	P
42	**9658**	FXSAL42/8CCT3/BZ/T3*	3CCT (3K/4K/5K)	6,090	150	Bronze	•	P
50	**9659**	FXSAL50/8CCT3/BZ/T3*	3CCT (3K/4K/5K)	7,000	250	Bronze	•	P
100	**9660**	FXSAL100/830/BZ/T3*	3000K	14,633	400	Bronze	•	P
100	**9606**	FXSAL100/840/BZ/T3	4000K	14,633	400	Bronze	•	P
100	**9607**	FXSAL100/850/BZ/T3	5000K	14,638	400	Bronze	•	P
150	**9648**	FXSAL150/830/BZ/T3*	3000K	21,118	400-575	Bronze	•	P
150	**9608**	FXSAL150/840/BZ/T3	4000K	21,163	400-575	Bronze	•	P
150	**9609**	FXSAL150/850/BZ/T3	5000K	21,118	400-575	Bronze	•	P
320	**9661**	FXSAL320/830/BZ/T3*	3000K	46,227	1000-1500	Bronze	•	P
320	**9612**	FXSAL320/840/BZ/T3	4000K	46,227	1000-1500	Bronze	•	P
320	**9613**	FXSAL320/850/BZ/T3	5000K	46,454	1000-1500	Bronze	•	P
25	**9662**	FXSAL25/8CCT3/BZ/T3/480*	3CCT (3K/4K/5K)	3,500	75	Bronze	•	P
42	**9663**	FXSAL42/8CCT3/BZ/T3/480*	3CCT (3K/4K/5K)	6,090	150	Bronze	•	P
50	**9664**	FXSAL50/8CCT3/BZ/T3/480*	3CCT (3K/4K/5K)	7,000	250	Bronze	•	P
103	**9614**	FXSAL100/840/BZ/T3/480*	4000K	14,710	400	Bronze	•	P
102	**9615**	FXSAL100/850/BZ/T3/480*	5000K	14,679	400	Bronze	•	P
150	**9616**	FXSAL150/840/BZ/T3/480*	4000K	21,417	400-575	Bronze	•	P
150	**9617**	FXSAL150/850/BZ/T3/480*	5000K	21,535	400-575	Bronze	•	P
325	**9620**	FXSAL320/840/BZ/T3/480*	4000K	45,830	1000-1500	Bronze	•	P
325	**9621**	FXSAL320/840/BZ/T3/480*	5000K	45,963	1000-1500	Bronze	•	P
						Bronze		

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ORDERING

*P= Premium DLC / *S = Standard DLC

Watts (W)	Ordering Code	Description	CCT (K)	Lumens (Lm)	Equiv. Wattage (W)	Color	IP66 Rated	DLC (S/P)
100	**9623**	FXSAL100/840/WH/T3	4000K	14,638	400	White	•	P
100	**9624**	FXSAL100/850/WH/T3	5000K	14,638	400	White	•	P
150	**9625**	FXSAL150/840/WH/T3	4000K	21,163	400-575	White	•	P
150	**9626**	FXSAL150/850/WH/T3	5000K	21,118	400-575	White	•	P
320	**9629**	FXSAL320/840/WH/T3	4000K	46,454	1000-1500	White	•	P
320	**9630**	FXSAL320/850/WH/T3	5000K	46,454	1000-1500	White	•	P
100	**9650**	FXSAL100/850/BK/T3	5000K	14,638	400	Black	•	P
150	**9651**	FXSAL150/850/BK/T3	5000K	21,118	400-575	Black	•	P

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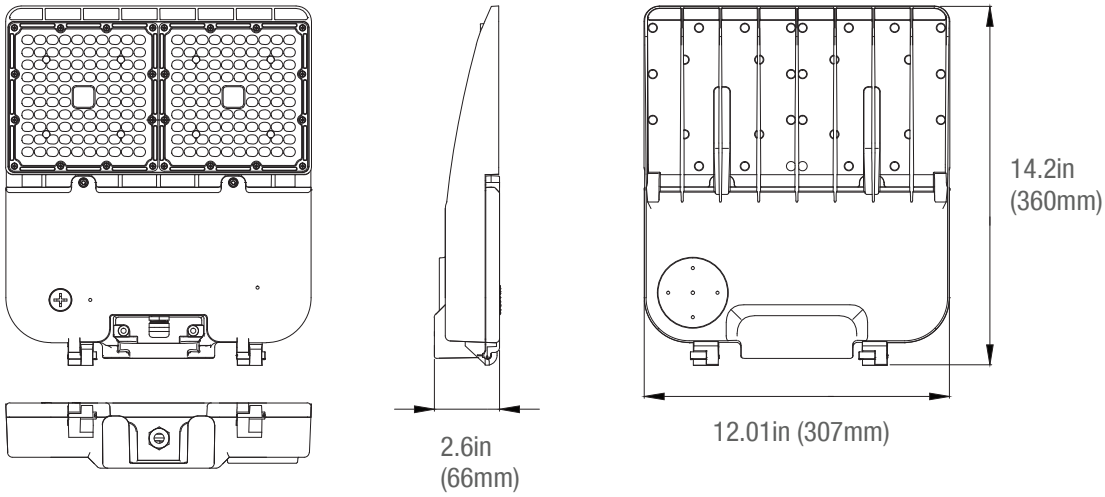
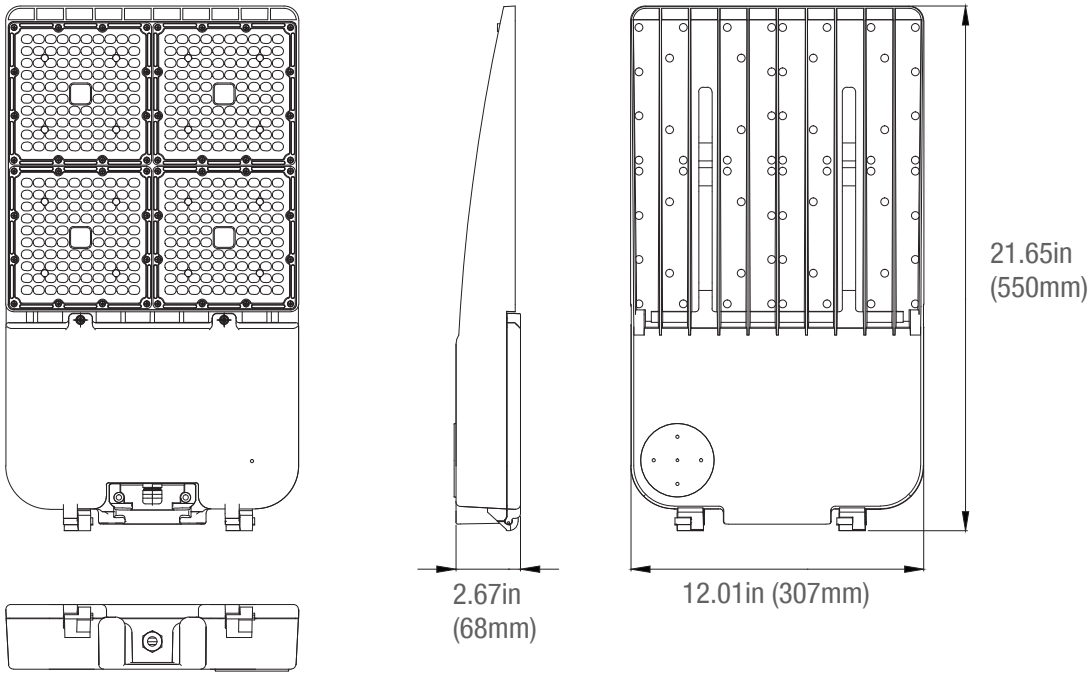
DIMENSIONS

75/100/150W
8.00-lbs



240/320W
15.50-lbs



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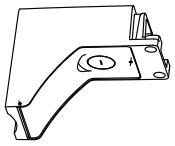
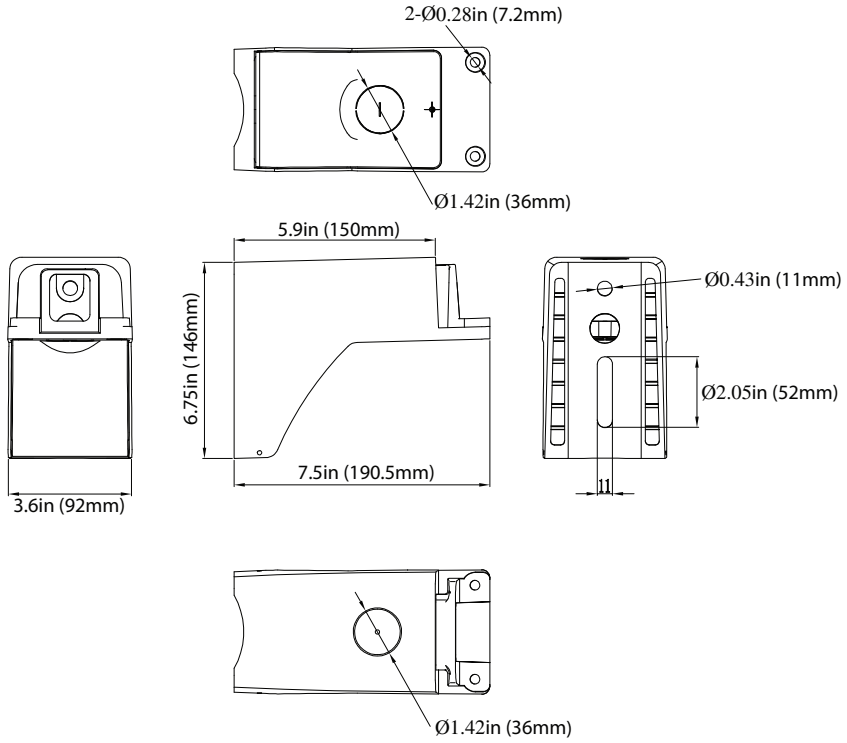
MOUNTINGS (Ordered Separately)

Pole Mount 6”

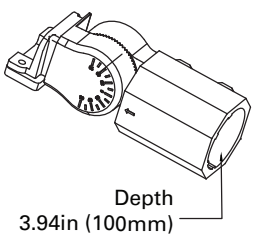
P10453 MT-AL/PM6/BZ
P10458 MT-AL/PM6/WH
P10468 MT-AL/PM6/BK

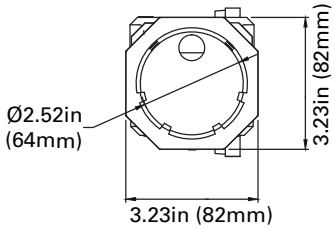


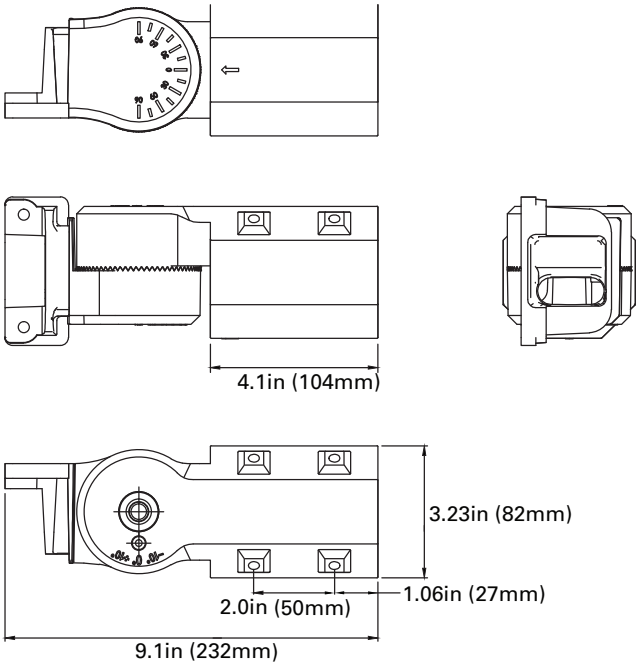


Slip Fitter

P10455 MT-AL/SF/BZ
P10460 MT-AL/SF/WH
P10470 MT-AL/SF/BK







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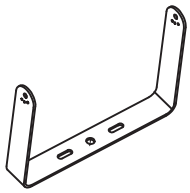
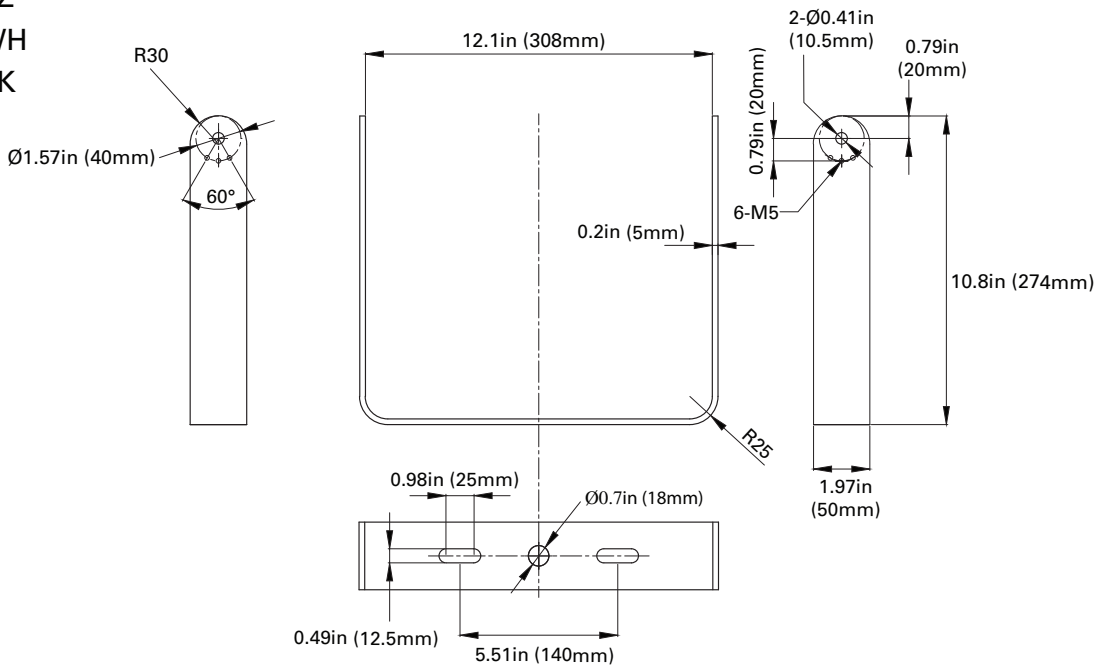
MOUNTINGS (Ordered Separately)

Yoke Mount 12”

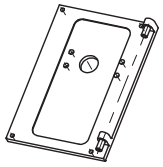
P10456 MT-SAL/YK12/BZ
P10461 MT-SAL/YK12/WH
P10471 MT-SAL/YK12/BK

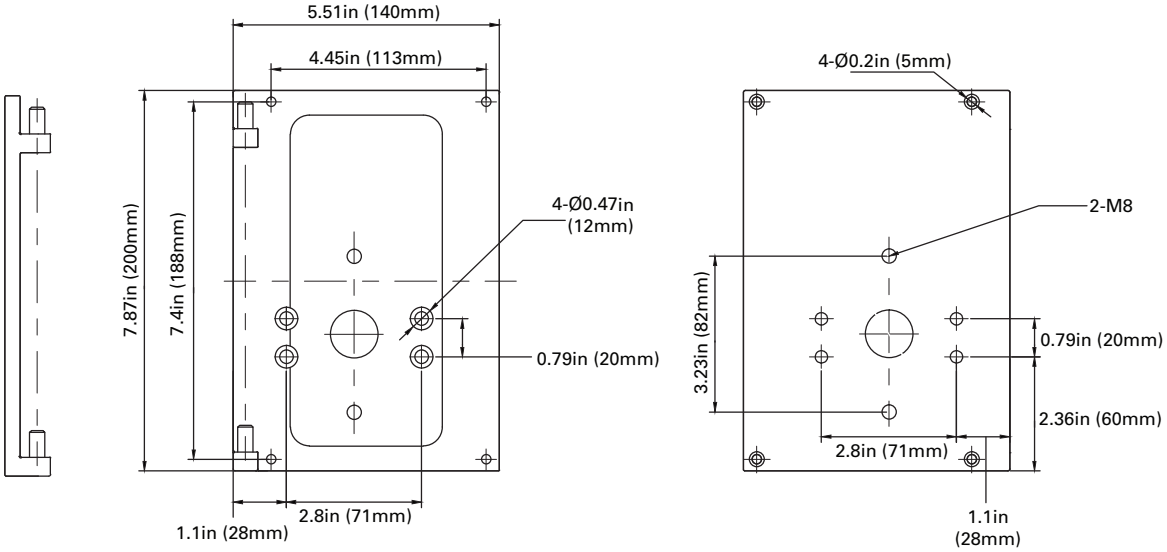




Wall Mount

P10473 MT-AL/WM/BZ
P10474 MT-AL/WM/WH
P10475 MT-AL/WM/BK





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ACCESSORIES (Ordered Separately)

6" Pole Mount Arm

- P10453 MT-AL/PM6/BZ (6" Pole Mount Arm Bronze)
- P10458 MT-AL/PM6/WH (6" Pole Mount Arm White)
- P10468 MT-AL/PM6/BK (6" Pole Mount Arm Black)

Slip Fitter

- P10455 MT-AL/SF/BZ (Slip Fitter Mount Bronze)
- P10460 MT-AL/SF/WH (Slip Fitter Mount White)
- P10470 MT-AL/SF/BK (Slip Fitter Mount Black)

Wall Mount

- P10473 MT-AL/WM/BZ (Wall Mount Bronze)
- P10474 MT-AL/WM/WH (Wall Mount White)
- P10475 MT-AL/WM/BK (Wall Mount Black)

Yoke Mount

- P10456 MT-SAL/YK12/BZ (12" Yoke Mount Bronze)
- P10461 MT-SAL/YK12/WH (12" Yoke Mount White)
- P10471 MT-SAL/YK12/BK (12" Yoke Mount Black)

Twist Lock Receptacle

P10141 REC3PLK
(Twist Lock Photocell & Receptacle Mount 120-480V 3 Prong)

P10142 REC7PLK
(Twist Lock Photocell & Receptacle Mount 120-480V 7 Prong)

Individual Sensors

P10371 SEN-BRI619
(PIR Motion/Photocell 0-10V Bi-Level Control IP66 12-24V IR Sensor)

P10316 SEN-BRI-RC100
(Remote Programmer for P10371)

Surge Protection

P10389 SPD-L-10KV-277
(Surge Protection 10KV 120-277V)

P10390 SPD-L-20KV-277
(Surge Protection 20KV 120-277V)

P10391 SPD-L-20KV-480
(Surge Protection 20KV 347-480V)

Shorting Cap

P10053 SEN-PHO-LK-MT-SRT
(Twist Lock Photocell Shorting Cap 120-480V 3 Prong)

Dusk to Dawn Photocell

K141030 REC3PLK/PHO
(Twist Lock Photocell & Receptacle 120-277V 3 Prong)

Type III & IV Lens

P10466 LENS-SAL-T3-G1
(Type III Lens)

P10467 LENS-SAL-T4-G1
(Type IV Lens)

P10499 LENS-SAL-T5-G1
(Type V Lens)

P10500 LENS-SAL-T3-BLC-G1
(Type 3 Back Light Cut Lens)

Glare Shield

P10481 GSFB-SAL/BZ
(Glare Shield- Bronze)

P10482 GSFB-SAL/WH
(Glare Shield- White)

P10483 GSFB-SAL/BK
(Glare Shield- Black)

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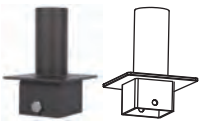
POLE BRACKETS (Ordered Separately)

Round Pole Mount Tenon
P10348 MT-3RTV2.5-1/BZ
(3" Round Pole with 2-3/8" Tenon)

P10349 MT-4RTV2.5-1/BZ
(4" Round Pole with 2-3/8" Tenon)

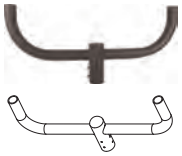
P10350 MT-5RTV2.5-1/BZ
(5" Round Pole with 2-3/8" Tenon)



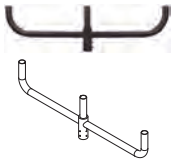
Square Pole Mount Tenon
P10351 MT-3STV2.5-1/BZ
(3" Square Pole with 2-3/8" Tenon)

P10352 MT-4STV2.5-1/BZ
(4" Square Pole with 2-3/8" Tenon)

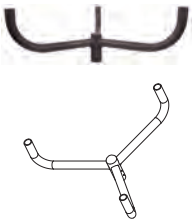
P10353 MT-5STV2.5-1/BZ
(5" Square Pole with 2-3/8" Tenon)



Bullhorns with Double -180°
P10356 MT-2.5RTBV2.5-2180/BZ
(Bullhorn with Double 2-3/8" Tenon-180°)

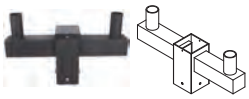


Bullhorns with Triple -180°
P10357 MT-2.5RTBV2.5-3180/BZ
(Bullhorn with Triple 2-3/8" Tenon-180°)

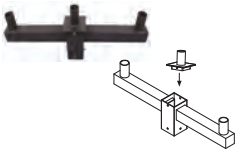


Bullhorns with Triple -120°
P10358 MT-2.5RTBV2.5-3120/BZ
(Bullhorn with triple 2-3/8" Tenon-120°)

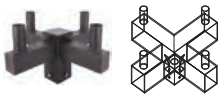
Spoke Mount Bracket - 90°
P10359 MT-2.5RTBH2.5-290/BZ
(Spoke Mount Bracket with Double 2-3/8" -90°)



Square Pole Mount with Double - 180°
P10360 MT-4STV2.5-2180/BZ
(4" Square Pole Mount with Double 2-3/8" Tenon)



Square Pole Mount with Triple - 180°
P10361 MT-4STV2.5-3180/BZ
(4"Square Pole Mount with Triple 2-3/8" Tenon)



Square Pole Mount with Quad - 90°
P10362 MT-4STV2.5-490/BZ
(4"Square Pole Mount with Quad 2-3/8" Tenon)

Wall Mount Bracket
P10363 MT-4WM2.5-1/BZ
(Wall Mount Bracket with 2-3/8" Tenon)

Angled Mount Bracket - 90°
P10364 MT-4WM2.5-190/BZ
(90° Angled Wall Mount with 2-3/8" Tenon)

Light Pole Cap
P10354 MT-4STC/BK
(4" Square Pole Cap)

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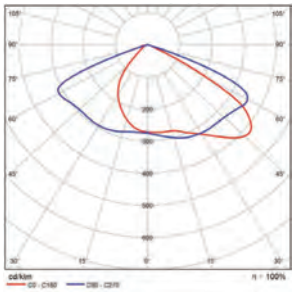
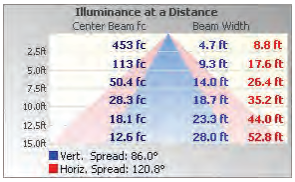
PHOTOMETRICS CHART

75 Watt - Type 3
DLC Premium





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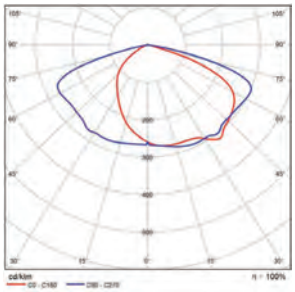
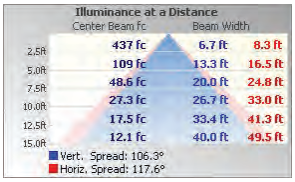
DLC Premium





75 Watt - Type 5
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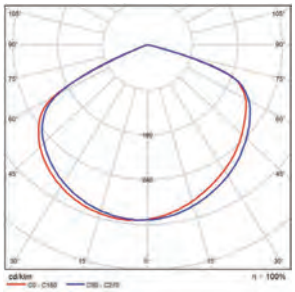

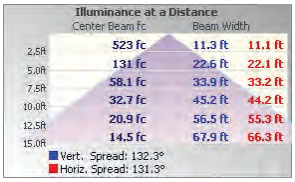

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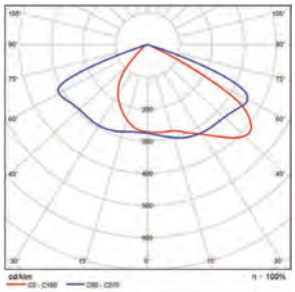

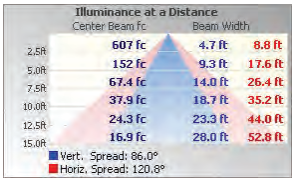

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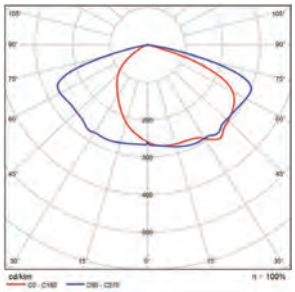

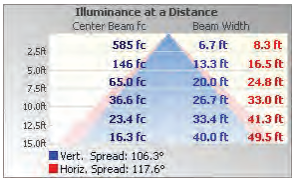

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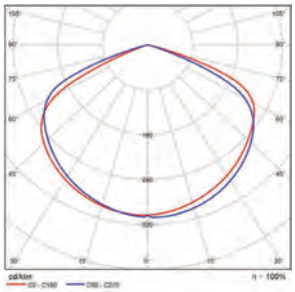

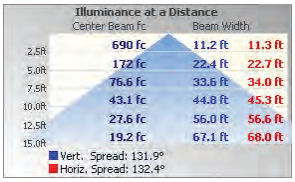

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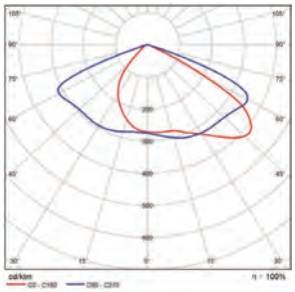

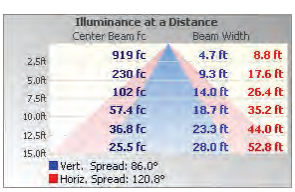

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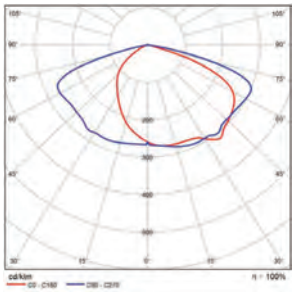

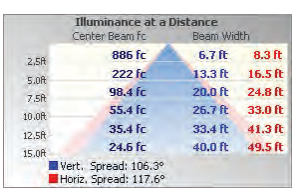

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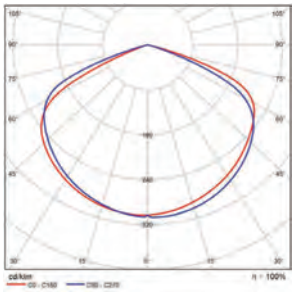

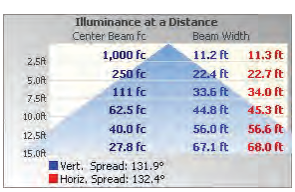

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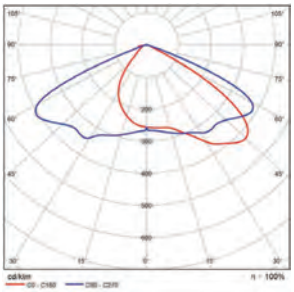
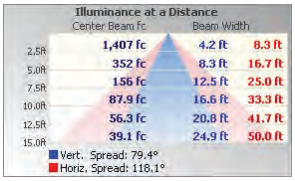
PHOTOMETRICS CHART

240 Watt - Type 3
DLC Premium





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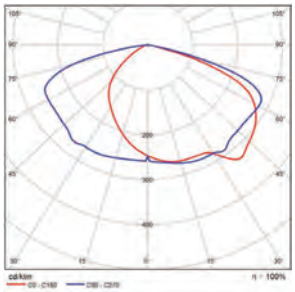

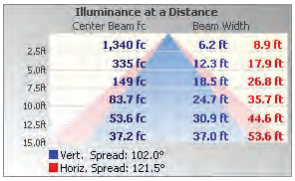

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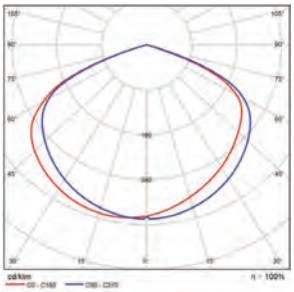

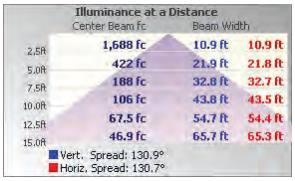

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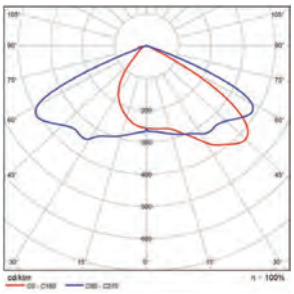

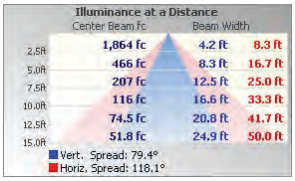

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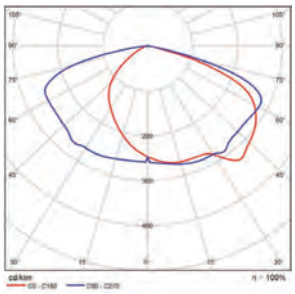

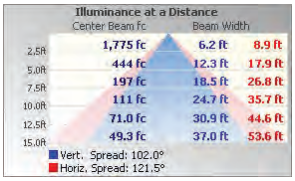

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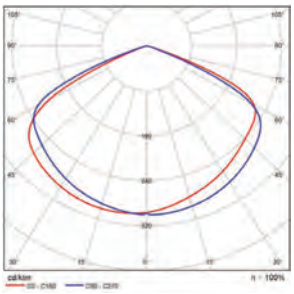
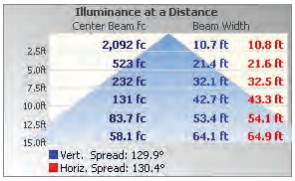
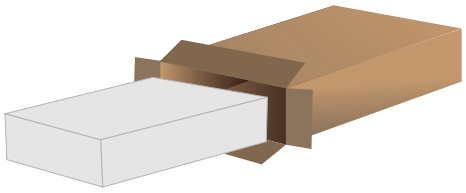




PACKAGE

Case Qty 1 pc



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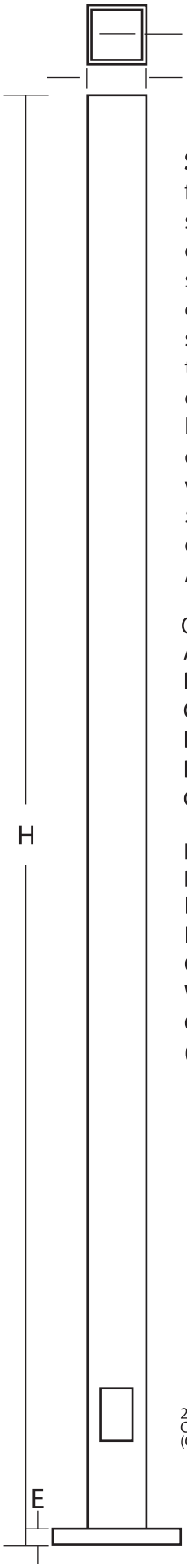
SSS
SERIES

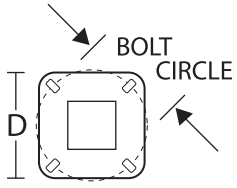


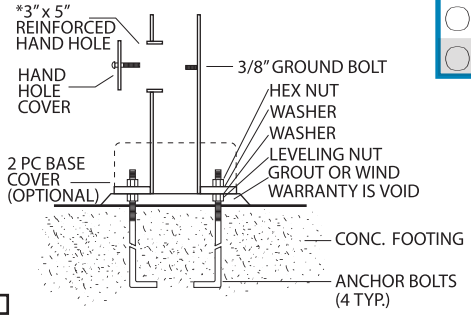
CONSTRUCTION:

Square straight steel poles are fabricated from hot rolled carbon steel with minimum yield strength of 55,000 psi. The anchor base shall be fabricated from hot rolled carbon steel with minimum yield strength of 36,000 psi. The base telescopes the pole shaft and is circumferentially welded top and bottom. Anchor bolts are fabricated from hot rolled steel bar with a minimum yield strength of 50,000 psi. Anchor bolts are hot dip galvanized in accordance to ASTM-A-153.

OPTIONS:
AT - 2-3/8" O.D. x 5" long tenon
BT - 2-7/8" O.D. x 5" long tenon
CT - 3" O.D. x 5" long tenon
BC - Two piece square base cover
DR - Duplex Receptacle
GFI - Ground Fault Interruptor

FINISH:
Polyester powder fuse coating.
BZ - Bronze
BK - Black
GN - Green
WT - White
GA - Hot dip galvanized
(Other colors upon request)





X	MOD NUMBER	WALL	SHAFT SIZE	HT.	BASE PLATE		BOLT CIRCLE	ANCHOR BOTLS	EPA 100 MPH	SHIP WT.
		A	B	H	D	E				
◯	SSS-11-308	.120"	3" SQ.	8'	8"	1/2"	8"	3/4x16x3	8.0	48#
◯	SSS-11-310	.120"	3" SQ.	10'	8"	1/2"	8"	3/4x16x3	6.8	58#
◯	SSS-11-312	.120"	3" SQ.	12'	8"	1/2"	8"	3/4x16x3	6.2	68#
◯	SSS-11-314	.120"	3" SQ.	14'	8"	1/2"	8"	3/4x16x3	5.0	78#
◯	SSS-11-408	.120"	4" SQ.	8'	9 1/2"	1/2"	9 1/2"	3/4x16x3	28.8	64#
◯	SSS-11-410	.120"	4" SQ.	10'	9 1/2"	1/2"	9 1/2"	3/4x16x3	26.0	78#
◯	SSS-11-412	.120"	4" SQ.	12'	9 1/2"	1/2"	9 1/2"	3/4x16x3	23.0	92#
◯	SSS-11-414	.120"	4" SQ.	14'	9 1/2"	1/2"	9 1/2"	3/4x16x3	21	106#
◯	SSS-11-415	.120"	4" SQ.	15'	9 1/2"	1/2"	9 1/2"	3/4x16x3	18	113#
◯	SSS-11-416	.120"	4" SQ.	16'	9 1/2"	1/2"	9 1/2"	3/4x16x3	16	120#
◯	SSS-11-418	.120"	4" SQ.	18'	9 1/2"	3/4"	9 1/2"	3/4x24x3	14	134#
◯	SSS-11-420	.120"	4" SQ.	20'	9 1/2"	3/4"	9 1/2"	3/4x24x3	10.0	148#
◯	SSS-11-422	.120"	4" SQ.	22'	9 1/2"	3/4"	9 1/2"	3/4x24x3	8	162#
◯	SSS-11-424	.120"	4" SQ.	24'	9 1/2"	3/4"	9 1/2"	3/4x24x3	7	176#
◯	SSS-11-425	.120"	4" SQ.	25'	9 1/2"	3/4"	9 1/2"	3/4x24x3	6	190#
◯	SSS-7-420	180"	4" SQ.	20'	9 1/2"	3/4"	9 1/2"	3/4x24x3	15	208#
◯	SSS-7-422	180"	4" SQ.	22'	9 1/2"	3/4"	9 1/2"	3/4x24x3	11	227#
◯	SSS-7-424	180"	4" SQ.	24'	9 1/2"	3/4"	9 1/2"	3/4x24x3	10	246#
◯	SSS-7-425	180"	4" SQ.	25'	9 1/2"	3/4"	9 1/2"	3/4x24x3	8	256#
◯	SSS-11-520	.120"	5" SQ.	20'	11 3/4"	3/4"	12"	3/4x24x3	18	190#
◯	SSS-11-522	.120"	5" SQ.	22'	11 3/4"	3/4"	12"	3/4x24x3	16	206#
◯	SSS-11-524	.120"	5" SQ.	24'	11 3/4"	3/4"	12"	3/4x24x3	13	222#
◯	SSS-11-525	.120"	5" SQ.	25'	11 3/4"	3/4"	12"	3/4x24x3	10	230#
◯	SSS-11-527	.120"	5" SQ.	27'	11 3/4"	3/4"	12"	1x36x4	8	246#
◯	SSS-11-530	.120"	5" SQ.	30'	11 3/4"	3/4"	12"	1x36x4	5	272#
◯	SSS-7-520	180"	5" SQ.	20'	11 3/4"	3/4"	12"	1x36x4	23	266#
◯	SSS-7-522	180"	5" SQ.	22'	11 3/4"	3/4"	12"	1x36x4	20	290#
◯	SSS-7-524	180"	5" SQ.	24'	11 3/4"	3/4"	12"	1x36x4	18	314#
◯	SSS-7-525	180"	5" SQ.	25'	11 3/4"	3/4"	12"	1x36x4	16	326#
◯	SSS-7-527	180"	5" SQ.	27'	11 3/4"	3/4"	12"	1x36x4	13	350#
◯	SSS-7-530	180"	5" SQ.	30'	11 3/4"	3/4"	12"	1x36x4	11.8	386#
◯	SSS-7-625	180"	6" SQ.	25'	11 3/4"	3/4"	12"	1x36x4	28	389#
◯	SSS-7-630	180"	6" SQ.	30'	11 3/4"	3/4"	12"	1x36x4	21	461#
◯	SSS-7-635	180"	6" SQ.	35'	11 3/4"	1'	12"	1x36x4	15	533#
◯	SSS-7-640	180"	6" SQ.	40'	11 3/4"	1'	12"	1x36x4	9	606#

1. Mod. #	2. Pole Ht.	3. Options	4. Finish