

# **Addendum to the Lower Busch Tank Improvement 2005 Negative Declaration**

## **Malibu, California**

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## **SECTION 1.0 INTRODUCTION**

### **1.1 PROJECT BACKGROUND**

The County of Los Angeles Department of Public Works Waterworks District No. 29 (District) operates the potable water system within a 47-square-mile service area comprising the City of Malibu and surrounding unincorporated areas. The District acquired several water facilities in the Malibu system from the Malibu Water Company in 1959, including the Lower Busch Tank. The District has an easement with Malibu Water Company to construct, repair, and maintain water facilities on the property.

The Lower Busch Tank is a potable water tank that was constructed in approximately 1947; it is located at 5731 South Busch Drive in Malibu, CA, and serves over 300 connections within the 325-foot pressure zone. Due to visible cracking, rust stains, and efflorescence on the tank, in 2000, the District authorized an inspection to be performed on the tank. The inspection report documented several cracks and poor concrete quality and determined that the tank did not meet American Water Works Association (AWWA) seismic standards (PSI 2000). Based on the information provided in the report, a tank retrofit was not economical. Consequently, the District elected to remove and replace the existing tank.

In 2003, in compliance with the California Environmental Quality Act (CEQA), the County prepared and circulated a Negative Declaration (ND) which was adopted by the Los Angeles County Board of Supervisors in 2005 to replace the existing concrete tank with a new steel tank (SCH No. 2003081124) based on preliminary conceptual designs. The tank as analyzed in the 2005 ND was proposed as 59 feet in diameter, 24 feet in height (part of which may have been below grade), and with capacity of 380,000 gallons. The project analyzed in the 2005 ND is henceforth referred to as the “Approved Project”.

The ND adopted in 2005 is herein referred to as the 2005 ND respecting its findings regarding environmental impacts. The CEQA baseline set forth in the ND is that when the ND was circulated for public review in August 2003; thus, references in this Addendum to the environmental setting identified in the ND are conditions in 2003, not 2005; and are identified as such in the foregoing text.

In 2011, the County retained an engineer (Cannon) to design the replacement tank. Based on site investigations and discussions with the District, minor technical modifications to the design of the tank were made. Cannon summarized the final recommendations for the replacement tank in a July 17, 2012 Design Memorandum.

In 2018 the replacement tank was redesigned again. The redesigned tank is proposed to be 62 feet in diameter; 26 feet high and entirely above grade; and have a capacity of 385,000 gallons. The 2018 redesign is henceforth referred to as the Proposed Project.

On October 5, 2020, a Categorical Exclusion was approved by the Federal Emergency Management Agency for the installation of a backup generator system for the Lower Busch Pump Station to provide backup power when an outage occurs so the pump station may continue to supply adequate water for firefighting, drinking, and other community needs.

## **1.2 PURPOSE OF AN ADDENDUM**

Section 15164 of the State CEQA Guidelines stipulates that a lead agency (County of Los Angeles) may prepare an addendum to an adopted ND “if only minor technical changes or additions are necessary or none of the conditions described in [State CEQA Guidelines] Section 15162 calling for the preparation of a subsequent EIR or negative declaration have occurred”. Those conditions are:

15162(a): A new significant impact; a substantial increase in the severity of a previously identified significant impact (new or intensified significant impacts could be due to a change in the project, a change in existing conditions, or both); mitigation measures or alternatives previously found to be infeasible is determined to be feasible and would substantially reduce one or more significant impacts of the project, but the project proponents decline to adopt the mitigation measure or alternative; or mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR/MND would substantially reduce one or more significant impacts of the project, but the project proponents decline to adopt the mitigation measure or alternative.

15162(b): If changes to a project or its circumstances occur or new information becomes available after adoption of a negative declaration, the lead agency shall prepare a subsequent EIR if required under subdivision (a). Otherwise, the lead agency shall determine whether to prepare a subsequent negative declaration, an addendum, or no further documentation.

An addendum need not be circulated for public review but can be included in or attached to the adopted ND.

The present Addendum addresses impacts of the Tank as redesigned in 2018.

## **1.3 FINDINGS FOR PROPOSED CHANGES**

In accordance with Section 15164(e) of the State CEQA Guidelines, the lead agency must provide a “brief explanation of the decision not to prepare a subsequent EIR pursuant to Section 15162 should be included in an addendum to an EIR, the lead agency’s findings on the project, or elsewhere in the record. The explanation must be supported by substantial evidence”. The following findings provide justification as to why an addendum, and not a subsequent EIR, is the appropriate document for the proposed modifications to the project:

- (1) No substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects.*

The 2005 ND analyzed impacts of replacing the existing concrete water tank with a steel tank measuring 24 feet high and with an outside diameter of 59-feet. The current (2018) replacement tank would be constructed at the same location after demolition of the existing water tank. The existing cylindrical 300,000-gallon concrete tank is a total of 21 feet high, 4 feet of which are buried below grade; it has an outside diameter of 52 feet. Table 1 provides a comparison of the project components.

**TABLE 1  
COMPARISON OF PROJECT COMPONENTS**

	Existing Tank	Conceptual Tank Design Proposed in 2005 ND	2018 Proposed Tank Design
<b>Material</b>	Concrete	Steel	Steel
<b>Diameter</b>	52 feet	59 feet	62 feet
<b>Height</b>	21 feet total (18 feet above grade and 4 feet below grade)	24 feet total (unclear how much is below grade)	26 feet above grade (none is below grade)
<b>Operational Capacity</b>	300,000 gallons	380,000 gallons	385,000 gallons

As shown in Table 1, the dimensions and capacity of the currently proposed tank are very similar to the one analyzed in the adopted 2005 ND. The 2018 proposed steel tank would be approximately 26 feet high with an outside diameter of 62 feet. The 2018 proposed tank's circumference would be slightly larger (by three feet), and the height would remain the same as the 2005 design. Despite the slightly larger footprint, the 2018 proposed tank would have a greater operational capacity.

The minor disparity in the operational capacity of 5,000 gallons can be attributed to the differing engineering assumptions that were used in 2005 and 2018.<sup>1</sup> The tank analyzed in the 2005 ND was based on preliminary conceptual designs – the tank design had not yet been finalized. In fact, the Geotechnical Engineering Report prepared in conjunction with the 2005 ND actually referred to a 58-foot tank, which is only slightly smaller than the currently proposed 62-foot tank (LACDPW 2003b). Therefore, the difference in operational capacity is negligible and for the purposes of this Addendum, the 2018 proposed tank is nearly identical to the one analyzed in the 2005 ND.

The environmental setting differs from that in 2003 analyzed in the ND due to burning of trees in the Woolsey Fire of November 2018. Several trees on the Project site burned, and several trees on the Busch Drive frontage next to the Project site also burned. Standing remnants of burned tamarisk trees are present in the southwest part of the site.

The Proposed Project includes the following components changed from the Approved Project:

- Relocate two 5,000-gallon temporary storage tanks to the northwest corner of the Project site from their current location at 21737 Azurelee Road in the City of Malibu, about 10 miles east of the Project site. Each temporary tank is about 8.5 feet in diameter and 12.5 feet high and would be transported by truck.
- Install a tank mounted blower. The blower is intended to minimize the formation of chlorine vapor inside the tank, to reduce the potential for chlorine corrosion. A blower would need to operate when there are significant temperature differences between the interior and exterior of the tank, such as dusk, and would not operate continuously. The blower would be encased in all-weather sound panels to absorb noise.

<sup>1</sup> Possible engineering discrepancies include the amount of “freeboard” available at the top of the tank. The freeboard area allows for containment of the sloshing wave height due to seismic activity, as well as any incidental water that fills the tank above the overflow outlet. Another discrepancy might be the location of the inlet/outlet piping on the tank. The area below the piping is considered to be “dead storage” because the water there is inaccessible.

- Remove the three dead or dying tamarisk trees (*Tamarix ramosissima*) located in the southwest corner of the Project site.
- Replace existing chain link fencing on the site perimeter with new 6-foot chain link fencing; and replace two chain link gates on the east site boundary with two new double-swing chain link gates.

The remaining District facilities at the site would not require any alterations, including the pump station, the pressure relief valve, the flow meter vault, the pressure-reducing station, the concrete masonry block building. However, depending on the construction area needed to remove the existing tank and install the new one, some of the existing utilities may need to be relocated. This would mostly affect the water lines and the electrical conduits on the site that are in close proximity to the existing tank (Cannon 2012). These project components would be required in order to implement both the approved 2005 design and the 2018 proposed design.

The environmental impacts associated with the overall increase in size of the tank from the existing concrete tank were analyzed under the 2005 ND, and no significant environmental effects were identified. All potential short-term construction-related impacts and all long-term operational impacts were determined to be less than significant. As the currently proposed tank is almost identical to the tank analyzed in the 2005 ND, the Proposed Project does not incorporate substantial changes to the project that would require major revisions of the 2005 ND.

- (2) No substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects.*

The site remains largely unchanged from 2003. The tank site, located at 5731 Busch Drive in Malibu, California, consists of a partially buried, 300,000-gallon-concrete tank, booster pumps and associated underground pipelines; a small concrete masonry block building that houses electrical panels and a restroom; buried leach lines for the restroom; and security fencing. The site is paved with aged asphalt concrete. The Project site is located within an established and fully developed residential community, with homes that border the Project site to the north, west, and south, and across Busch Drive to the east, with multiple trees located near the property lines. The Project site is fully paved and does not offer any opportunities for flora or fauna—including federally or State-listed species or species of special concern—to become established within the project limits.

As discussed under (1) above, the currently proposed tank is almost identical to the tank analyzed in the 2005 ND, and the minor changes in the tank design do not constitute substantial changes to the project. Additionally, no substantial changes have occurred with respect to the circumstances under which the project is undertaken that require major revisions to the 2005 ND, as there are no new significant environmental effects or increases in the severity of previously identified impacts.

- (3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the Negative Declaration was adopted, shows any of the following:*

- (A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;*

- (B) *Significant effects previously examined will be substantially more severe than shown in the previous EIR;*
- (C) *Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or*
- (D) *Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.*

The project does not include new information of substantial importance that was not known at the time the 2005 ND was adopted. As discussed above, the Proposed Project components are almost identical to the project that was analyzed in the 2005 ND. Only minor technical changes to the design of the tank are proposed. The new project would not create any new significant impacts, nor would it increase the severity of any impacts when compared to the project analyzed in the 2005 ND. While a new geotechnical study of the Project site was prepared by Ninyo & Moore in April 2012 (Ninyo & Moore 2012), the conclusions reached in the study are consistent with what was found in previous studies, such as the Geotechnical Engineering Report prepared by the County of Los Angeles Department of Public Works, Soils Investigation Unit for the ND (LACDPW 2003b).

#### **1.4 MEASURES, PROJECT DESIGN FEATURES AND REGULATORY REQUIREMENTS**

As all impacts were determined to be less than significant, no mitigation measures were required for the 2005 design, as set forth in the 2005 ND. While the adoption of mitigation measures is not required if significant impacts are not identified, it is not prohibited for a project proponent to voluntarily agree to measures to further minimize a less than significant environmental effect, thus the 2005 ND did include several measures to ensure compliance with applicable regulatory requirements and standard construction practices. The ND (p. 14) referenced these measures as “mitigation measures” even though the ND did not identify significant impacts and did not require mitigation measures to reduce such impacts. These measures are listed below.

##### **Air Quality**

- Control dust by appropriate means, such as watering and/or sweeping.
- Compliance with applicable air pollution control regulations.

##### **Geology and Soils**

- Proper removal and disposal of excess soils and excavated materials.

##### **Hazards and Hazardous Materials**

- Proper maintenance of all construction equipment.
- Compliance with all applicable laws and ordinances regarding chemical cleanup.

##### **Hydrology and Water Quality**

- Compliance with all applicable Best Management Practices as required by the National Pollutant Discharge Elimination System permit issued to the County by the Regional Water Quality Control Board.

## **Noise**

- Compliance with all applicable noise and ordinances during construction.
- Construction activities would be restricted to the County appointed construction times.

## **Transportation/Traffic**

- Advance notification of all street and/or lane closures and detours to all emergency service agencies.
- Clear delineations and barricades to designate through traffic lanes.
- Compliance with all applicable laws and ordinances regarding the transportation routes for the haul of material.

No new mitigation measures are required as part of the minor changes to the project. In order to clarify the measures that were listed in the 2005 ND and to reflect the standard operating procedures that the County implements during water tank replacement projects, such as the Lower Busch Tank project, the project design features (PDFs) and regulatory requirements (RRs) have been included as part of this Addendum. These PDFs and RRs are not new or considerably different from those included in the 2005 ND; they merely specify how the measures will be implemented and cite the applicable State and local regulatory requirements.

The contents of some RRs or PDFs have changed somewhat since 2005; for instance, regarding PDF WQ-1, Los Angeles County Public Works (DPW) issued a Low Impact Development Standards Manual in 2014 replacing previous DPW stormwater quality standards.

The County shall confirm that these PDFs and RRs are included in the Contractor Specifications and that contractor compliance with these PDF and RR requirements are performed to the satisfaction of the County Department of Public Works.

## **Air Quality**

**RR AQ-1** Project contractors shall comply with South Coast Air Quality Management District (SCAQMD) Rule 403, Fugitive Dust, which requires the implementation of best available control measures (BACM) for any activity or man-made condition capable of generating fugitive dust, including, but not limited to, earth-moving activities, construction/demolition activities, disturbed surface area, or heavy- and light-duty vehicular movement (SCAQMD 1976). The BACMs include stabilizing soil; watering surface soils and crushed materials; covering hauls or providing freeboard; preventing track-out; and limiting vehicle speeds and wind barriers, among others. Rule 403 requires dust control, as necessary, to prevent visible emissions beyond the Project site property lines. Compliance with this Rule will result in a reduction in short-term particulate pollutant emissions. This measure shall be included by the County as notes in the Contractor Specifications

**RR AQ-2** All off-road diesel-powered construction equipment greater than 50 horsepower (hp) shall meet U.S. Environmental Protection Agency (USEPA) Tier 3 or better off-road emissions standards. A copy of each unit's certified Tier specification shall be provided to the County at the time of mobilization of each applicable unit of equipment.

**RR AQ-3** Electricity shall come from power poles rather than diesel- or gasoline-fueled generators, compressors, or similar equipment unless it is demonstrated to the County to not be feasible.

- RR AQ-4** Construction contractors shall implement the following measures:
- a. All construction equipment shall be tuned and maintained in accordance with the manufacturer's specifications;
  - b. Diesel truck idling time shall be five minutes or less, both on and off site; and
  - c. Work crews shall shut off diesel equipment when not in use.
- RR AQ-5** Construction contractors shall support and encourage ridesharing and incentives for the construction crews.

**Biological Resources**

**RR BIO-1** To ensure compliance with the Migratory Bird Treaty Act, the County shall schedule all vegetation removal and grading activities during the non-breeding season (i.e., September 1 to January 31) to avoid impacts on active nests for common and special status birds. If project timing requires that vegetation clearing or grading occur between February 1 and August 31, the County shall retain a qualified Biologist (one with experience conducting nesting bird surveys) to conduct a pre-construction survey for nesting birds and raptors. A pre-construction survey shall be conducted by a qualified Biologist within 72 hours prior to vegetation clearing or the initiation of work during the breeding season. The pre-construction nesting bird survey area shall include the Project site (i.e., disturbance footprint) plus a 250-foot buffer to search for nesting birds and a 500-foot buffer to search for nesting raptors. If no active nests are found, no restriction on construction would be required.

If an active nest is observed during the survey, the Biologist shall delineate an appropriate buffer to protect the nest. A protective buffer zone (25 feet to 500 feet for nesting birds, 300 feet to 500 feet for nesting raptors) shall be used to protect nesting birds and nesting raptors. The size of the buffer shall be established at the discretion of the Biologist based on site topography, existing disturbance, status of the species, sensitivity of the individuals (established by observing the individuals at the nest), and the type of construction activity. No construction activities shall be allowed in the designated buffer until the Biologist determines that nesting activity has ended. Encroachment into the buffer area around a known nest will only be allowed if the Biologist determines that the proposed activity would not disturb the nest occupants. Construction may proceed within the buffer once the Biologist determines that nesting activity has ceased (i.e., fledglings have left the nest, or the nest has failed). The designated buffer will be clearly marked in the field and will be mapped as Environmentally Sensitive Areas (ESAs) on construction plans.



## **Cultural Resources**

**RR CULT-1** In accordance with Section 7050.5 of the *California Health and Safety Code*, if human remains are found during ground-disturbing activities, no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall occur until the County Coroner has determined, within two working days of notification of the discovery, the appropriate treatment and disposition of the human remains. The County Coroner shall be notified within 24 hours of the discovery. If the County Coroner determines that the remains are or believed to be Native American, s/he shall notify the Native American Heritage Commission (NAHC) in Sacramento within 24 hours of the discovery. In accordance with Section 5097.98 of the *California Public Resources Code*, the NAHC must immediately notify those persons it believes to be the most likely descended from the deceased Native American. The descendants shall complete their inspection within 48 hours of being granted access to the site by the property owner. The property owner would then determine, in consultation with a designated Native American representative, the final disposition of the human remains (14 *California Code of Regulations* §15064.5[e]). The County shall confirm this requirement is included in the Contractor Specifications, and contractor compliance with this requirement shall be performed to the satisfaction of the County Department of Public Works.

## **Geology and Soils**

**PDF GEO-1** The County of Los Angeles Department of Public Works shall review the *Geotechnical Evaluation, Lower Busch Tank Project, Malibu, California* (Ninyo & Moore 2012) and all additional geotechnical reports prepared for the Project site and shall confirm that all geotechnical recommendations provided in it have been fully and appropriately incorporated into the site preparation and building design specifications. Compliance with geotechnical report recommendations is required under Los Angeles County Public Works Grading Guidelines, and no mitigation is required to ensure implementation of this PDF.

The following RR would be applicable to the proposed Project. Because this RR is intended to ensure compliance with an existing law or regulation, it does not constitute new mitigation.

**RR GEO-1** The Project shall be designed and constructed in compliance with the American Water Works Association (AWWA) Standard D-100; and the County Building Code, which incorporates, by reference, the 2019 California Building Code (CBC, or the most recent County building and seismic codes in effect at the time the grading plans are approved) to ensure the structural integrity of proposed site improvements against seismic shaking. The County shall confirm this requirement is included in the building plans and Contractor Specifications. Contractor compliance with this requirement shall be performed to the satisfaction of the County of Los Angeles Department of Public Works. Water storage facilities and pump structures required to maintain water pressure for fire suppression are classified as Essential Facilities by the 2019 CBC. CBC compliance is required for the Project, and no mitigation is required to ensure compliance with this RR.

## **Hazards and Hazardous Materials**

**PDF HAZ-1** During construction activities, LACDPW shall employ standard equipment and techniques to minimize fire hazards from activities generating sparks, such as welding and cutting (“hot work”); including keeping combustible materials clear of hot work areas; use of fire-retardant blankets to cover combustible materials when removal of such materials from near hot work areas is impracticable; and inspection of the work site at completion of hot work for any potential ignition.

The following RR would be applicable to the proposed Project. Because this RR is intended to ensure compliance with an existing law or regulation, it does not constitute new mitigation.

**RR HAZ-1** During construction activities, hazardous materials encountered on the Project site requiring off-site disposal shall be transported off site by a properly licensed hazardous waste hauler who shall be in compliance with all applicable State and federal requirements, including California Department of Transportation (Caltrans) regulations. Hazardous materials that may be encountered during Proposed Project implementation shall be handled, treated, and/or disposed of in accordance with applicable regulations and/or the requirements of the local oversight agency(ies). The County shall confirm this requirement is included in the Contractor Specifications, and contractor compliance with this requirement shall be performed to the satisfaction of the County of Los Angeles Department of Public Works.

The following project design feature is incorporated into the project to minimize wildfire hazards from construction activities generating sparks. Because this is a design feature of the Proposed Project, it does not constitute new mitigation.

## **Hydrology and Water Quality**

**PDF WQ-1** Pursuant to Waste Discharge Requirements for Municipal Storm Water and Urban Runoff Discharges within County of Los Angeles, and the Incorporated Cities Therein, Except the City of Long Beach (Order No. R4-2012-0175), NPDES No. CAS004001), of which the City of Malibu is a co-permittee, the contractor shall develop and incorporate BMPs for reducing or eliminating construction-related pollutants in site runoff. The County shall confirm this requirement is included in the Contractor Specifications, and contractor compliance with this requirement shall be performed to the satisfaction of the County of Los Angeles Department of Public Works.

## **Transportation/Traffic**

**PDF TRANS-1** Construction traffic would be managed in compliance with the Federal Highway Administration’s (FHWA’s) *Manual on Uniform Traffic Control Devices* (FHWA 2009) and applicable City of Malibu requirements to limit roadway obstruction and the need for temporary detours. During times of heavy truck traffic, a flag person may be stationed at the Project site entrance to ensure the safety of through traffic.

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## SECTION 2.0 PROJECT DESCRIPTION

### 2.1 PROJECT LOCATION

The Project site is at 5731 South Busch Drive in the City of Malibu in western Los Angeles County. Access to the site is from Pacific Coast Highway (State Route 1) about 0.9 mile to the south. The Pacific Ocean is about 0.9 mile southwest of the Project site. The Project site is mapped on Exhibit 1, *Vicinity Map*. The site is on the east slope of a small canyon and is at an elevation of about 315 feet above mean sea level (AMSL). Malibu Equestrian Park is about 0.25 mile to the south, and Malibu High School is about 0.5 mile to the southwest.

### 2.2 EXISTING CONDITIONS

The tank site consists of a 21-foot partially buried (18 feet above grade and 4 feet below grade), 300,000-gallon-concrete tank, booster pumps and associated underground pipelines; a small concrete masonry block building that houses electrical panels and a restroom; buried leach lines for the restroom; and security fencing. Exhibit 2, *Aerial Photograph*, shows existing conditions on and near the site. The site is approximately level and paved with aged asphalt concrete. The tank is 52 feet in diameter and 21 feet in total height. The tank is partially buried, with 18 feet above ground and 4 feet below ground. There are two dead or dying mature trees in the southwest corner of the Project site (see Exhibit 3, *Site Photographs*). The Project site is located within an established and fully developed residential community, with detached single-family homes that border the Project site to the north (approximately 170 feet), west (approximately 140 feet), and south (approximately 80 feet), and across Busch Drive to the east, (approximately 160 feet) and multiple trees located near the property lines. The surrounding terrain has a south slope of about nine percent grade.

### 2.3 PROPOSED IMPROVEMENTS

The proposed steel tank would be approximately 26 feet high, entirely above-ground, with an outside diameter of 62 feet and capacity of 385,000 gallons. Exhibit 4, *Site Plan*, shows the site plan, while Exhibit 5, *Elevation*, shows an elevation of the proposed tank. Exhibit 6, *Grading Plan*, shows the outline of the existing tank superimposed within the footprint of the proposed tank. The proposed tank would be seven feet higher above ground level than the existing tank.

The tank would be constructed on a reinforced concrete ringwall foundation. In the area circumscribed by the ringwall, a 12-inch-deep crushed aggregate base shall be placed, with four inches of oiled sand placed on top of the aggregate base. A cross-section of the proposed ringwall foundation is shown on Exhibit 7, *Ringwall Foundation Section*. The replacement tank would serve over 300 connections in the 325-foot pressure zone, as does the existing tank.

The inlet pipe to the tank is a 10-inch steel pipe connecting to an existing 12-inch water main in Busch Drive. The inlet pipe would connect to the east side of the tank at approximately 75 percent of the height of the tank, in order to mix colder incoming water with warmer water in the tank. By comparison, the inlet pipe to the existing tank attaches at the bottom of the tank. The outlet pipe is also a 10-inch steel pipe connecting to the bottom of the tank and to a water main in Busch Drive.

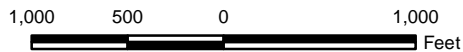
Proposed Project plans include installation of a parkway drain conveying overflow from the tank to South Busch Drive.



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### Vicinity Map

Lower Busch Tank Addendum



### Exhibit 1





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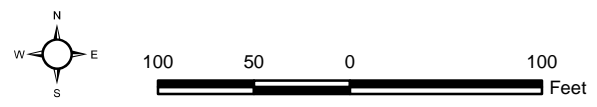


Aerial Source: LAR-IAC 2014

# Aerial Photograph

# Exhibit 2

Lower Busch Tank Addendum



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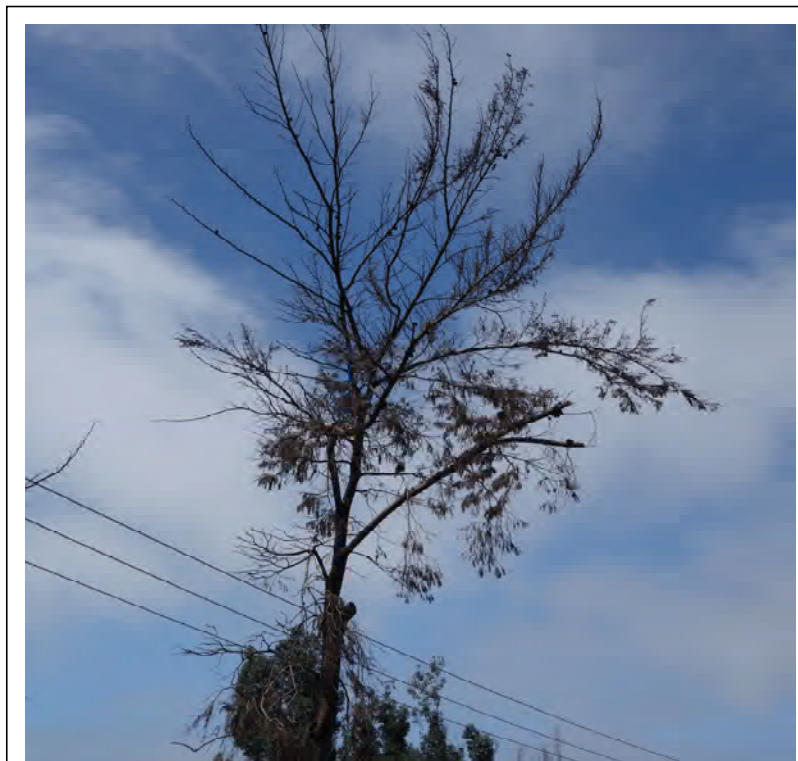




**Photo 1:** View southwest from the northeast corner of the project site showing the tank; part of the electrical and restroom building is visible on the right.



**Photo 2:** View looking southwest from the northwest part of the site of the electrical and restroom building in the west part of the site.



**Photo 3:** View looking southwest from the south part of the site of one of two dead or dying trees on the south site boundary



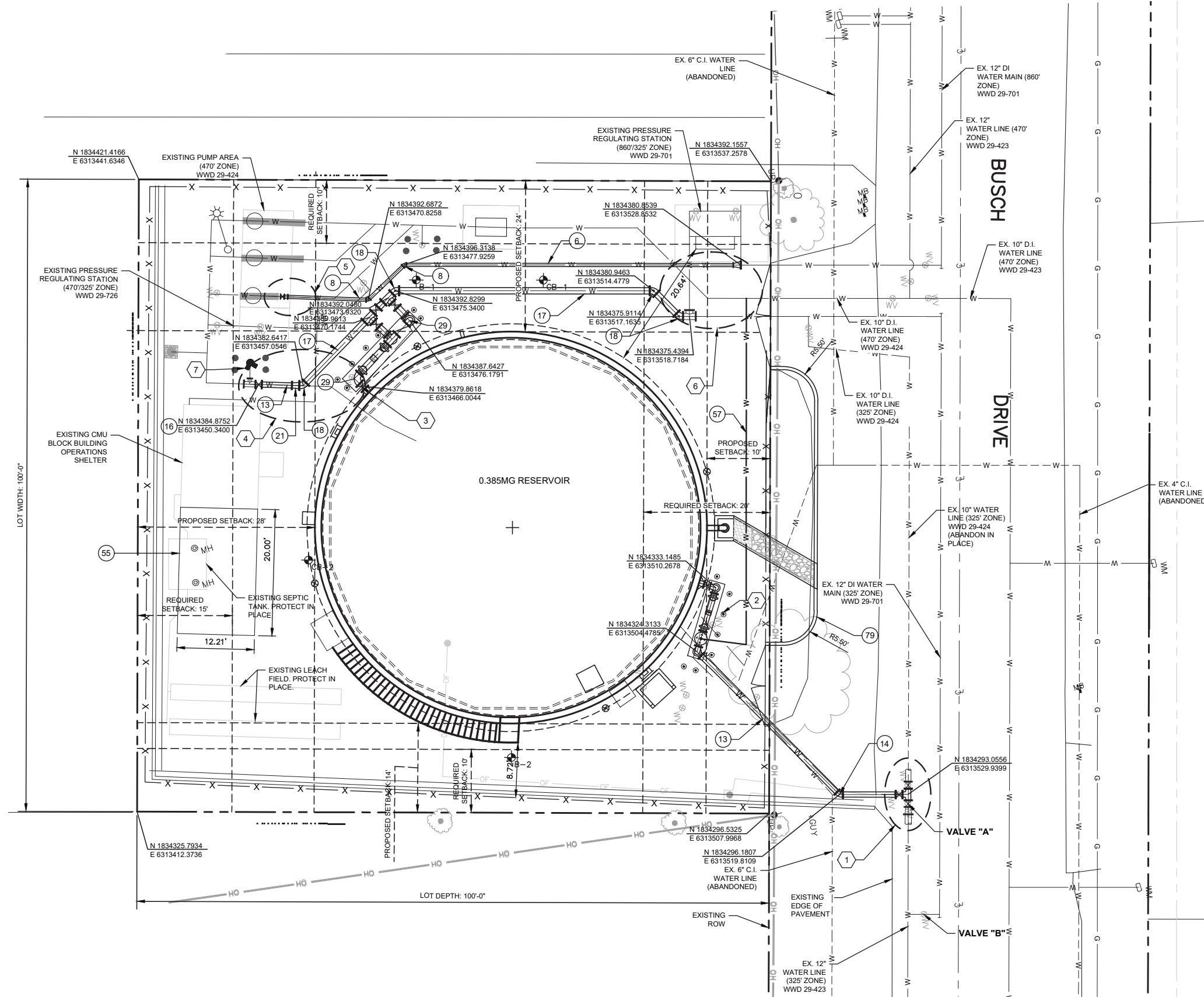
**Photo 4:** View looking southwest from the southeast part of the site of piping on the southeast side of the tank; the trailer in the background is offsite to the south.

## Site Photographs

## Exhibit 3



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### MATERIALS LIST:

- 6 6" STL STD WT PIPE, CML & CMC, CL F FLG.
- 8 .....
- 13 10" STD WT STL PIPE, CML & CMC.
- 14 .....
- 17 12" STD WT STL PIPE, CML & CMC.
- 21 12" X 10" STL REDUCER, FLG X FLG.
- 29 .....
- 55 12'-3" W x 20'-0" L x 8" THICK CONCRETE GENERATOR PAD, #6 REBAR AT 12" O.C AT MID HEIGHT OF PAD. RAISE SEPTIC TANK MANHOLE LIDS AND CAST INTO CONCRETE SLAB.
- 57 1" COPPER WATER SERVICE FROM 470 PZ, CONNECTION PER STD PLAN W-36
- 79 6" MOW STRIP PER DETAIL 5 ON SHEET 13

### CONSTRUCTION NOTES

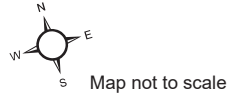
- 1 TANK SUPPLY LINE CONNECTION, SEE DETAIL 1 ON SHEET 9.
- 2 10" RESERVOIR INLET PIPING, SEE DETAIL 2 ON SHEET 11
- 3 12" RESERVOIR OUTLET PIPING, SEE DETAIL 1 ON SHEET 11
- 4 TANK DISCHARGE CONNECTION, SEE DETAIL 2 ON SHEET 9.
- 5 6" PUMP DISCHARGE CONNECTION, SEE DETAIL 4 ON SHEET 9
- 6 860 PZ AND 325 PZ CONNECTION, SEE DETAIL 3 ON SHEET 9
- 7 EX. 4" EMERGENCY PUMP CONNECTION

### INTERCONNECTION NOTES:

1. AFTER COMPLETION OF THE WATER MAIN INSTALLATION, SATISFACTORILY COMPETING BACTERIOLOGICAL AND PRESSURE TESTS IN ACCORDANCE WITH SECTION W OF THE SPECIAL PROVISIONS, AND AFTER APPROPRIATE VALVES "A" AND "B" HAVE BEEN CLOSED BY AGENCY PERSONNEL, THE CONTRACTOR (UNDER AGENCY SUPERVISION) SHALL REMOVE THE INTERFERING PORTION OF THE 10-INCH WATER MAIN, INSTALL VALVES, AND COMPLETE THE INTERCONNECTION AS SHOWN ON THE PLANS. SEE GENERAL NOTE 10 ON SHEET 2. THE CONTRACTOR SHALL NOTIFY ALL AFFECTED AGENCY CUSTOMERS AND THE FIRE DEPARTMENT NO LESS THAN 48 HOURS PRIOR TO LOSS OF SERVICE. SHUTDOWN TIME SHALL NOT EXCEED 3 HOURS.

## Site Plan

Lower Busch Tank Addendum



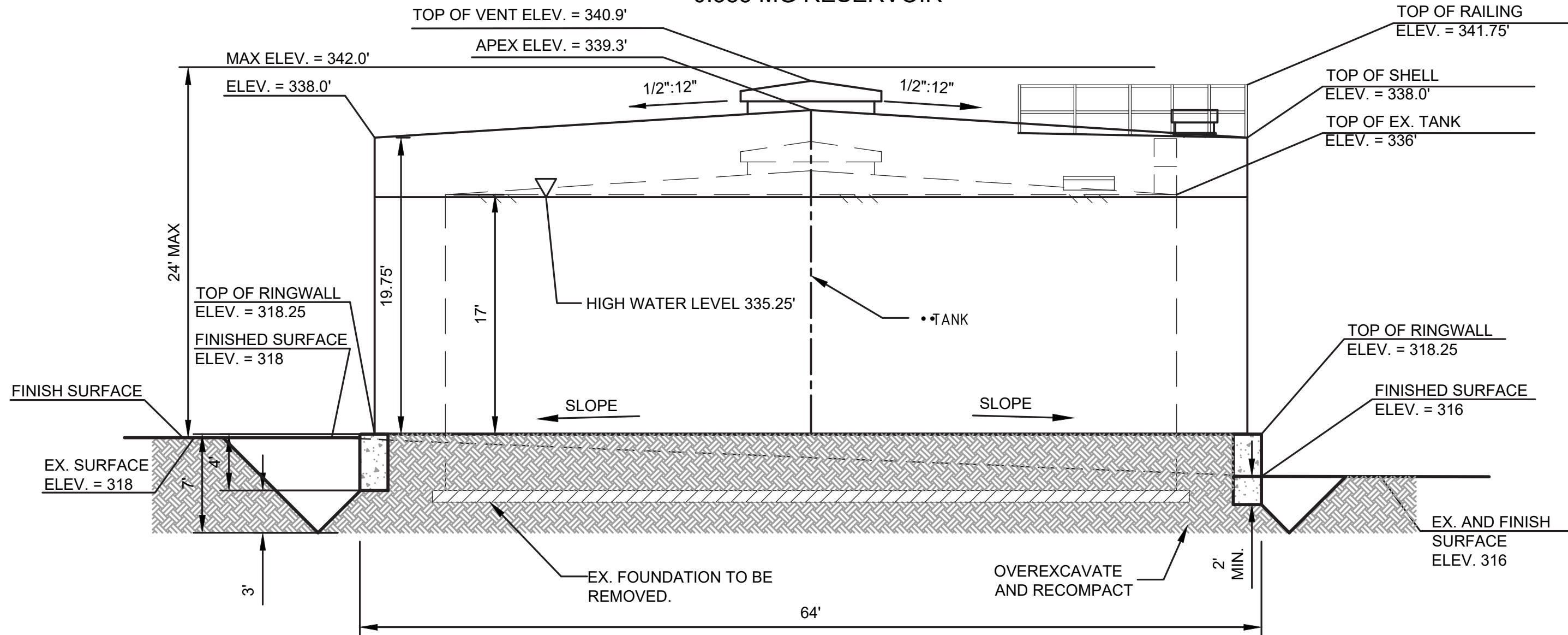
Source: Cannon Corporation, 2019

## Exhibit 4





# 0.385 MG RESERVOIR



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Source: Cannon Corporation, 2019

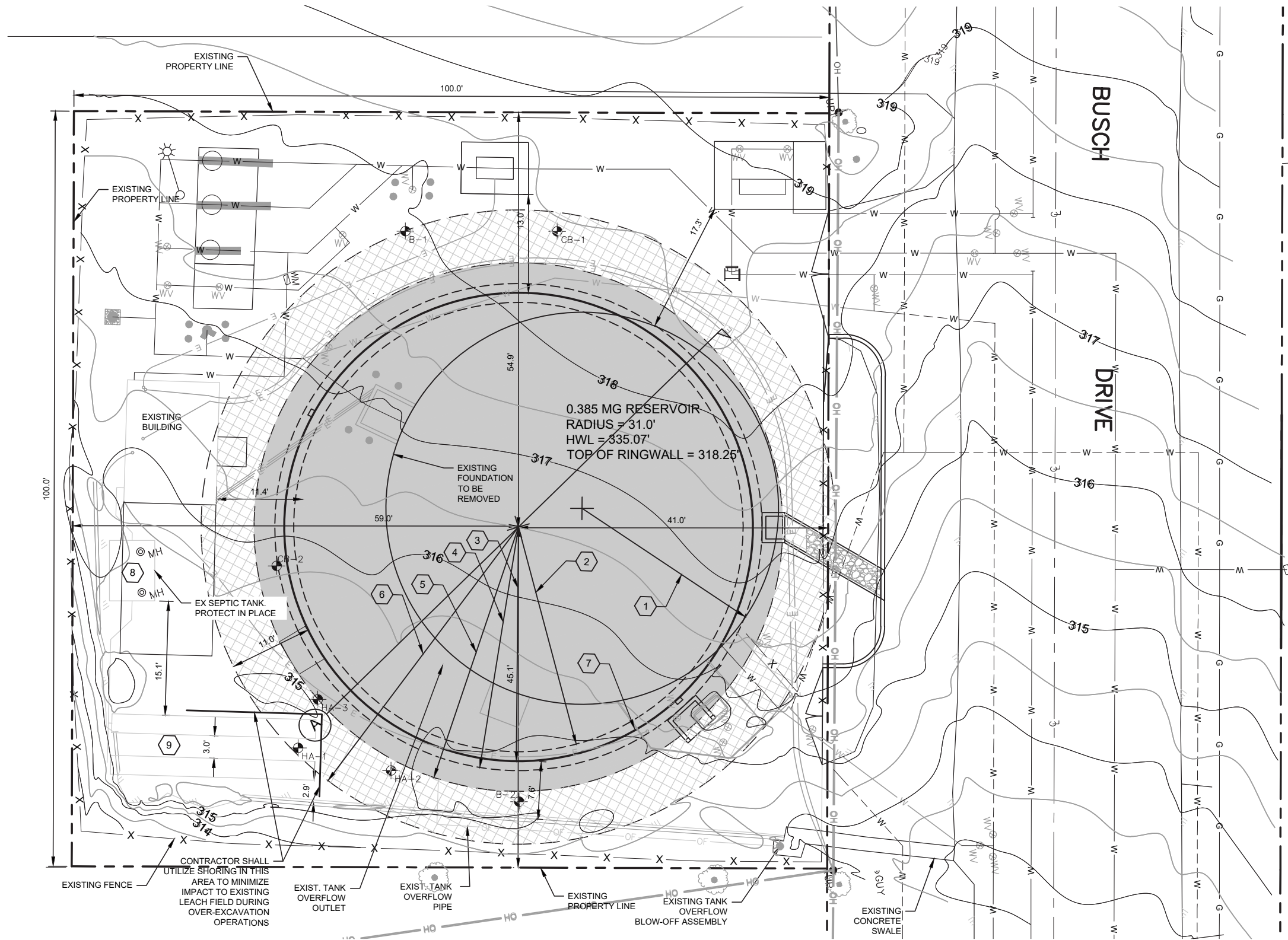
## Elevation

Lower Busch Tank Addendum

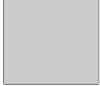

## Exhibit 5



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### LEGEND

-  OVEREXCAVATION AND RECOMPACTION ZONE
-  LIMITS OF GRADING OPERATIONS

### CONSTRUCTION NOTES:

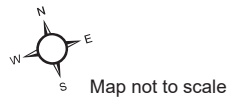
- 1 EXISTING TANK RADIUS = 26'.
- 2 NEW RINGWALL INTERIOR RADIUS = 30'.
- 3 NEW TANK RADIUS = 31'.
- 4 NEW RINGWALL OUTSIDE RADIUS = 32'.
- 5 OVEREXCAVATION AND RECOMPACTION LIMITS RADIUS = 35' (3' BEYOND RINGWALL AT A 1:1 SLOPE)
- 6 GRADING LIMITS RADIUS = 42'.
- 7 MINIMUM BURIED DEPTH OF RINGWALL = 2'.
- 8 EXISTING SEPTIC TANK TO REMAIN IN SERVICE.
- 9 EXISTING LEACH FIELD TO REMAIN IN SERVICE.

### GENERAL NOTES:

1. CONTRACTOR SHALL PROTECT ALL EXISTING STRUCTURES IN PLACE THAT ARE OUTSIDE OF THE GRADING LIMITS.
2. REFER TO DEMOLITION AND BYPASS PLAN SHEETS FOR REMOVAL OF UTILITY CONFLICTS DURING GRADING OPERATIONS.
3. THE SOILS ENGINEER OF RECORD WILL INSPECT AND APPROVE THE FOUNDATION EXCAVATIONS BEFORE STEEL OR CONCRETE IS PLACED. THE CONTRACTOR SHALL NOT PLACE ANY MATERIALS FOR THE NEW FOUNDATION WITHOUT PRIOR WRITTEN APPROVAL FROM THE ENGINEER.

## Grading Plan

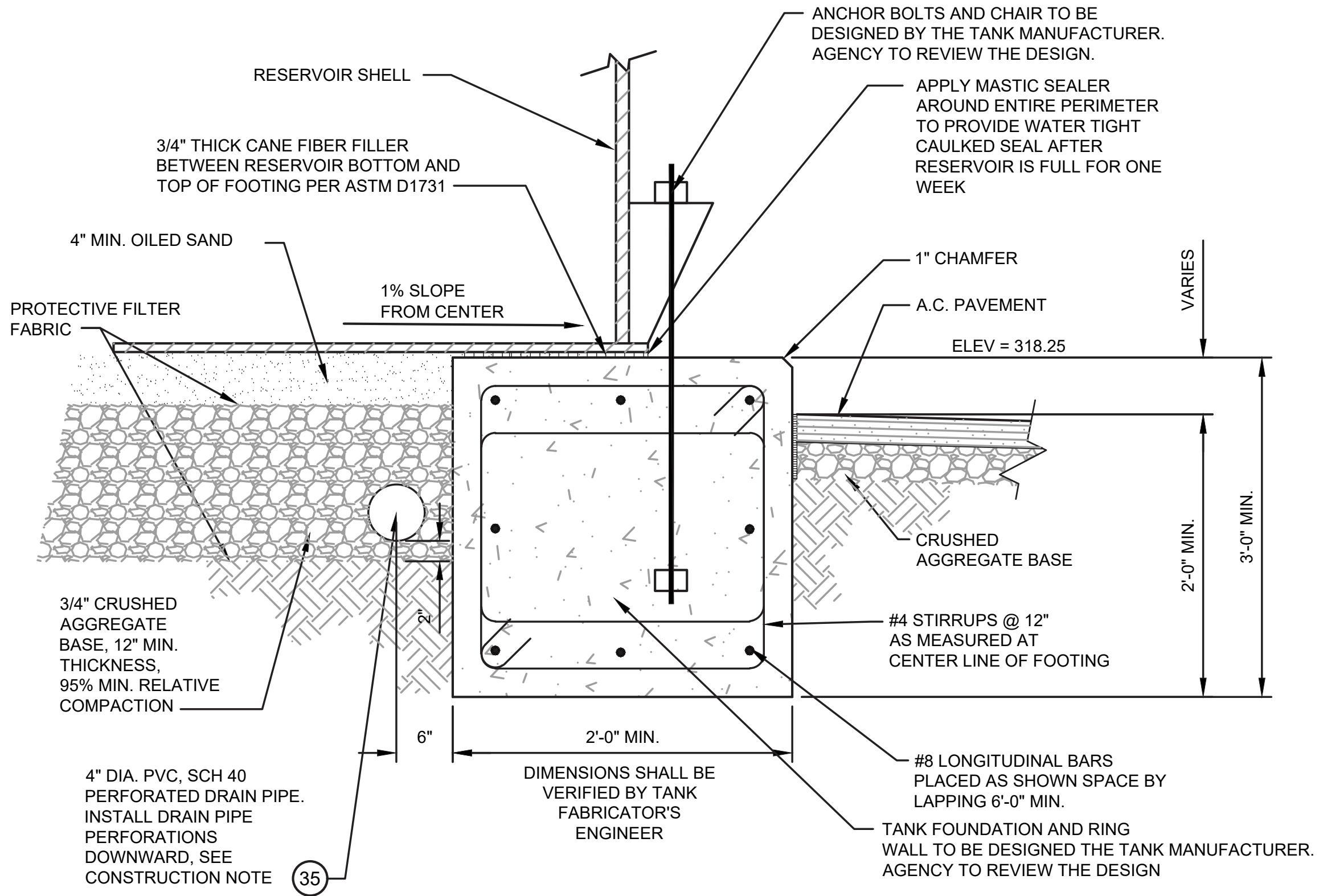
### Lower Busch Tank Addendum



Source: Cannon Corporation, 2019

## Exhibit 6





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Source: Cannon Corporation, 2019

## Ringwall Foundation Section

Lower Busch Tank Addendum

Exhibit 7



A stairway within a sheet metal enclosure, with a locking door at the foot of the enclosure, would be built on the southwest side of the tank. The base of the stairway would be at the stairway's west end, and the top at its south end. Handrails would extend north partway across the roof of the tank from the top of the stairs.

The currently Proposed Project also includes the following onsite improvements in addition to those included in the 2005 approved ND:

- Relocate two 5,000-gallon temporary storage tanks to the northwest corner of the Project site from their current location at 21737 Azurelee Road in the City of Malibu, about 10 miles east of the Project site. Each temporary tank is about 8.5 feet in diameter and 12.5 feet high and would be transported by truck.
- Install a tank mounted blower. The blower is intended to minimize the formation of chlorine vapor inside the tank, to reduce the potential for chlorine corrosion. A blower would need to operate when there are significant temperature differences between the interior and exterior of the tank, such as dusk, and would not operate continuously. The blower would be encased in all-weather sound panels to absorb noise.
- Remove the three dead or dying tamarisk trees (*Tamarix ramosissima*) located in the southwest corner of the Project site.
- Replace existing chain link fencing on the site perimeter with new 6-foot chain link fencing; and replace two chain link gates on the east site boundary with two new double-swing chain link gates.
- Installation of exterior safety lighting.

### **2.3.1 GRADING**

The amount of grading on the site would be determined by the type of shoring used by the contractor. It is anticipated that total on-site grading would impact approximately 7,500 square feet of the 10,000 square foot Project site, and there would be no off-site grading. As recommended in the geotechnical report, the site must be over-excavated and recompacted to the depth of the existing tank foundation or three feet below the proposed tank foundation, whichever is deeper. Because the new tank would be constructed at grade, the footing for the existing tank would determine the required grading depth. The existing footing is between 4 feet and 5 feet deep, and another 3 feet of excavation puts the expected depth of the site grading at 8 feet deep. Project development is expected to involve approximately 400 cubic yards (cy) of soil export and 600 cy of soil import. Grading is anticipated to last for one month. The project grading plan is shown on Exhibit 5. Grading quantity was not specified in the 2005 ND; however, as the entire tank in the Modified Project would be above-grade, the Modified Project is not expected to involve increased grading compared to the Approved Project.

### **2.3.2 CONSTRUCTION AND PHASING**

The currently proposed Project construction activities are anticipated to require approximately 8 months total, commencing in the fall of 2025 (subject to change). Project construction is proposed in two major phases: demolition of the existing tank and construction of the new tank. There will be two 5,000-gallon temporary storage tanks installed on a concrete pad and connected to existing water piping and appurtenances which will be in service throughout the duration of the construction period. Construction subphases would include site preparation, grading, foundations, and tank erection. Construction staging would be located on a small portion of the Malibu Equestrian Park in the City of Malibu, near the intersection of Busch Drive and Merritt Drive, approximately 0.30 miles southwest of the Project site. The staging would occur on an empty

parking lot and associated dirt area at the equestrian park, which would require an agreement with the Santa Monica Unified School District.

Demolition activities, including demolition of the existing tank and appurtenances, would occur over an approximate 3-week period and would use equipment including, but not limited to, a backhoe, loader, jackhammer, excavator, and dump trucks. Grading would occur over an approximate 4-week period and would result in approximately 245 cy of materials being hauled off-site. Anticipated equipment during this phase would include, but is not limited to, an excavator, backhoe, loader, dozer, and dump trucks.

Construction of the Approved Project would have consisted of two phases, demolition and construction; equipment for each phase is expected to have been generally similar to that for the Modified Project.

As with the previously approved project, underground infrastructure and utilities construction would occur over an approximately 4-week period and tank foundation construction would last approximately 3 weeks, with an estimated 55 cy of concrete required. Construction of the tank would occur over an approximately 4-month period and would involve a crane, backhoe, and welding equipment. The painting of the tank would require sand blasting and architectural coatings, and paving would require asphalt across the entire site except the proposed tank footprint.

Construction duration for the Approved Project was not specified in the 2005 ND.

### **2.3.3 PROJECT APPROVALS**

The following discretionary approvals are required for project implementation:

- Los Angeles County Board of Supervisors acting on behalf of the Los Angeles County Water Works District 29: Project Approval
- California Coastal Commission: City of Malibu Local Coastal Development Permit

The following ministerial permits are also required for project implementation:

- City of Malibu: Permit for Encroachment into South Busch Drive
- Southern California Edison: Utility Relocation

On July 20, 2020, the City of Malibu approved Variance No. 13-042 as part of Planning Commission Resolution No. 20-23 for the height of the water tank to exceed the maximum height of 26 feet.

## **2.4 EXISTING ZONING AND GENERAL PLAN DESIGNATIONS**

The existing zoning district onsite is RR2, Rural Residential, which permits single-family residential units on lots of two acres or larger. The existing General Plan land use designation onsite is Rural Residential, which permits large lot single-family development with lots ranging from 1 to 40 acres. The Project site is also in the Coastal Zone and subject to the City of Malibu's Local Coastal Program.

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## SECTION 3.0 ENVIRONMENTAL ANALYSIS

This portion of the Addendum examines each environmental topical issue analyzed in the 2005 ND. The Addendum includes additional areas of analysis, including forestland resources and greenhouse gas emissions, pursuant to the 2010 amendments to the State CEQA Guidelines, and addresses the Tribal Cultural Resources and Wildfire pursuant to the 2018 amendments to the State CEQA Guidelines. An addendum to a CEQA document is intended to demonstrate that the modifications/alterations to the previously approved project would not substantially increase environmental impacts or create any new significant impacts. The following analysis documents why and how this conclusion has been made.

Note that while the 2005 ND did not identify significant impacts due to development of the Approved Project, the ND included several mitigation measures identified below in the relevant topical sections of this Addendum which are the following six environmental impact areas: air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, and transportation and traffic. The ND also included embedded mitigation set forth in the environmental analysis text which is also identified below in the relevant topical sections. The mitigation measures specified in the ND would apply to the Modified Project.

This Addendum also sets forth project design features that clarify and specify how, when, and by whom mitigation measures would be implemented. Note that the project design features are regulatory requirements that applied to the Approved project as well as the Proposed project. Mitigation is not required for impacts determined to be less than significant after implementation of existing regulatory requirements, and regulatory requirements are not mitigation.

### ***Organization of Environmental Analysis***

This portion of the Addendum is divided into 20 topical sections each covering one of the CEQA topics specified in CEQA Guidelines Appendix G, Environmental Checklist Form, contained in the CEQA Guidelines Update approved by the Office of Administrative Law in December 2018. Each topical section in turn is divided into three subsections: 1, Summary of Previous Environmental Analysis (the 2005 ND); 2, Modified Project Environmental Review; and a conclusion substantiating that none of the conditions requiring subsequent CEQA analysis apply to the Modified Project.

### ***Consideration of Cumulative Impacts***

The Modified Project is not part of a series of projects at Lower Busch Tank. The City of Malibu Planning Department website does not list proposed projects within 0.5 mile of the Modified Project site (Malibu 2020). A Civic Center Storm Drain Repair project undertaken by the City of Malibu, currently in its design phase, consists of storm drain improvements in the Civic Center area directing stormwater flow into Legacy Park. Malibu Civic Center is approximately seven miles east of the Project site; at that distance, impacts of that project will not combine with impacts of the Proposed project to result in significant cumulative impacts.

Water Works District 29 does not list Priority Projects near enough to the Proposed Project site such that impacts of those projects would combine with impacts of the Proposed Project to cause significant cumulative impacts. The nearest District priority project to the Modified Project site is a Creek Crossing Project near the intersection of Bonsall Drive and SR-1 approximately 0.9 mile south of the Modified Project site (WWD29 2020). No related projects are identified in this Addendum, and no further consideration of cumulative impacts is required.



### 3.1 AESTHETICS

#### 3.1.1 SUMMARY OF PREVIOUS ENVIRONMENTAL ANALYSIS

The ND concluded that development of the Approved Project would not adversely affect scenic vistas or scenic resources — such as trees, rock outcroppings, or historic buildings — within a state scenic highway. The Project site is screened from surrounding residences by trees; thus, the ND determined that Approved Project development would have less than significant impacts on the visual character of the site and surroundings. The Approved Project did not propose lighting or surfaces that could generate glare, and the ND found that the Approved Project would not adversely affect views in the area due to new sources of light or glare.

#### 3.1.2 PROJECT ENVIRONMENTAL REVIEW

The Proposed Project includes several components differing from the Approved Project, including installation of safety lights; installation of a tank-mounted blower with ducting connected to the tank headspace; relocation of two 5,000-gallon temporary storage tanks to the northwest corner of the Project site from another site several miles away; removal of standing remnants of three burned trees from the Project site; and replacement of chain link fencing and gates on the site perimeter.

Existing conditions on and next to the site differ from those in 2003 identified in the ND in that several trees onsite and next to the east site boundary burned in 2018; standing remnants of three burned trees are present in the southwest part of the site.

	New Significant Environmental Effect Caused by a Change in the Project or Circumstances	Substantial Increase in the Severity of a Previously Identified Significant Effect Caused by a Change in the Project or Circumstances	New or Substantially More Severe Significant Impacts Shown by New Information	Ability to Substantially Reduce a Significant Effect Shown by New Information but Declined by Proponent
3.1.2 Would the project:				
a. Have a substantial adverse effect on a scenic vista?	No	No	No	No
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	No	No	No	No
c. In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	No	No	No	No
d. Create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area?	No	No	No	No



## **Impact Discussion**

### **Would the project:**

#### **a) Have a substantial adverse effect on a scenic vista?**

**No Subsequent Analysis Required.** No impacts to scenic vistas were identified in the ND. The proposed tank would not be constructed in or near designated vistas or scenic highways within the project area. There are no scenic vistas visible from the Project site, and Proposed Project development would not adversely affect a scenic vista. Therefore, the project impact would continue to be negligible and would not result in adverse impacts on scenic vistas.

#### **b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway or local scenic expressway, scenic highway, or eligible scenic highway?**

**No Subsequent Analysis Required.** No impacts to scenic resources within a State Scenic Highway were identified in the ND. The Project site is not in or near a State scenic highway; the nearest such highway is State Route 2 (SR-2 or the Angeles Crest Highway), about 40 miles to the east (Caltrans 2019). Therefore, Proposed Project development would not damage scenic resources in a State scenic highway. There are no scenic resources onsite; site photographs are shown on Exhibit 3, *Site Photographs* and depict the existing tank; the restroom and electrical building; several pipes, and asphalt pavement. The proposed tank is 62 feet in diameter with a vent 26 feet above the existing grade on the north side of the tank, while the existing tank is 52 feet in diameter. There are three designated County scenic highways in the project region: (1), Mulholland Highway west of State Route 23, about 5 miles northwest of the Project site; (2), Mulholland Highway, a segment extending east and west from Malibu Canyon Road/Las Virgenes Road, about 7 miles northeast of the Project site; and Malibu Canyon Road/Las Virgenes Road, about 7 miles east of the Project site (Los Angeles County 2017). State Route 1, about 0.9 mile south of the Project site, is an eligible State scenic highway and an eligible Los Angeles County scenic highway (Caltrans 2019; Los Angeles County 2017). The Project site is not visible from SR-1 nor from any of the aforementioned designated or eligible scenic highways, nor would the Proposed Project once completed be visible from those vantages. Project development would not affect scenic resources as observed from any of those scenic highways, and no impact would occur. Proposed Project implementation would not cause new significant impacts or increased impacts and would not require mitigation. No subsequent analysis is required.

#### **c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?**

**No Subsequent Analysis Required** The Proposed Project consists of replacing an existing water tank with a new tank that is slightly larger in diameter (62 feet as opposed to the existing 59 feet) and height (26 feet tall as opposed to the existing 24 feet) (see Exhibit 6, *Grading Plan*). None of the changes to the Project compared to the Approved Project would substantially change the visual character of the Project site. As previously discussed, the proposed height of 26 feet would be consistent with Variance No 13-042 approved by the City of Malibu in July 2020.

The Project site is visible from residences to the north, south, and west; from Busch Drive; and from residences to the east across Busch Drive from the Project site. The existing tank shows

visible evidence of corrosion and wear. Because the project would replace an existing tank with a new tank, the proposed tank replacement would not substantially degrade the existing visual character of the site and surroundings. Thus, the Proposed Project development would not substantially degrade the existing visual character of the site or surroundings compared to the Approved Project as analyzed in the 2005 ND.

**d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?**

**No Subsequent Analysis Required.** The Proposed Project would include installation of exterior safety lighting. Safety lighting would be shielded to limit light trespass onto surrounding residential properties to no more than 0.1 foot-candle pursuant to City of Malibu Municipal Code Section 17.41.050(G)(1). Lighting at the building entrance and at the driveway entrance may remain lit all night; any other safety lighting installed must be extinguished by 11:00 PM except for lighting activated by motion sensor which extinguishes ten (10) minutes after activation, pursuant to City of Malibu Municipal Code Section 17.41.060(C)(2). Proposed safety lighting would not generate substantial light trespass or glare adversely affecting nighttime views in the area. that would generate glare. The tank exterior would be painted steel. Thus, Proposed Project development would not adversely affect daytime or nighttime views in the area due to light or glare as identified in the 2005 ND.

**Conclusion**

Overall, the Proposed Project would be consistent with the project analyzed in the 2005 ND. The ND concluded that impacts of Approved Project implementation to aesthetics would be less than significant. As detailed above, the Proposed Project would be substantially the same as the previously Approved Project in location, massing, and appearance; therefore, development would not create a new significant impact or substantial increase in the severity of previously identified effects. In regard to Section 15162 of the State CEQA Guidelines, the Proposed Project (1) would not propose substantial changes; (2) would not have circumstantial changes under which the project is undertaken; and (3) would bring about no new information of substantial importance that would (a) create new significant impacts, (b) increase the severity of previously examined effects, (c) determine that mitigation measures or alternatives previously found not to be feasible would, in fact, be feasible, or (d) introduce mitigation measures that are considerably different from those analyzed in the previous documents. For these reasons, there are no major revisions required to the aesthetics analysis provided in the ND.

**3.2 AGRICULTURAL AND FORESTRY RESOURCES**

**3.2.1 SUMMARY OF PREVIOUS ENVIRONMENTAL ANALYSIS**

The ND determined that no impact to agricultural resources would occur, as the Project site is paved and is not mapped as important farmland or zoned for agricultural use.

**3.2.2 PROJECT ENVIRONMENTAL REVIEW**

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the

State’s inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology.

The Proposed Project includes several components differing from the Approved Project, including installation of safety lights; installation of a tank-mounted blower with ducting connected to the tank headspace; relocation of two 5,000-gallon temporary storage tanks to the northwest corner of the Project site from another site several miles away; removal of standing remnants of three burned trees from the Project site; and replacement of chain link fencing and gates on the site perimeter.

Existing conditions on and next to the site differ from those of 2003 identified in the ND in that several trees onsite and next to the east site boundary burned in 2018; standing remnants of three burned trees are present in the southwest part of the site.

	New Significant Environmental Effect Caused by a Change in the Project or Circumstances	Substantial Increase in the Severity of a Previously Identified Significant Effect Caused by a Change in the Project or Circumstances	New or Substantially More Severe Significant Impacts Shown by New Information	Ability to Substantially Reduce a Significant Effect Shown by New Information but Declined by Proponent
<b>3.2.2 Would the project:</b>				
a. Convert Prime Farmland, Unique Farmland or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	No	No	No	No
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	No	No	No	No
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	No	No	No	No
d. Result in the loss of forest land or conversion of forest land to non-forest use?	No	No	No	No
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	No	No	No	No

## **Impact Discussion**

**Would the project:**

- a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?**

**No Subsequent Analysis Required.** The Project site is mapped as Urban and Built-Up Land, and not as important farmland, on the California Important Farmland Finder maintained by the Division of Land Resource Protection (DLRP 2019). Consistent with the findings of the 2005 ND, the Proposed Project development would not impact mapped important farmland and no new or substantially increased impact would occur.

- b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?**

**No Subsequent Analysis Required.** The Project site is zoned for rural residential use (RR2) and is not zoned for agricultural use. Williamson Act contracts restrict the use of privately-owned land to agriculture and compatible open space uses under contract with local governments; in exchange, the land is taxed based on actual use rather than potential market value. The Project site is not subject to a Williamson Act contract. Consistent with the finding of the ND, no new or increased impacts would occur; no mitigation is required; and no subsequent analysis is required.

- c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?**

**No Subsequent Analysis Required.** The Project site is paved and developed with a water tank and does not support forest or woodland vegetation. Impacts to forestry resources were not analyzed in the 2005 ND, as thresholds addressing forestry resources were added to the Environmental Checklist in 2010. No new or increased impacts would occur; no mitigation is required; and no subsequent analysis is required.

- d) Result in the loss of forest land or conversion of forest land to non-forest use?**

**No Subsequent Analysis Required.** The Project site is paved and developed with a water tank and does not support forest or woodland vegetation. Impacts to forestry resources were not analyzed in the 2005 ND. No new or increased impacts would occur; no mitigation is required; and no subsequent analysis is required.

- e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?**

**No Subsequent Analysis Required.** As explained in the responses to Sections 3.2.2(a) through 3.2.2(d), no impacts to farmland or forestry resources would occur.

## **Conclusion**

Overall, the Proposed Project would be consistent with the project analyzed in the 2005 ND; as detailed above, there are no designated areas of farmland or forestry resources which would be impacted by the Proposed Project. The ND concluded that Approved Project implementation

would not impact agricultural resources. Proposed Project development would not create a new significant impact or substantial increase in the severity of previously identified effects. In regard to Section 15162 of the State CEQA Guidelines, the Proposed Project (1) would not propose substantial changes; (2) would not have circumstantial changes under which the project is undertaken; and (3) would bring about no new information of substantial importance that would (a) create new significant impacts, (b) increase the severity of previously examined effects, (c) determine that mitigation measures or alternatives previously found not to be feasible would, in fact, be feasible, or (d) introduce mitigation measures that are considerably different from those analyzed in the previous documents. For these reasons, there are no major revisions required to the agricultural and forestry resources analysis provided in the ND.

### **3.3 AIR QUALITY**

#### **3.3.1 SUMMARY OF PREVIOUS ENVIRONMENTAL ANALYSIS**

The 2005 ND determined that Approved Project development would not conflict with the applicable air quality plan, because the District's standard practice is to comply with dust control measures set forth in the Air Quality Management Plan. It was determined that Project operation would not impact air quality. The 2005 ND found that project construction would comply with District standard conditions specified on contract documents, including equipping construction equipment with emissions control devices; and thus, project construction would not impact air quality. It was also found that compliance with standard conditions would also limit air quality impacts on sensitive receptors to less than significant. Objectionable odor impacts could occur during construction but would be temporary and thus less than significant. The ND did not require mitigation measures for air quality impacts.

#### **Previously Approved Measures**

As all impacts were determined to be less than significant, no mitigation measures were required for the 2005 design; however, the following measures were included in the analysis in connection with the 2005 ND; was applicable to the Approved Project; and would also be applicable to the proposed Project. The ND identified less than significant impacts for air quality impacts, did not identify significant impacts, and did not state that mitigation measures were required to reduce impacts to less than significant.

**MM AQ-1** Control dust by appropriate means, such as watering and/or sweeping.

**MM AQ-2** Compliance with applicable air pollution control regulations.

#### **Existing Conditions**

Air quality in the City of Malibu is regulated by the SCAQMD, which is the agency principally responsible for comprehensive air pollution control in the South Coast Air Basin (SoCAB). Both the State of California and the US Environmental Protection Agency (EPA) have established health-based Ambient Air Quality Standards (AAQS) for air pollutants, which are known as "criteria pollutants". The AAQS are designed to protect the health and welfare of the populace within a reasonable margin of safety. The AAQS for ozone (O<sub>3</sub>), carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), respirable particulate matter with a diameter of 10 microns or less (PM<sub>10</sub>), PM<sub>2.5</sub>, and lead are shown in Table 2, California and Federal Ambient Air Quality Standards.

Regional air quality is defined by whether the area has attained or not attained State and federal air quality standards, as determined by air quality data from various monitoring stations. Areas

that are considered in “nonattainment” are required to prepare plans and implement measures that will bring the region into “attainment”. When an area has been reclassified from nonattainment to attainment for a federal standard, the status is identified as “maintenance”, and there must be a plan and measures established that will keep the region in attainment for the following ten years.

**TABLE 2  
CALIFORNIA AND FEDERAL AMBIENT AIR QUALITY STANDARDS**

Pollutant	Averaging Time	California Standards	Federal Standards	
			Primary <sup>a</sup>	Secondary <sup>b</sup>
O <sub>3</sub>	1 Hour	0.09 ppm (180 µg/m <sup>3</sup> )	–	–
	8 Hour	0.070 ppm (137 µg/m <sup>3</sup> )	0.070 ppm (137 µg/m <sup>3</sup> )	Same as Primary
PM10	24 Hour	50 µg/m <sup>3</sup>	150 µg/m <sup>3</sup>	Same as Primary
	AAM	20 µg/m <sup>3</sup>	–	Same as Primary
PM2.5	24 Hour	–	35 µg/m <sup>3</sup>	Same as Primary
	AAM	12 µg/m <sup>3</sup>	12.0 µg/m <sup>3</sup>	15.0 µg/m <sup>3</sup>
CO	1 Hour	20 ppm (23 mg/m <sup>3</sup> )	35 ppm (40 mg/m <sup>3</sup> )	–
	8 Hour	9.0 ppm (10 mg/m <sup>3</sup> )	9 ppm (10 mg/m <sup>3</sup> )	–
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m <sup>3</sup> )	–	–
NO <sub>2</sub>	AAM	0.030 ppm (57 µg/m <sup>3</sup> )	0.053 ppm (100 µg/m <sup>3</sup> )	Same as Primary
	1 Hour	0.18 ppm (339 µg/m <sup>3</sup> )	0.100 ppm (188 µg/m <sup>3</sup> )	–
SO <sub>2</sub>	24 Hour	0.04 ppm (105 µg/m <sup>3</sup> )	–	–
	3 Hour	–	–	0.5 ppm (1,300 µg/m <sup>3</sup> )
	1 Hour	0.25 ppm (655 µg/m <sup>3</sup> )	0.075 ppm (196 µg/m <sup>3</sup> )	–
Lead	30-day Avg.	1.5 µg/m <sup>3</sup>	–	–
	Calendar Quarter	–	1.5 µg/m <sup>3</sup>	Same as Primary
	Rolling 3-month Avg.	–	0.15 µg/m <sup>3</sup>	
Visibility Reducing Particles	8 Hour	Extinction coefficient of 0.23 per km – visibility ≥ 10 miles (0.07 per km – ≥30 miles for Lake Tahoe)	<b>No Federal Standards</b>	
Sulfates	24 Hour	25 µg/m <sup>3</sup>		
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m <sup>3</sup> )		
Vinyl Chloride	24 Hour	0.01 ppm (26 µg/m <sup>3</sup> )		

O<sub>3</sub>: ozone; ppm: parts per million; µg/m<sup>3</sup>: micrograms per cubic meter; PM10: respirable particulate matter 10 microns or less in diameter; AAM: Annual Arithmetic Mean; –: No Standard; PM2.5: fine particulate matter 2.5 microns or less in diameter; CO: carbon monoxide; mg/m<sup>3</sup>: milligrams per cubic meter; NO<sub>2</sub>: nitrogen dioxide; SO<sub>2</sub>: sulfur dioxide; km: kilometer.

<sup>a</sup> *National Primary Standards*: The levels of air quality necessary, within an adequate margin of safety, to protect the public health.

<sup>b</sup> *National Secondary Standards*: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

Note: More detailed information in the data presented in this table can be found at the CARB website ([www.arb.ca.gov](http://www.arb.ca.gov)).

Source: CARB 2016

For CARB, an “Unclassified” designation indicates that the air quality data for the area are incomplete and do not support a designation of attainment or nonattainment. Table 3, Criteria Pollutant Designations in the South Coast Air Basin, summarizes the current attainment status of the SoCAB for the criteria pollutants.

**TABLE 3  
CRITERIA POLLUTANT DESIGNATIONS  
IN THE SOUTH COAST AIR BASIN**

Pollutant	State	Federal
O <sub>3</sub> (1-hour)	Nonattainment	No Standard
O <sub>3</sub> (8-hour)	Nonattainment	Nonattainment
PM10	Nonattainment	Attainment/Maintenance
PM2.5	Nonattainment	Nonattainment
CO	Attainment	Attainment/Maintenance
NO <sub>2</sub>	Attainment	Attainment/Maintenance
SO <sub>2</sub>	Attainment	Attainment
Lead	Attainment	Nonattainment/Attainment <sup>a</sup>
Visibility-Reducing Particles	Unclassified <sup>b</sup>	No Standards
Sulfates	Attainment	
Hydrogen Sulfide	Unclassified	

O<sub>3</sub>: ozone; PM10: respirable particulate matter with a diameter of 10 microns or less; PM2.5: fine particulate matter with a diameter of 2.5 microns or less; CO: carbon monoxide; NO<sub>2</sub>: nitrogen dioxide; SO<sub>2</sub>: sulfur dioxide; SoCAB: South Coast Air Basin.

<sup>a</sup> Los Angeles County is classified as nonattainment for lead; the remainder of the SoCAB is in attainment of State and federal standards.

<sup>b</sup> “Unclassified” designation indicates that the air quality data for the area are incomplete and do not support a designation of attainment or nonattainment.

Source: SCAQMD 2016

O<sub>3</sub> is formed by photochemical reactions between NO<sub>x</sub> and VOCs rather than being directly emitted. O<sub>3</sub> is the principal component of smog. Elevated O<sub>3</sub> concentrations cause eye and respiratory irritation; reduce resistance to lung infection; and may aggravate pulmonary conditions in persons with lung disease. O<sub>3</sub> is also damaging to vegetation and untreated rubber. The entire SoCAB is designated as a nonattainment area for the State one-hour O<sub>3</sub> standard.

CO is formed by the incomplete combustion of fossil fuels, almost entirely from automobiles. It is a colorless, odorless gas that can cause dizziness, headaches, and fatigue. The SoCAB is designated as an attainment area for federal CO standards.

NO<sub>2</sub> (a “whiskey brown”-colored gas) and nitric oxide (NO) (a colorless, odorless gas) are formed from combustion devices. These compounds are referred to as NO<sub>x</sub>. NO<sub>x</sub> is a primary component of the photochemical smog reaction. The severity of health effects of NO<sub>x</sub> depends primarily on the concentration inhaled. Acute symptoms can include coughing, difficulty breathing, vomiting, headache, and eye irritation. Respiratory symptoms may also increase in severity after prolonged exposure.

SO<sub>2</sub> is a corrosive gas that is primarily formed from the combustion of fuels containing sulfur (e.g., from power plants) and heavy industry that use coal or oil as fuel. SO<sub>2</sub> irritates the respiratory tract and can result in lung disease and breathing problems for asthmatics. Atmospheric SO<sub>2</sub> also contributes to acid rain.

Lead is found in old paints and coatings, plumbing, and a variety of other materials including gasoline anti-knock additives. Once in the blood stream, lead can cause damage to the brain, nervous system, and other body systems. Children are highly susceptible to the effects of lead. However, lead emissions have significantly decreased due to the near elimination of the use of leaded gasoline.

Particulate Matter is the term used for a mixture of solid particles and liquid droplets found in the air. Respirable particulate matter (i.e., PM10) derives from a variety of sources including road dust from paved and unpaved roads; diesel soot; combustion products; tire and brake abrasion; construction operations; and fires. Fuel combustion and certain industrial processes are primarily responsible for fine particle (i.e., PM2.5) levels. Coarse particles (PM10) can accumulate in the respiratory system and aggravate health problems such as asthma. PM2.5 can deposit itself deep in the lungs and may contain substances that are harmful to human health.

Toxic air contaminants (TACs) are a diverse group of air pollutants that may cause or contribute to an increase in deaths or in serious illness or that may pose a present or potential hazard to human health. TACs may be emitted from a variety of common sources, including motor vehicles, gasoline stations, dry cleaners, industrial operations, painting operations, and research and teaching facilities. TACs are different than the “criteria” pollutants previously discussed in that AAQS have not been established for them. TACs occurring at extremely low levels may still affect health, and it is typically difficult to identify levels of exposure that do not produce adverse health effects. TAC impacts on human health are described by having carcinogenic risk and being chronic (i.e., of long duration) or acute (i.e., severe but of short duration). Diesel particulate matter (diesel PM) is a TAC and is responsible for the majority of California’s known cancer risk from outdoor air pollutants.

The effects from air pollution can be significant, both in the short-term during smog alerts, but also from long-term exposure to pollutants. While the majority of the populace can overcome short-term air quality health concerns, selected segments of the population are more vulnerable to its effects. Specifically, young children, the elderly, and persons with existing health problems are most susceptible to respirator complications. Sensitive receptors include single-family residences that are adjacent to the Project site and across Busch Drive.

### **Significance Criteria**

Appendix G of the State CEQA Guidelines states that the significance criteria established by the applicable air quality management district may be relied upon to make significance determinations. The SCAQMD has established significance thresholds to assess the regional and localized impacts of Project-related air pollutant emissions; Table 4, SCAQMD Air Quality Significance Thresholds, presents the current significance thresholds.



**TABLE 4  
SCAQMD AIR QUALITY SIGNIFICANCE THRESHOLDS**

<b>Mass Daily Thresholds<sup>a</sup></b>		
<b>Pollutant</b>	<b>Construction</b>	<b>Operation</b>
NOx	100 lbs/day	55 lbs/day
VOC	75 lbs/day	55 lbs/day
PM10	150 lbs/day	150 lbs/day
PM2.5	55 lbs/day	55 lbs/day
SOx	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Lead	3 lbs/day	3 lbs/day
<b>TACs, Odor, and GHG Thresholds</b>		
TACs (including carcinogens and non-carcinogens)	Maximum Incremental Cancer Risk $\geq$ 10 in 1 million Cancer Burden > 0.5 excess cancer cases (in areas $\geq$ 1 in 1 million) Chronic & Acute Hazard Index $\geq$ 1.0 (project increment)	
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402	
GHG	10,000 MT/yr CO <sub>2</sub> e for industrial facilities	
<b>Ambient Air Quality Standards for Criteria Pollutants<sup>b, c</sup></b>		
NO <sub>2</sub>  1-hour average annual arithmetic mean	The SCAQMD is in attainment; the Project is significant if it causes or contributes to an exceedance of the following attainment standards:  0.18 ppm (State) 0.03 ppm (State) and 0.0534 ppm (federal)	
PM10  24-hour average annual average	10.4 $\mu\text{g}/\text{m}^3$ (construction) <sup>c</sup> & 2.5 $\mu\text{g}/\text{m}^3$ (operation) 1.0 $\mu\text{g}/\text{m}^3$	
PM2.5 24-hour average	10.4 $\mu\text{g}/\text{m}^3$ (construction) <sup>c</sup> & 2.5 $\mu\text{g}/\text{m}^3$ (operation)	
SO <sub>2</sub> 1-hour average 24-hour average	0.25 ppm (State) & 0.075 ppm (federal – 99 <sup>th</sup> percentile) 0.04 ppm (State)	
Sulfate 24-hour average	25 $\mu\text{g}/\text{m}^3$ (State)	
CO  1-hour average 8-hour average	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards:  20.0 ppm (State) and 35 ppm (federal) 9.0 ppm (State/federal)	
Lead 30-day average Rolling 3-month average	1.5 $\mu\text{g}/\text{m}^3$ (State) 0.15 $\mu\text{g}/\text{m}^3$ (federal)	
<p>NOx: nitrogen oxides, lbs/day: pounds per day, VOC: volatile organic compound, PM10: respirable particulate matter with a diameter of 10 microns or less, PM2.5: fine particulate matter with a diameter of 2.5 microns or less, SOx: sulfur oxides, CO: carbon monoxide, TACs: toxic air contaminants, GHG: greenhouse gases, MT/yr CO<sub>2</sub>e: metric tons per year of carbon dioxide equivalents, NO<sub>2</sub>: nitrogen dioxide, ppm: parts per million, <math>\mu\text{g}/\text{m}^3</math>: micrograms per cubic meter; SCAQMD: South Coast Air Quality Management District</p> <p><sup>a</sup> Source: SCAQMD CEQA Handbook (SCAQMD 1993)</p> <p><sup>b</sup> Ambient air quality thresholds for criteria pollutants based on SCAQMD Rule 1303, Table A-2 unless otherwise stated</p> <p><sup>c</sup> Ambient air quality threshold is based on SCAQMD Rule 403</p> <p>Source: South Coast AQMD 2019</p>		

### 3.3.2 PROJECT ENVIRONMENTAL REVIEW

The Proposed Project includes several components differing from the Approved Project, including installation of safety lights; installation of a tank-mounted blower with ducting connected to the tank headspace; relocation of two 5,000-gallon temporary storage tanks to the northwest corner of the Project site from another site several miles away; removal of standing remnants of three burned trees from the Project site; and replacement of chain link fencing and gates on the site perimeter.

Existing conditions on and next to the site differ from those of 2003 identified in the ND in that several trees onsite and next to the east site boundary burned in 2018; standing remnants of three burned trees are present in the southwest part of the site.

	New Significant Environmental Effect Caused by a Change in the Project or Circumstances	Substantial Increase in the Severity of a Previously Identified Significant Effect Caused by a Change in the Project or Circumstances	New or Substantially More Severe Significant Impacts Shown by New Information	Ability to Substantially Reduce a Significant Effect Shown by New Information but Declined by Proponent
3.3.2 Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied on to make the following determinations. Would the project:				
a. Conflict with or obstruct implementation of the applicable air quality plan?	No	No	No	No
b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	No	No	No	No
c. Expose sensitive receptors to substantial pollutant concentrations?	No	No	No	No
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	No	No	No	No

### **Impact Discussion**

**Would the project:**

**a) Conflict with or obstruct implementation of the applicable air quality plan?**

**No Subsequent Analysis Required.** Since approval of the 2005 ND, the SCAQMD updated the Air Quality Management Plan (AQMP). The current AQMP for CEQA analysis purposes is the 2016 AQMP, which was approved in March 2017 and is a regional and multi-agency effort (involving SCAQMD, California Air Resources Board [CARB], Southern California Association of Governments [SCAG], and [USEPA]). The 2016 AQMP incorporates the latest scientific and technical information and planning assumptions, including SCAG's *2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)*, updated emission inventory methods for various source categories, and latest growth forecasts (SCAG 2016).

The Project is not anticipated to involve a change in energy consumption between existing conditions and conditions with the Proposed Project. The Project would also not result in changes related to vehicle trips associated with maintenance activities. Because the Project would not result in changes in activities which generate air pollutant emissions, operations phase emissions would not change from existing conditions.

City and County General Plans were used to develop the growth and pollutant emissions forecasts in the RTP/SCS and the 2016 AQMP. The Project would not result in any population growth or substantial changes to emissions. Therefore, the Project is consistent with the 2016 AQMP. No conflict with the current AQMP would result, which is also consistent with the air quality impacts that were identified, analyzed and disclosed in the IS/MND. No new significant impacts or increases in the severity of any previously identified significant impacts related to the AQMP would occur with implementation of the Proposed Project.

The Proposed Project includes the following changes compared to the Approved Project: installation of a tank-mounted blower with ducting connected to the tank headspace; relocation of two 5,000-gallon temporary storage tanks to the northwest corner of the Project site from another site several miles away; removal of standing remnants of three burned trees from the Project site; and replacement of chain link fencing and gates on the site perimeter. These changes to the project would not involve substantial energy use (the blower would be operated only at dusk); substantial construction effort; or generate substantial number of vehicle trips. Thus, none of these changes would generate substantial GHG emissions.

**b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?**

**No Subsequent Analysis Required.** The Project would result in construction related air pollutant emissions. Operations phase emissions are not anticipated to change from those occurring under the existing conditions due to the lack of changes associated with energy consumption and vehicle trips under the Proposed Project.

California Emissions Estimator Model (CalEEMod®), Version 2016.3.2. was used to calculate the emissions associated with construction activities. CalEEMod is a computer program developed for the California Air Pollution Officers Association (CAPCOA) in collaboration with the California Air Districts and is currently used to estimate anticipated emissions associated with land development projects in California. CalEEMod calculates emission rates for criteria pollutants utilizing the Emission FACTor model (EMFAC 2014) for on-road vehicles, OFFROAD 2011 for off-road vehicles, and USEPA formulas for non-vehicular emissions (CAPCOA 2017). The estimated construction-related air quality emissions using the current version of CalEEMod have been calculated for the Project and the CalEEMod model output is provided in Appendix A.

**Construction-Related Air Quality Emissions**

As shown in Tables 5 and 6, regional air quality impacts would be less than the respective thresholds. Implementation of RR AQ-1 would ensure that fugitive dust emissions would not exceed established thresholds (note that per compliance with SCAQMD Rule 403, this reduction is already considered in the analysis and Table 5). Compliance with RR AQ-2 through AQ-5 would ensure that exhaust emissions from construction equipment operating on site would not exceed established thresholds.

**TABLE 5  
ESTIMATED MAXIMUM DAILY CONSTRUCTION EMISSIONS  
PROPOSED PROJECT**

Year	Emissions (lbs/day)					
	VOC	NOx	CO	SOx	PM10	PM2.5
2021	1	12	17	0	1	1
<b>SCAQMD Thresholds</b>	<b>75</b>	<b>100</b>	<b>550</b>	<b>150</b>	<b>150</b>	<b>55</b>
<b>Exceeds SCAQMD Thresholds?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>
lbs/day: pounds per day; VOC: volatile organic compound; NOx: nitrogen oxides; CO: carbon monoxide; SOx: sulfur oxides; PM10: respirable particulate matter 10 microns or less in diameter; PM2.5: fine particulate matter 2.5 microns or less in diameter; SCAQMD: South Coast Air Quality Management District. Source: CalEEMod 2018; see Appendix A for CalEEMod model outputs.						

**Operational Air Quality Emissions**

After construction activities are completed, there would be no routine operational trips, energy consumption, or other sources of criteria pollutant emissions beyond what is currently occurring. As such, there would be no project related emissions during the operational phase. Consequently, there would be no new impacts and no mitigation is required.

**Cumulative Air Quality Emissions**

The SCAQMD considers impacts that are directly less than significant on a project-level to be also cumulatively less than significant. That is, the SCAQMD uses the same significance thresholds for project specific and cumulative impacts (SCAQMD 2003).<sup>2</sup> Construction emissions would be below the SCAQMD regional and localized significance thresholds. Therefore, consistent with SCAQMD guidance, short-term construction emissions of nonattainment pollutants during construction of the Project would not be cumulatively considerable. There would be no new impacts from construction of the Project and no mitigation is required.

As previously discussed, no long-term emissions associated with the operation of the Project beyond those occurring under existing conditions and therefore not cumulatively considerable; the long-term cumulative impact would be less than significant and would not represent a new impact and no mitigation is required.

**c) Expose sensitive receptors to substantial pollutant concentrations?**

**No Subsequent Analysis Required.** In addition to the mass daily emissions thresholds established by the SCAQMD, short-term local impacts to nearby sensitive receptors from on-site emissions of NO<sub>2</sub>, CO, PM10, and PM2.5 are examined based on SCAQMD’s localized significance threshold (LST) methodology. To assess local air quality impacts for development projects without complex dispersion modeling, the SCAQMD developed screening (lookup) tables to assist lead agencies in evaluating impacts.

The LST method is recommended to be limited to projects that are five acres or less. For the purposes of an LST analysis, the SCAQMD considers receptors where it is possible that an individual could remain for 1 hour for NO<sub>2</sub> and CO exposure and 24 hours for PM10 and PM2.5 exposure. The emissions limits in the lookup tables are based on the SCAQMD’s Ambient Air

<sup>2</sup> The only case where the significance thresholds for project specific and cumulative impacts differ is the Hazard Index (HI) significance threshold for toxic air contaminant (TAC) emissions.

Quality Standards (SCAQMD 2016). The closest receptors to the Project site are adjacent residential uses.

Table 6, Construction-Phase Localized Significance Threshold Emissions, shows the maximum daily on-site emissions for construction activities compared with the SCAQMD LST thresholds. The thresholds shown are from the lookup tables for a site that is 1 acre, which is based on the assumption that the most intensive phase of construction that involves soil disturbance would not exceed 1 acre. The Project's maximum daily on-site emissions would occur during the demolition phase (for NOx and CO), and during the grading/excavation phase (for PM10 and PM2.5). As shown in Table 6, localized emissions for all criteria pollutants would be less than their respective thresholds. Therefore, localized air quality impacts at receptors proximate to construction activities would be exposed to less than significant air quality impacts. No new impacts would occur.

**TABLE 6  
LOCALIZED SIGNIFICANCE THRESHOLD CONSTRUCTION  
EMISSIONS PROPOSED PROJECT**

Emissions and Thresholds	Emissions (lbs/day)			
	NOx	CO	PM10	PM2.5
Project maximum daily on-site emissions	11	16	1	1
Localized Significance Threshold	103	562	4	3
<b>Exceed threshold?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>
lbs/day: pounds per day; NOx: nitrogen oxides; CO: carbon monoxide; PM10: respirable particulate matter 10 microns or less in diameter; PM2.5: fine particulate matter 2.5 microns or less in diameter. Note: Data is for SCAQMD Source Receptor Area 2, Northwest Coastal LA County. Source: SCAQMD 2009 (thresholds); see Appendix A for CalEEMod model outputs.				

As discussed previously, the operations phase of the Project would not involve new activities that generate air pollutant emissions.

A blower would be added as part of the project to prevent accumulation of chlorine vapors that may lead to corrosion in the interior head space of the tank. Chlorine would be added to control the growth of bacteria within the water tank. Chlorine levels would be limited to 2 parts per million (2 ppm). This concentration is within the range of chlorine concentrations the Centers for Disease Control recommend for swimming pools (at least 1 ppm) and hot tubs (at least 3 ppm)<sup>3</sup>. Because chlorine concentrations within the water are comparable to a swimming pool, a SCAQMD permit is not required for the blower due to the low level of chlorine vapor associated with the water tank. No potential health risk is associated with the operation of the blower to minimize the accumulation of chlorine vapors. Thus, the operations phase would result in less than significant impacts related to emissions that would expose sensitive receptors to substantial pollutant concentrations. No new impacts would occur.

**d) Result in other emissions (such as those leading to odors) adversely odors affecting a substantial number of people.**

**No Subsequent Analysis Required.** The Project is regulated from nuisance odors or other objectionable emissions by SCAQMD Rule 402. Rule 402 prohibits the discharge from any source of air contaminants or other material which would cause injury, detriment, nuisance, or annoyance

<sup>3</sup> Centers for Disease Control and Prevention (CDC). 2016 (May 4, revision date). Healthy Swimming: Disinfection & Testing. <https://www.cdc.gov/healthywater/swimming/residential/disinfection-testing.html>.

to people or the public. The proposed structures do not involve processes or emissions that would result in the generation of emissions (such as those leading to odors) which would adversely affect a substantial number of people. Operation of the blower for reducing chlorine vapor concentrations in the tank would not cause odors affecting a substantial number of people. The blower is intended to reduce concentration of chlorine vapor that could otherwise cause corrosion in the interior head space of the tank and is not required to prevent exposure of nearby residents to nuisance odors. Therefore, the Proposed Project would not result in new or substantially more severe effects related to this issue. Thus, the impact of creating objectionable odor is considered less than significant as identified in the 2005 ND.

### **Conclusion**

Overall, the Proposed Project would be consistent with the project analyzed in the 2005 ND. As detailed above, the minor changes between the previously Approved Project and the Proposed Project would not result in any new or increased impacts. The ND concluded that impacts of Approved Project implementation to air quality would be less than significant. Proposed Project development would not create a new significant impact or substantial increase in the severity of previously identified effects. In regard to Section 15162 of the State CEQA Guidelines, the Proposed Project (1) would not propose substantial changes; (2) would not have circumstantial changes under which the project is undertaken; and (3) would bring about no new information of substantial importance that would (a) create new significant impacts, (b) increase the severity of previously examined effects, (c) determine that mitigation measures or alternatives previously found not to be feasible would, in fact, be feasible, or (d) introduce mitigation measures that are considerably different from those analyzed in the previous documents. For these reasons, there are no major revisions required to the air quality analysis provided in the ND.

### **Regulatory Requirement**

The following regulatory requirements was set forth in the ND; was applicable to the Approved Project; and would be applicable to the proposed Project. Because this measure is intended to ensure compliance with an existing law or regulation, it does not constitute preexisting or new mitigation.

**RR AQ-1** Project contractors shall comply with South Coast Air Quality Management District (SCAQMD) Rule 403, Fugitive Dust, which requires the implementation of best available control measures (BACM) for any activity or man-made condition capable of generating fugitive dust, including, but not limited to, earth-moving activities, construction/demolition activities, disturbed surface area, or heavy- and light-duty vehicular movement. The BACMs include stabilizing soil; watering surface soils and crushed materials; covering hauls or providing freeboard; preventing track-out; and limiting vehicle speeds and wind barriers, among others. Rule 403 requires dust control as necessary to prevent visible emissions beyond the Project site property lines. Compliance with this rule would result in a reduction in short term particulate pollutant emissions. This measure shall be included by the County as notes in the Contractor Specifications.

**RR AQ-2** All off-road diesel-powered construction equipment greater than 50 horsepower (hp) shall meet United States Environmental Protection Agency (USEPA) Tier 3 or better off-road emissions standards. A copy of each unit's certified Tier specification shall be provided to the County at the time of mobilization of each applicable unit of equipment.

**RR AQ-3** Electricity shall come from power poles rather than diesel- or gasoline-fueled generators, compressors, or similar equipment unless it is demonstrated to the County to not be feasible.

**RR AQ-4** Construction contractors shall implement the following measures:

- a. All construction equipment shall be tuned and maintained in accordance with the manufacturer's specifications;
- b. Diesel truck idling time shall be five minutes or less, both on- and off-site; and
- c. Work crews shall shut off diesel equipment when not in use.

**RR AQ-5** Construction contractors shall support and encourage ridesharing and incentives for the construction crews.

### **3.4 BIOLOGICAL RESOURCES**

#### **3.4.1 SUMMARY OF PREVIOUS ENVIRONMENTAL ANALYSIS**

The 2005 ND concluded that development of the Approved Project would not impact biological resources. As evaluated in in the ND, the Project site in 2003 was paved and developed with a concrete water tank. The ND determined that project development would not impact sensitive species, sensitive habitat, or riparian habitat, and that there were no wetlands onsite. The site was found not to be in a wildlife movement corridor and was found to be located outside of areas protected by habitat conservation plans or natural community conservation plans.

#### **3.4.2 PROJECT ENVIRONMENTAL REVIEW**

The Proposed Project includes several components differing from the Approved Project, including installation of safety lights; installation of a tank-mounted blower with ducting connected to the tank headspace; relocation of two 5,000-gallon temporary storage tanks to the northwest corner of the Project site from another site several miles away; removal of standing remnants of three burned trees from the Project site; and replacement of chain link fencing and gates on the site perimeter.

Existing conditions on and next to the site differ from those in 2003 identified in the ND in that several trees onsite and next to the east site boundary burned in 2018; standing remnants of three burned trees are present in the southwest part of the site.

	New Significant Environmental Effect Caused by a Change in the Project or Circumstances	Substantial Increase in the Severity of a Previously Identified Significant Effect Caused by a Change in the Project or Circumstances	New or Substantially More Severe Significant Impacts Shown by New Information	Ability to Substantially Reduce a Significant Effect Shown by New Information but Declined by Proponent
<b>3.4.2 Would the project:</b>				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFG [CDFW] or USFWS?	No	No	No	No
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFG [CDFW] or USFWS?	No	No	No	No
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	No	No	No	No
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	No	No	No	No
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	No	No	No	No
f. Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan?	No	No	No	No

**Impact Discussion**

**Would the project:**

- a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?**



**No Subsequent Analysis Required.** Consistent with the findings of the 2005 ND, the Project site is developed as an asphalt-paved surface and a concrete water tank. Vegetation onsite is limited to ruderal (weedy) plants growing along the edges of the asphalt-paved pad and two small dead or dying tamarisk trees (*Tamarix ramosissima*) in the south site boundary, as observed on a site visit by Psomas staff on August 13, 2019. No suitable habitat for sensitive animal or plant species is present onsite. A yew tree (*Taxus sp.*) is growing offsite just outside the southeast corner of the site; and two mature pine trees (*Pinus sp.*) are offsite just outside the northern site boundary. Project development would not affect the offsite trees. No sensitive or special status species as identified by the California Department of Fish and Wildlife (CDFW) or the U.S. Fish and Wildlife Service are known to exist at the Project site. The site is fenced; fencing in addition to the lack of suitable habitat precludes habitation onsite by sensitive species. As with the findings of the 2005 ND, Project development would have no impact on sensitive or special status species or their respective habitat because no sensitive or special status species or habitat were identified within the Project impact area. None of the changes to the project compared to the Approved Project would impact special status species. No change in impacts to special status species would result from changes to the existing setting since 2003. No new or increased impacts would occur; no mitigation is required; and no subsequent analysis is required.

**b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?**

**No Subsequent Analysis Required.** Sensitive natural communities are natural communities that are considered rare in the region by regulatory agencies; that are known to provide habitat for sensitive animal or plant species; or are known to be important wildlife corridors. There are no sensitive natural communities onsite. No riparian habitat is present onsite. No changes in impacts to riparian habitat or sensitive natural communities would result from changes to the Project or the existing setting since adoption of the ND. Construction activities would be performed within the existing tank site right-of-way. Therefore, there would be no adverse impact on riparian habitat or other sensitive natural community. No new or increased impacts would occur; no mitigation is required; and no subsequent analysis is required.

**c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?**

**No Subsequent Analysis Required.** An area is considered to be a wetland if, under normal circumstances (1) the area has continuous or recurrent saturation of the upper soils caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause a lack of free oxygen in the upper soils; and (3) the area's vegetation is dominated by plants growing in water or saturated soils; or lacks vegetation. The site consists of asphalt pavement and a concrete water tank, and therefore does not meet the criteria of a wetland. The nearest offsite wetland to the Project site shown on the National Wetlands Mapper maintained by the US Fish and Wildlife Service is a creekbed approximately 235 feet to the west (USFWS 2020); modified Project construction and operation would not impact wetlands in that creekbed. The Proposed Project does not involve any federally protected wetland habitat. Therefore, the Proposed Project would not impact wetland habitat. No changes in impacts to wetlands would result from changes to the Project or the existing setting since adoption of the ND. No new or increased impacts would occur; no mitigation is required; and no subsequent analysis is required.

**d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?**

**No Subsequent Analysis Required.** The site is fenced with a locked gate along the Busch Drive frontage and is thus not available for overland wildlife movement. As identified in 2003 in the ND, the site does not provide important corridors for wildlife movement or nursery opportunities. No new impact to wildlife movement corridors would occur. Two small dead or dying trees in the southern edge of the site would be removed for utilities installation during project construction. The trees are unlikely to be used by nesting birds due to their small size and sparse, dead foliage. Nevertheless, tree removal has the potential to disturb nesting birds protected under federal and State laws. Demolition and construction could also disturb nesting birds in trees adjacent to the Project site. Potential impacts to nesting birds are reduced compared to those identified in the ND due to the recent burning of trees onsite. The changes to the Project compared to the Approved Project would not affect trees and thus would not cause new or increased impacts to nesting birds. The Proposed Project would comply with existing regulations pursuant to state and federal laws protecting nesting birds (Code of Federal Regulations Title 50 Parts 10, 20, and 21; and California Fish and Game Code Sections 3503 and 3503.5) The Proposed Project would be required to comply with RR BIO-1 requiring vegetation clearance outside of the peak nesting season (February 1 to August 31); or nesting bird survey(s) by a qualified biologist, and avoidance of active nests. The specified regulatory requirement reiterates the aforementioned existing regulations and is not mitigation; and no mitigation is needed to ensure implementation of this requirement. This regulatory requirement applied to the Approved project as well as to the Proposed project. No subsequent analysis is required.

**e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?**

**No Subsequent Analysis Required.** The City of Malibu does not have ordinances protecting biological resources on the Project site, which is owned by LACWWD 29. No new or increased impacts would occur; no mitigation is required; and no subsequent analysis is required.

**f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?**

**No Subsequent Analysis Required.** The Project site is not in a habitat conservation plan or natural community conservation plan (USFWS 2018). Therefore, Proposed Project development would not conflict with a habitat conservation plan or natural community conservation plan. No new or increased impacts would occur; no mitigation is required; and no subsequent analysis is required.

**Conclusion**

Overall, the Proposed Project would be consistent with the project analyzed in the 2005 ND. The ND concluded that Approved Project implementation would not impact biological resources. As detailed above, the Proposed Project would impact the same area as with the Approved Project and the presence of biological resources is consistent with the previous analysis. Proposed Project development would not create a new significant impact or substantial increase in the severity of previously identified effects. In regard to Section 15162 of the State CEQA Guidelines, the Proposed Project (1) would not propose substantial changes; (2) would not have circumstantial changes under which the project is undertaken; and (3) would bring about no new information of substantial importance that would (a) create new significant impacts, (b) increase

the severity of previously examined effects, (c) determine that mitigation measures or alternatives previously found not to be feasible would, in fact, be feasible, or (d) introduce mitigation measures that are considerably different from those analyzed in the previous documents. For these reasons, there are no major revisions required to the biological resources analysis provided in the ND.

### **Regulatory Requirement**

The following regulatory requirement was set forth in the ND; was applicable to the Approved Project; and would be applicable to the proposed Project. Because this measure is intended to ensure compliance with an existing law or regulation, it does not constitute preexisting or new mitigation. No significant impact to nesting birds was identified either in the ND or in the present Addendum, and no mitigation measure is required to reduce impacts to nesting birds.

**RR BIO-1** To ensure compliance with the Migratory Bird Treaty Act, the County shall schedule all vegetation removal and grading activities during the non-breeding season (i.e., September 1 to January 31) to avoid impacts on active nests for common and special status birds. If project timing requires that vegetation clearing or grading occur between February 1 and August 31, the County shall retain a qualified Biologist (one with experience conducting nesting bird surveys) to conduct a pre-construction survey for nesting birds and raptors. A pre-construction survey shall be conducted by a qualified Biologist within 72 hours prior to vegetation clearing or the initiation of work during the breeding season. The pre-construction nesting bird survey area shall include the Project site (i.e., disturbance footprint) plus a 250-foot buffer to search for nesting birds and a 500-foot buffer to search for nesting raptors. If no active nests are found, no further mitigation would be required.

If an active nest is observed during the survey, the Biologist shall delineate an appropriate buffer to protect the nest. A protective buffer zone (25 feet to 500 feet for nesting birds, 300 feet to 500 feet for nesting raptors) shall be used to protect nesting birds and nesting raptors. The size of the buffer shall be established at the discretion of the Biologist based on site topography, existing disturbance, status of the species, sensitivity of the individuals (established by observing the individuals at the nest), and the type of construction activity. No construction activities shall be allowed in the designated buffer until the Biologist determines that nesting activity has ended. Encroachment into the buffer area around a known nest will only be allowed if the Biologist determines that the proposed activity would not disturb the nest occupants. Construction may proceed within the buffer once the Biologist determines that nesting activity has ceased (i.e., fledglings have left the nest or the nest has failed). The designated buffer will be clearly marked in the field and will be mapped as Environmentally Sensitive Areas (ESAs) on construction plans.

### **3.5 CULTURAL RESOURCES**

#### **3.5.1 SUMMARY OF PREVIOUS ENVIRONMENTAL ANALYSIS**

The 2005 ND concluded that no historical, archaeological, or paleontological resources were known onsite.

Impacts of the Approved Project to cultural resources were identified as less than significant after implementation of the preceding mitigation.

#### **Previously Approved Measure**

As all impacts were determined to be less than significant, no mitigation measures were required for the 2005 design; however, the following mitigation measure was included in the analysis in connection with the 2005 ND; was applicable to the Approved Project; and would also be applicable to the proposed Project. The ND identified no impacts for cultural resource impacts, did not identify significant impacts, and did not state that mitigation measures were required to reduce impacts to less than significant.

**MM CULT-1** If any cultural resources, including human remains, are discovered during construction, the contractor shall cease excavation and contact a specialist to examine the Project sites as required by project specifications.

#### **3.5.2 PROJECT ENVIRONMENTAL REVIEW**

The information in this section is based on the Resource List prepared by the South Central Coastal Information Center (SCCIC) at California State University Fullerton based on the Cultural Records Search for the Proposed Project completed by the SCCIC on July 31, 2019. A copy of the Resource List is included as Appendix B to this Addendum. A confidential map of cultural resources within one mile of the Proposed Project site is available for review by qualified personnel at the Los Angeles County Public Works office at 900 South Fremont Avenue in the City of Alhambra.

The Proposed Project includes several components differing from the Approved Project, including installation of safety lights; installation of a tank-mounted blower with ducting connected to the tank headspace; relocation of two 5,000-gallon temporary storage tanks to the northwest corner of the Project site from another site several miles away; removal of standing remnants of three burned trees from the Project site; and replacement of chain link fencing and gates on the site perimeter.

Existing conditions on and next to the site differ from those analyzed in the 2005 ND in that several trees onsite and next to the east site boundary burned in 2018; standing remnants of three burned trees are present in the southwest part of the site.

	New Significant Environmental Effect Caused by a Change in the Project or Circumstances	Substantial Increase in the Severity of a Previously Identified Significant Effect Caused by a Change in the Project or Circumstances	New or Substantially More Severe Significant Impacts Shown by New Information	Ability to Substantially Reduce a Significant Effect Shown by New Information but Declined by Proponent
3.5.2 Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	No	No	No	No
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	No	No	No	No
c. Disturb any human remains, including those interred outside of dedicated cemeteries?	No	No	No	No

**Impact Discussion**

**Would the project:**

**a) Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?**

**No Subsequent Analysis Required.** The SCCIC record search identified one historic resource, cement towers for a small dam, within 0.5 mile of the Project site—However, the SCCIC record search did not identify any historic resources were identified onsite. The site contains an existing tank built in approximately 1947 that does not meet the criteria for an historic resource, as assessed by the 2005 ND. There were several single-family houses of various architectural styles surrounding the Project site, including east of the site opposite Busch Drive, when the ND was circulated in 2003. All but one of those houses burned in the Woolsey Fire of November 2018; the only one of those houses remaining is 75 feet north of the Project site at 5703 Busch Drive (APN 4469-028-010). That house, a multilevel single-family Ranch Rambler style house, has not been evaluated for historical significance, and its significance is unknown. However, several archaeological and historical studies have been conducted in the surrounding area, such as LA-3086, LA-4086, LA-5909, and LA-12777; these studies have not identified any historic districts or significant historic resources surrounding the Project site that would suggest the built structure located at 5703 Busch Drive would be historically significant.

The replacement tank would be similar in appearance and slightly larger than the existing tank (replacement tank 62 feet diameter and 26 feet above grade compared to existing tank 52 feet diameter and 18 feet above grade). Demolition and earth moving activities would be confined to the Project site. Thus, development of the replacement tank would not directly impact the built structure located at 5703 Busch Drive. Construction activities may utilize the access road in between the Project site and 5703 Busch Drive, but these activities are not expected to substantially degrade any potential historical significance of the residence at 5703 Busch Drive. Therefore, consistent with the conclusions of the 2005 ND, the Proposed Project would not cause an adverse change in the significance of a historical resource pursuant to Section 15064. The Project does not anticipate any new direct or indirect impacts associated with the Proposed Project.

**b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?**

**No Subsequent Analysis Required.** The 2019 archaeological records search identified 28 cultural resources studies conducted within a one-mile radius of the Project site. None of these studies included any portion of the Project site. Five prehistoric resources are located within 0.5 miles of the Project site, but these resources are located at least 0.25 miles away from the Project site. Twenty-one prehistoric sites were identified within one mile of the Project site consisting of habitation sites, lithic production sites, and resource quarries. Two resources contained human burials and burial goods. These results suggest that although the Project site does not contain any known prehistoric resources, there may be a chance of encountering unknown, buried resources.

Earth moving activities associated with construction of the Proposed Project could result in damage to or destruction of subsurface archaeological resources, which are considered to hold scientific value and are also considered under criterion D of the National Register of Historic Places and criterion 4 of the California Register of Historic Resources as likely to yield information important in history or prehistory. This potential for damage would be considered a potentially significant impact.

No impact to archaeological resources was identified in the ND. However, the ND stated in the environmental analysis for cultural resources “if any cultural resources, including human remains, are discovered during construction, the contractor shall cease excavation and contact a specialist to examine the project sites as required by project specifications.” That requirement would also apply to the Proposed Project.

If approved, the Proposed Project would not involve substantial tank disturbance on land that was previously disturbed on the original project and thus would not substantially increase impacts to archaeological resources that may be buried in site soils. Since the 2005 ND, the physical setting has undergone changes, such as the incineration of vegetation and gross structural damages to the surrounding built environment, which was incurred during the 2018 Woolsey Fire. However, the recent changes to the physical setting has not changed the assessed archaeological sensitivity, as discussed in the 2005 ND. The Project does not anticipate any direct or indirect impacts to any known archaeological resources. No new or intensified impact would occur if the Proposed Project is approved. As such, the Project does not require any further environmental analysis or mitigating efforts.

**c) Disturb any human remains, including those interred outside of dedicated cemeteries?**

**No Subsequent Analysis Required.** There are no known human remains or burials located on the Project site. The Project site is not part of a formal cemetery and is not known to have been used for burial of historic or prehistoric human remains. Thus, the Project is not expected to impact known human remains or cemeteries. However, the potential still exists for such resources to be present and earth moving construction activities could disturb these resources. Human burials, in addition to being potential archaeological resources, have specific provisions for treatment in Section 5097 of the California Public Resources Code. Disturbing human remains could violate the health code, as well as destroy the resource, which would constitute a potentially significant archaeological impact.

If human remains are encountered during Project construction, those remains would require proper treatment, in accordance with applicable State laws. Sections 7050.5 through 7055 of the *California Health and Safety Code* describe the general provisions for human remains. Specifically, Section 7050.5 of the *California Health and Safety Code* describes the protocols to

be followed if human remains are accidentally discovered during excavation of a site. In addition, the requirements and procedures set forth in Section 5097.98 of the *California Public Resources Code* would be implemented. If human remains are found during excavation, construction activities must stop in the vicinity of the find and in any area that is reasonably suspected to overlie adjacent remains until the County Coroner has been notified; the remains have been investigated; and appropriate recommendations have been made for the treatment and disposition of the remains.

The potential impacts to human remains would be considered less than significant by complying with State regulations, which detail the appropriate actions necessary in the event human remains are encountered. As mentioned above, human remains may also be considered a significant archaeological and tribal cultural resource. Compliance with existing regulatory requirements requiring notification of the County coroner within 24 hours after accidental discovery of human remains (RR CULT-1) would ensure that a significant impact would not occur. These requirements applied to the Approved project as well as to the Proposed project. The changes to the Project compared to the Approved Project would not involve substantial additional ground disturbance and thus would not substantially increase potential impacts to human remains. No new or substantially greater impacts would occur, and no mitigation is required; thus, no subsequent CEQA analysis is required.

### **Conclusion**

Overall, the Proposed Project would be consistent with the project analyzed in the 2005 ND. The ND concluded that Approved Project implementation would not impact cultural resources. As detailed above, the Proposed Project would be located within the same area as the previously Approved Project and the likelihood of encountering cultural resources has not changed since the 2005 ND was approved. Proposed Project development would not create a new significant impact or substantial increase in the severity of previously identified effects. In regard to Section 15162 of the State CEQA Guidelines, the Proposed Project (1) would not propose substantial changes; (2) would not have circumstantial changes under which the project is undertaken; and (3) would bring about no new information of substantial importance that would (a) create new significant impacts, (b) increase the severity of previously examined effects, (c) determine that mitigation measures or alternatives previously found not to be feasible would, in fact, be feasible, or (d) introduce mitigation measures that are considerably different from those analyzed in the previous documents. For these reasons, there are no major revisions required to the cultural resources analysis provided in the ND.

### **Regulatory Requirement**

The following regulatory requirement was set forth in the ND; was applicable to the Approved Project as it referenced State laws were in place at that time; and would be applicable to the proposed Project. Because this measure is intended to ensure compliance with an existing law or regulation, it does not constitute new mitigation.

**RR CULT-1** In accordance with Section 7050.5 of the *California Health and Safety Code*, if human remains are found during ground-disturbing activities, no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall occur until the County Coroner has determined, within two working days of notification of the discovery, the appropriate treatment and disposition of the human remains. The County Coroner shall be notified within 24 hours of the discovery. If the County Coroner determines that the remains are or are believed to be Native American, s/he shall notify the Native American Heritage Commission (NAHC) in Sacramento within 24 hours of the discovery. In

accordance with Section 5097.98 of the *California Public Resources Code*, the NAHC must immediately notify those persons it believes to be the most likely descended from the deceased Native American. The descendants shall complete their inspection within 48 hours of being granted access to the site by the property owner. The property owner would then determine, in consultation with a designated Native American representative, the final disposition of the human remains (14 *California Code of Regulations* §15064.5[e]). The District shall comply with these requirements.

## **3.6 ENERGY**

### **3.6.1 SUMMARY OF PREVIOUS ENVIRONMENTAL ANALYSIS**

When the 2005 ND was adopted, energy was not part of the required CEQA analyses. Effective December 28, 2018, the State adopted amendments to Appendix G of the State CEQA Guidelines requiring the analysis and mitigation of the effects of energy in CEQA documents. The State CEQA Guidelines regarding energy emissions do not specifically address situations involving subsequent implementation actions for a project with a previously certified EIR or adopted ND. However, as described below, courts have ruled that there is no requirement to address energy in an Addendum to an EIR that was completed prior to the adopted CEQA amendments. Although there is no requirement to address energy in this Addendum, an analysis is provided.

### **3.6.2 PROJECT ENVIRONMENTAL REVIEW**

Southern California Edison (SCE) and the Southern California Gas Company (SCGC) are utility companies that currently provide and would continue to provide electrical and natural gas services, respectively, to the Project site. Compliance with energy efficiency and conservation policies and regulations is discussed in this section.

The State of California has also adopted efficiency design standards within the Title 24 Building Standards and CALGreen requirements. Title 24 of the California Code of Regulations (CCR, specifically, Part 6) is California's Energy Efficiency Standards for Residential and Non-residential Buildings. Title 24 was established by the California Energy Commission (CEC) in 1978 in response to a legislative mandate to create uniform building codes to reduce California's energy consumption and to provide energy efficiency standards for residential and non-residential buildings. The 2016 California Green Building Standards Code (24 CCR, Part 11), also known as the CALGreen Code, contains mandatory requirements for new residential and nonresidential buildings throughout California. The development of the CALGreen Code is intended to (1) cause a reduction in GHG emissions from buildings; (2) promote environmentally responsible, cost-effective, healthier places to live and work; (3) reduce energy and water consumption; and (4) respond to the directives by the Governor. In short, the Code is established to reduce construction waste; make buildings more efficient in the use of materials and energy; and reduce environmental impact during and after construction. The regulation of energy efficiency for residential and non-residential structures is established by the CEC and its California Energy Code.

The Proposed Project includes several components differing from the Approved Project, including installation of safety lights; installation of a tank-mounted blower with ducting connected to the tank headspace; relocation of two 5,000-gallon temporary storage tanks to the northwest corner of the Project site from another site several miles away; removal of standing remnants of three burned trees from the Project site; and replacement of chain link fencing and gates on the site perimeter.



Existing conditions on and next to the site differ from those of 2003 identified in the ND in that several trees onsite and next to the east site boundary burned in 2018; standing remnants of three burned trees are present in the southwest part of the site.

	New Significant Environmental Effect Caused by a Change in the Project or Circumstances	Substantial Increase in the Severity of a Previously Identified Significant Effect Caused by a Change in the Project or Circumstances	New or Substantially More Severe Significant Impacts Shown by New Information	Ability to Substantially Reduce a Significant Effect Shown by New Information but Declined by Proponent
3.6.2 Would the project:				
a. Result in potentially significant impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?	No	No	No	No
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	No	No	No	No

**Impact Discussion**

**Would the project:**

- a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation? or**
- b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?**

**No Subsequent Analysis Required.** The Project would consume energy during the construction and operations phases of the Project. Energy consumption of the different fuels from each of these phases are discussed below. The Proposed Project consists of a replacement tank 62 feet in diameter compared to a 59-foot-diameter tank in the Approved Project.

None of the modifications to the Project would use substantial amounts of energy (the blower would operate occasionally such as dusk), or would involve wasteful, inefficient, or unnecessary energy use. The change to the existing setting since 2003 would not affect Project energy use.

**Construction**

Project construction would require the use of construction equipment for demolition, excavation, and building activities. Fuel consumed during construction would be temporary in nature and would not represent a significant demand on energy resources. The Project would also implement best management practices such as requiring equipment to be properly maintained and minimize idling and where feasible, use electric or clean alternative fuel equipment. Furthermore, there are no unusual Project characteristics that would necessitate the use of construction equipment that would be less energy-efficient than at comparable construction sites in other parts of the State. Energy used in the construction of the Project would enable the development of buildings that meet the latest energy efficiency standards as detailed in California’s Title 24 building standards, similar to the previously approved project’s requirements to comply with the standards applicable

at that time. Therefore, the proposed construction activities would not result in inefficient, wasteful, or unnecessary fuel consumption. No new or increased impacts would occur; no mitigation is required; and no subsequent analysis is needed.

### **Operations**

The proposed Project would consume energy from transportation fuels and electricity. However, the Project would not increase the amount of energy used over existing uses. As such, the Project is not considered a wasteful, inefficient or unnecessary consumption of energy resources and would result in less than significant energy impacts relative to the consumption of energy for Project operation. There would be no impact, no mitigation is required, and no subsequent analysis is needed.

### **Conclusion**

Overall, the Proposed Project would be consistent with the project analyzed in the 2005 ND. As detailed above, although energy impacts were not specifically addressed in the 2005 ND, the anticipated demand for energy as well as the availability of energy sources (i.e., electricity and natural gas) would be the same as would have been for the Approved Project. Proposed Project development would not create a new significant impact or substantial increase in the severity of previously identified effects. In regard to Section 15162 of the State CEQA Guidelines, the Proposed Project (1) would not propose substantial changes; (2) would not have circumstantial changes under which the project is undertaken; and (3) would bring about no new information of substantial importance that would (a) create new significant impacts, (b) increase the severity of previously examined effects, (c) determine that mitigation measures or alternatives previously found not to be feasible would, in fact, be feasible, or (d) introduce mitigation measures that are considerably different from those analyzed in the previous documents. For these reasons, there are no major revisions required to the energy analysis provided in the ND.

## **3.7 GEOLOGY AND SOILS**

The information in this section is based on the Geotechnical Investigation Report for Lower Busch Tank by Ninyo & Moore dated April 25, 2012; a complete copy of this Report is included as Appendix C to this Addendum.

### **3.7.1 SUMMARY OF PREVIOUS ENVIRONMENTAL ANALYSIS**

The 2005 ND concluded that Approved Project development would not cause substantial hazards arising from surface rupture of a known active fault. The ND stated that the Malibu Coast Fault, the closest known fault to the Project site, is expected to generate earthquakes up to Magnitude 6.7. The steel tank evaluated in the 2005 ND would be supported on a foundation capable of sustaining such an earthquake. Thus, the 2005 ND found that development of the previously approved project would not cause significant hazards due to strong ground shaking. The ND identified liquefaction potential onsite and specified that the tank would be supported on a cast-in-place concrete pile foundation recommended to minimize liquefaction hazards. The ND determined that the Project site is on rather flat terrain not subject to landslide hazards.

The 2005 ND concluded that replacing the existing water tank would not cause soil erosion impacts.

The 2005 ND determined that a clay layer under the site could be expansive; but that the weight of the tank and foundation would resist structural damage from potentially expansive soil.

This Addendum addresses impacts to paleontological resources in the Geology and Soils Section pursuant to the CEQA Guidelines Update finalized in December 2018. The ND, in its Cultural Resources Section, determined that Approved Project development would not have impacted paleontological resources.

### **Previously Approved Measure**

As all impacts were determined to be less than significant, no mitigation measures were required for the 2005 design; however, the following mitigation measure was included in the analysis in connection with the 2005 ND; was applicable to the Approved Project; and would also be applicable to the proposed Project. The ND identified less than significant impacts for geology and soil impacts, did not identify significant impacts, and did not state that mitigation measures were required to reduce impacts to less than significant. The mitigation measure is a project feature of the Approved Project and was not required to reduce a significant impact. The District would implement this measure (proper removal and disposal of excess soils and excavated materials) as part of its construction best management practices (BMPs) for minimizing stormwater pollution. LACPW complies with its own Low-Impact Development Standards Manual specifying BMPs to be implemented to minimize stormwater pollution, including soil erosion; thus, no mitigation is required to ensure implementation of this measure.<sup>4</sup> Impacts of the Proposed project would also be less than significant, and no mitigation measure is required to reduce geology and soils impacts of the Proposed project.

**MM GEO-1** Proper removal and disposal of excess soils and excavated materials.

### **3.7.2 PROJECT ENVIRONMENTAL REVIEW**

The Proposed Project includes the following components that differ from the Approved Project: installation of safety lights; installation of a tank-mounted blower with ducting connected to the tank headspace; relocation of two 5,000-gallon temporary storage tanks to the northwest corner of the Project site from another site several miles away; removal of standing remnants of three burned trees from the Project site; and replacement of chain link fencing and gates on the site perimeter.

Existing conditions on and next to the site differ from those of 2003 identified in the ND in that several trees onsite and next to the east site boundary burned in 2018; standing remnants of three burned trees are present in the southwest part of the site.

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<sup>4</sup> LACPW issued its LID Standards Manual in 2014; parallel LACPW requirements were in place when the 2005 ND was adopted.

	New Significant Environmental Effect Caused by a Change in the Project or Circumstances	Substantial Increase in the Severity of a Previously Identified Significant Effect Caused by a Change in the Project or Circumstances	New or Substantially More Severe Significant Impacts Shown by New Information	Ability to Substantially Reduce a Significant Effect Shown by New Information but Declined by Proponent
<b>3.7.2 Would the project:</b>				
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Report 42)	No	No	No	No
ii. Strong seismic ground shaking?	No	No	No	No
iii. Seismic-related ground failure, including liquefaction?	No	No	No	No
iv. Landslides?	No	No	No	No
b. Result in substantial soil erosion or the loss of topsoil?	No	No	No	No
c. Be located on a geologic unit that is unstable, or that would become unstable as a result of the project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?	No	No	No	No
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	No	No	No	No
e. Have soils incapable of adequately supporting the use of a septic tank or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	No	No	No	No
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	No	No	No	No

## **Impact Discussion**

**Would the project:**

- a) **Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:**
  - i) **Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.**

**No Subsequent Analysis Required.** No active faults are mapped through or next to the Project site, and the nearest such fault continues to be the Malibu Coast Fault at a distance of about 1.1 miles. The nearest Alquist-Priolo Earthquake Fault Zone to the Project site is along a branch of the Malibu Coast Fault about 2.6 miles to the east. Proposed Project development would not cause hazards arising from surface rupture of a known earthquake fault due to the absence of such faults on or next to the Project site. None of the changes to the Project compared to the Approved Project, or the existing setting, would affect seismic hazards relative to Project implementation. No new or increased impacts would occur; no mitigation is required; and no subsequent analysis is needed.

**ii) Strong seismic ground shaking?**

**No Subsequent Analysis Required.** The estimated ground acceleration onsite due to an earthquake with an average return period of 2,475 years — that is, the maximum credible earthquake for the Project site — is about 0.90g, where g is the acceleration of gravity. Ground acceleration of 0.90g correlates with intensity IX on the Modified Mercalli Intensity (MMI) Scale (Wald et. al. 1999), a subjective scale of how earthquakes are felt by people and the effects of earthquakes on buildings. The MMI Scale is a 10-point scale summarized below in Table 7 (USGS 2019).

**TABLE 7  
MODIFIED MERCALLI INTENSITY SCALE**

Intensity	Shaking	Description/Damage
I	Not felt	Not felt except by a very few under especially favorable conditions.
II	Weak	Felt only by a few persons at rest, especially on upper floors of buildings.
III	Weak	Felt quite noticeably by persons indoors, especially on upper floors of buildings. Many people do not recognize it as an earthquake.
IV	Light	Felt indoors by many, outdoors by few during the day. At night, some awakened. Dishes, windows, doors disturbed; walls make cracking sound.
V	Moderate	Felt by nearly everyone; many awakened. Some dishes, windows broken. Unstable objects overturned.
VI	Strong	Felt by all, many frightened. Some heavy furniture moved; a few instances of fallen plaster. Damage slight.
VII	Very strong	Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable damage in poorly built or badly designed structures; some chimneys broken.
VIII	Severe	Damage slight in specially designed structures; considerable damage in ordinary substantial buildings with partial collapse. Damage great in poorly built structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned.
IX	Violent	Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb. Damage great in substantial buildings, with partial collapse. Buildings shifted off foundations.
X	Extreme	Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations. Rails bent.

Source: USGS 2019

Water storage facilities and pump structures required to maintain water pressure for fire suppression are classified as Essential Facilities by the 2019 California Building Code (CBC; California Code of Regulations Title 24 Part 2), Section 1604.5.<sup>5</sup> Design and construction of the proposed tank would comply with CBC requirements governing design and construction of essential facilities. Impacts from strong ground shaking would be less than significant after compliance with applicable CBC provisions. None of the changes to the Project compared to the Approved Project, or the existing setting, would affect seismic hazards relative to Project implementation. No new or increased impacts would occur; no mitigation is required; and no subsequent analysis is needed.

**iii) Seismic-related ground failure, including liquefaction?**

**No Subsequent Analysis Required.** Liquefaction refers to loose, saturated sand or silt deposits that behave as a liquid and lose their load-supporting capability when strongly shaken. Loose granular soils and silts that are saturated by relatively shallow groundwater are susceptible to liquefaction. The 2005 ND identified liquefaction potential onsite and specified that the tank would be supported on a cast-in-place concrete pile foundation recommended to minimize liquefaction hazards. The 2012 geotechnical investigation included a liquefaction analysis and concluded that soils under the site have low liquefaction potential due to the relatively dense soil and shallow sandstone bedrock. Settlement of shallow soil due to liquefaction of underlying soil is estimated at about 0.5 inch. The geotechnical investigation report recommended use of a ring foundation; and excavation of existing soil to three feet below the bearing level of the new foundation, or the

<sup>5</sup> The CBC is updated on a three-year cycle; the 2019 CBC is scheduled to take effect on January 1, 2020.

bearing level of the existing foundation, whichever is deeper; and replacement of removed soil with compacted granular fill.

Based on the findings of the 2012 geotechnical investigation, the Proposed Project development would not cause significant hazards resulting from liquefaction. None of the changes to the Project compared to the Approved Project, or the existing setting, would affect liquefaction hazard relative to Project implementation. No new or increased impacts would occur; no mitigation is required; and no subsequent analysis is needed.

**iv) Landslides?**

**No Subsequent Analysis Required.** The Project site is paved and level, and Proposed Project development would not cause landslide hazards to people or structures on or near the site. None of the changes to the Project compared to the Approved Project, or the existing setting, would affect landslide hazard relative to Project implementation. No new or increased impacts would occur; no mitigation is required; and no subsequent analysis is needed.

**b) Result in substantial soil erosion or the loss of topsoil?**

**No Subsequent Analysis Required.** Demolition and construction activities related to the Proposed Project would disturb substantial amounts of soil and have the potential to result in soil erosion. Site grading and construction activities would include implementation of erosion control and sediment control best management practices per Los Angeles County Public Works Low-Impact Development Standards Manual (LID Manual). None of the changes to the Project compared to the Approved Project would involve substantial ground disturbance, and thus the changes would not cause substantial soil erosion. The change to the existing setting since 2003 (burning of vegetation) would not affect soil erosion relative to Project implementation. Consistent with the finding of the ND, no new or increased impacts would occur after compliance with LID Manual requirements; no mitigation is required; and no subsequent analysis is needed.

**c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?**

**No Subsequent Analysis Required.** Impacts related to liquefaction and landslides are addressed above under thresholds GEO-a.iii and GEO-a.iv, respectively.

Subsurface site soils to depths of up to 14.5 to 20 feet below ground surface (bgs) consist of sandy clay, sandy silt, poorly graded sand with silt, silty sand, and clayey sand. Weakly cemented sandstone bedrock was found below the soils to the depth explored, 26.5 feet bgs.

Lateral spreading is horizontal displacement of surface sediment due to liquefaction in a subsurface layer. The Project site is not considered susceptible to lateral spreading due to the density of the subsurface soils.

The major cause of ground subsidence is the excessive withdrawal of groundwater. The Project site is not over a groundwater basin and is not in an area where groundwater is pumped for municipal or agricultural use. The District's water supplies consist of imported water from northern California and the Colorado River, and recycled water; the District does not use groundwater (WWD 29 2017). Proposed Project development would not cause subsidence.

Total soil settlement under the foundations of proposed buildings is estimated at about one inch over a horizontal span of 40 feet, and differential settlement under foundations is estimated at about 0.5 inch over the same span.

Collapsible soils shrink upon being wetted and/or being subject to a load. Site soils to a depth of the existing foundation; or three feet below the proposed foundation bottom, whichever is greater, are not considered suitable for supporting the proposed tank. The geotechnical investigation report recommends removal of such soil and replacing it with compacted granular fill. Compliance with recommendations of the geotechnical investigation report would minimize hazards from collapsible soils.

None of the changes to the Project compared to the Approved Project, or the existing setting, involve substantial ground disturbance or would cause or exacerbate hazards arising from unstable soils. No new or increased impact would occur; no mitigation is required; and no subsequent analysis is needed.

**d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?**

**No Subsequent Analysis Required.** One sample of subsurface soil from the northern part of the Project site is considered highly expansive, based on an expansion index test conducted as part of the geotechnical investigation. The recommendations for grading and foundation design in the geotechnical investigation report account for the expansive soils. Compliance with such recommendations would minimize hazards from expansive soils. A project could exacerbate expansive soils hazards by, for instance, subjecting soils to repeated cycles of wetting and drying. Proposed Project plans include installation of a parkway drain conveying overflow from the tank to South Busch Drive.

The changes to the Project compared to the Approved Project, and to the existing setting, would not repeatedly wet site soils. Thus, Proposed project implementation would not cause new or increased impact from expansive soils. No mitigation is required, and no subsequent analysis is needed.

**e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?**

**No Subsequent Analysis Required.** Proposed project development would not use septic tanks or other alternative waste water disposal systems and would not impact soil stability relating to such systems. No new or increased impacts would occur; no mitigation is required; and no subsequent analysis is needed.

**f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?**

**No Subsequent Analysis Required.** The information in this section is based on the records search results provided by the vertebrate paleontology department at the Natural History Museum of Los Angeles County (LACM) on August 12, 2019. A copy of the records search is included as Appendix D to this Addendum.

The 2019 paleontological records search identified one paleontological resource locality from late Pleistocene terrace deposits within a one-mile radius of the Project site. This locality produced a diverse late Pleistocene avian and mammalian fauna, including specimens that have been



included in scientific literature. While no LACM fossil localities have been documented from the underlying Trancas Formation, multiple localities are known from the Topanga Formation, which is equivalent in age and lithology. These localities have produced a number of marine fossil specimens including sharks, fish, sea cows, and whales. These results suggest that although the Project site does not contain any known paleontological resources, there may be a chance of encountering unknown, buried resources.

Earth moving activities associated with construction of the proposed Project could result in damage to or destruction of subsurface paleontological resources, which are considered to hold scientific value and are protected under California PRC Section 5097.5. However, the analysis of impacts to cultural resources in the 2005 ND stated that “if any cultural resources, including human remains, are discovered during construction, the contractor shall cease excavation and contact a specialist to examine the Project sites as required by project specifications.”

Although no resources are known, implementation of this measure would reduce the impact associated with potential damage to unanticipated paleontological resources to a less-than-significant level.

### **Conclusion**

Overall, the Proposed Project would be consistent with the project analyzed in the 2005 ND. As detailed above, the Proposed Project would occur within the same physical area as the Approved Project and be subject to the same geologic conditions. Additionally, due to the lack of earthwork in the area since approval of the ND in 2005 that could alter the Project site, impacts would be consistent. The ND concluded that impacts of Approved Project implementation to geology and soils would be less than significant. Proposed project development would not create a new significant impact or substantial increase in the severity of previously identified effects. In regard to Section 15162 of the State CEQA Guidelines, the Proposed Project (1) would not propose substantial changes; (2) would not have circumstantial changes under which the project is undertaken; and (3) would bring about no new information of substantial importance that would (a) create new significant impacts, (b) increase the severity of previously examined effects, (c) determine that mitigation measures or alternatives previously found not to be feasible would, in fact, be feasible, or (d) introduce mitigation measures that are considerably different from those analyzed in the previous documents. For these reasons, there are no major revisions required to the geology and soils analysis provided in the ND.

### **Project Design Feature and Regulatory Requirement**

The following project design feature would be applicable to the proposed Project and was also applicable to the Approved project. Because this is a design feature of the Proposed Project, it does not constitute new mitigation.

**PDF GEO-1** The County of Los Angeles Department of Public Works shall review the *Geotechnical Evaluation, Lower Busch Tank Project, Malibu, California* (Ninyo & Moore 2012) and all additional geotechnical reports prepared for the Project site and shall confirm that all geotechnical recommendations provided in it have been fully and appropriately incorporated into the site preparation and building design specifications. Compliance with geotechnical report recommendations is required under Los Angeles County Public Works Grading Guidelines, and no mitigation is required to ensure implementation of this PDF.

The following regulatory requirement was set forth in the ND; was applicable to the Approved Project; would be applicable to the proposed Project. Because this RR is intended to ensure compliance with an existing law or regulation, it does not constitute new mitigation.

**RR GEO-1** The Project shall be designed and constructed in compliance with the American Water Works Association (AWWA) Standard D-100; and the County Building Code, which incorporates, by reference, the 2016 California Building Code (CBC, or the most recent County building and seismic codes in effect at the time the grading plans are approved) to ensure the structural integrity of proposed site improvements against seismic shaking. The County shall confirm this requirement is included in the building plans and Contractor Specifications. Contractor compliance with this requirement shall be performed to the satisfaction of the County of Los Angeles Department of Public Works. Water storage facilities and pump structures required to maintain water pressure for fire suppression are classified as Essential Facilities by the 2019 CBC. CBC compliance is required for the Project, and no mitigation is required to ensure compliance with this RR.

### **3.8 GREENHOUSE GAS EMISSIONS**

#### **3.8.1 SUMMARY OF PREVIOUS ENVIRONMENTAL ANALYSIS**

At the time the 2005 ND was adopted, greenhouse gas (GHG) emissions were not part of the required CEQA analysis. Effective March 18, 2010, the State adopted amendments to the State CEQA Guidelines requiring the analysis and mitigation of the effects of GHG emissions in draft CEQA documents. The State CEQA Guidelines regarding GHG emissions do not specifically address situations involving subsequent implementation actions for a project with a previously certified EIR or adopted ND. However, as described below, courts have ruled that there is no requirement to address GHG emissions in an Addendum to an EIR that was completed prior to the adopted CEQA amendments. Although there is no requirement to address GHG emissions in this Addendum, an analysis is provided following the discussion of relevant court decisions.

#### **3.8.2 PROJECT ENVIRONMENTAL REVIEW**

Climate change refers to any significant change in measures of climate (e.g., average temperature, precipitation, or wind patterns) over a period of time. Climate change may result from natural factors, natural processes, and human activities that change the composition of the atmosphere and alter the surface and features of the land. Significant changes in global climate patterns have recently been associated with global warming, which is an average increase in the temperature of the atmosphere near the Earth's surface; this is attributed to an accumulation of GHG emissions in the atmosphere. GHGs trap heat in the atmosphere which, in turn, increases the Earth's surface temperature. Some GHGs occur naturally and are emitted to the atmosphere through natural processes, while others are created and emitted solely through human activities. The emission of GHGs through fossil fuel combustion in conjunction with other human activities appears to be closely associated with global warming.

GHGs, as defined under California's Assembly Bill (AB) 32, include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF<sub>6</sub>). General discussions on climate change often include water vapor, atmospheric ozone, and aerosols in the GHG category. Water vapor and atmospheric ozone are not gases that are formed directly in the construction or operation of development Projects, nor can they be controlled in these Projects. Aerosols are not gases. While these elements have a role in climate change, they are not considered by either regulatory bodies, such as CARB, or climate change groups, such as the California Climate Action Registry, as gases to be reported

or analyzed for control. Therefore, no further discussion of water vapor, atmospheric ozone, or aerosols is provided.

The Proposed Project includes the following components differing from the Approved Project: installation of safety lights; installation of a tank-mounted blower with ducting connected to the tank headspace; relocation of two 5,000-gallon temporary storage tanks to the northwest corner of the Project site from another site several miles away; removal of standing remnants of three burned trees from the Project site; and replacement of chain link fencing and gates on the site perimeter.

Existing conditions on and next to the site differ from those of 2003 identified in the ND in that several trees onsite and next to the east site boundary burned in 2018; standing remnants of three burned trees are present in the southwest part of the site.

**City of Malibu**

The City of Malibu has adopted the State of California’s CalGreen and Title 24 energy efficiency standards as well as Landscape Water Conservation Standards. The City also requires that at least 65 percent of construction and demolition waste be recycled or salvaged for reuse consistent with CALGreen Section 5.408. The City has been recognized for sustainability actions as discussed in the *City of Malibu Sustainability Best Practice Activities*. This document represents a collection of activities the City has completed in 10 areas of sustainability. These areas include Energy Efficiency and Conservation Activities, Water & Wastewater Systems Activities, Green Building Activities, Waste Reduction and Recycling Activities, Climate-friendly Purchasing Activities, Renewable Energy and Low Carbon Fuels Activities, Efficient Transportation Activities, Land Use and Community Design Activities, Open Space and Offsetting Carbon Emission Activities, and Promoting Community and Individual Action Activities.

	New Significant Environmental Effect Caused by a Change in the Project or Circumstances	Substantial Increase in the Severity of a Previously Identified Significant Effect Caused by a Change in the Project or Circumstances	New or Substantially More Severe Significant Impacts Shown by New Information	Ability to Substantially Reduce a Significant Effect Shown by New Information but Declined by Proponent
3.8.2 Would the project:				
a. Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?	No	No	No	No
b. Conflict with any applicable plan, policy or regulation of an agency adopted for the purposes of reducing the emissions of GHGs?	No	No	No	No

## **Impact Discussion**

### **Would the project:**

- a) **Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?**

**No Subsequent Analysis Required.** In developing methods for GHG impact analysis, there have been suggestions of quantitative thresholds, often referred to as screening levels, which define an emissions level below which it may be presumed that climate change impacts would be less than significant. Neither the SCAQMD, the City of Malibu nor the County of Los Angeles have adopted a significance threshold for the GHG emissions from non-industrial development projects.

Beginning in April 2008, the SCAQMD convened a Working Group to provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents. On December 5, 2008, the SCAQMD Governing Board adopted its staff proposal for an interim CEQA GHG significance threshold of 10,000 metric tons of CO<sub>2</sub> equivalent per year (MTCO<sub>2e</sub>/yr) for projects where the SCAQMD is the lead agency (SCAQMD 2008). In September 2010, the Working Group presented a revised tiered approach to determining GHG significance for residential and commercial projects wherein Tier 1 determines if a project qualifies for an applicable CEQA exemption; Tier 2 determines consistency with GHG reduction plans; and Tier 3 proposes a numerical screening value as a threshold. At their September 28, 2010 meeting, the Working Group suggested a Tier 3 threshold of 3,000 metric tons of carbon dioxide equivalent (MTCO<sub>2e</sub>) per year for all land use types (SCAQMD 2010).

It is noted that the use of the Tier 3 threshold is selected for the Project because it is in the SoCAB and these thresholds are based on the best available information and data at the time of preparation of this document. The development of CEQA project-level thresholds is an ongoing effort at State, regional, and County levels, and significance thresholds may differ for future projects based on new or additional data and information that may be available for consideration at that time.

### **Construction**

Construction GHG emissions are generated by vehicle engine exhaust from construction equipment, on-road hauling trucks, vendor trips, and worker commuting trips. Construction GHG emissions were calculated by using CalEEMod Version 2016.3.2 (the model is described in Section 4.3, Air Quality). Input details are provided in Appendix A. The results are output in MTCO<sub>2e</sub> for the construction phase. The estimated construction GHG emissions for the Project are shown in Table 8, Estimated Annual Greenhouse Gas Emissions From Construction.

GHG emissions generated from construction activities are finite and would occur for a relatively short-term time period. Unlike the numerous opportunities available to reduce a project's long-term GHG emissions through design features, operational restrictions, use of green-building materials, and other methods, GHG emissions-reduction measures for construction equipment are relatively limited. Therefore, SCAQMD staff recommended that construction emissions be amortized over a 30-year project lifetime, so that GHG reduction measures will address construction GHG emissions as part of the operational GHG reduction strategies (SCAQMD 2008). As shown in Table 8, Estimated Annual Greenhouse Gas Emissions from Construction, the 30-year amortized construction emissions would be 4 MTCO<sub>2e</sub>/yr.

The changes to the proposed Project compared to the Approved Project would not involve substantial additional construction effort and thus would not considerably affect Project GHG emissions.

**TABLE 8  
ESTIMATED ANNUAL GREENHOUSE GAS EMISSIONS  
FROM CONSTRUCTION**

Year	Emissions (MTCO <sub>2</sub> e)
2021	115
<b>Total</b>	<b>115</b>
<b>Amortized Annual Emissions*</b>	<b>4</b>
MTCO <sub>2</sub> e: metric tons of carbon dioxide equivalent	
* Combined total amortized over 30 years	

**Operations**

As stated previously, the Project site is developed with existing water storage infrastructure. The Project would not result in a change in the number of vehicle trips or energy consumption association with the proposed Project. Consequently, there would be no change in the quantity of GHG emissions associated with Project over existing uses.

Construction and operational GHG emissions are combined by amortizing the construction operations over a 30-year period. As shown in Table 9, Estimated Annual Greenhouse Gas Emissions, with consideration of amortized construction emissions, the total annual estimated GHG emissions for the proposed Project is 4 MTCO<sub>2</sub>e/yr. This value is less than the proposed SCAQMD screening threshold of 10,000 MTCO<sub>2</sub>e/yr for industrial uses that is being applied in this analysis. It is accepted as very unlikely that any individual development project would have GHG emissions of a magnitude to directly impact global climate change; therefore, there would be no direct project GHG emissions impact and any impact would be considered on a cumulative basis. Because the proposed Project's GHG emissions would be less than 10,000 MTCO<sub>2</sub>e/yr, the emissions would not be cumulatively considerable. Therefore, the proposed Project would result in less than significant GHG emissions.

The changes to the proposed Project compared to the Approved Project would not directly emit GHGs and would not substantially increase Project energy demands (for instance the blower would operate for two hours at dusk). No new or increased impacts would occur; no mitigation is required; and no subsequent analysis is needed.

**TABLE 9  
ESTIMATED TOTAL ANNUAL GREENHOUSE GAS EMISSIONS**

Source	Emissions MTCO <sub>2</sub> e/yr
Construction (amortized) (from Table 16)	4
Operations	0
<b>Total</b>	<b>4</b>
<b>SCAQMD Significance Threshold for Industrial Uses</b>	<b>10,000</b>
<b>Exceeds Threshold?</b>	<b>No</b>
MTCO <sub>2</sub> e/yr: metric tons of carbon dioxide equivalent per year.	

**b) Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?**

**No Subsequent Analysis Required.** The SCAQMD and the City of Malibu have not adopted standards for the purpose of reducing GHG emissions. As discussed previously, the State policy and standards adopted for the purpose of reducing GHG emissions that are applicable to the proposed Project are Executive Order S-3-05, AB 32, the California Global Warming Solutions Act of 2006, and Senate Bill (SB) 32. The quantitative goal of these regulations is to reduce GHG emissions to 1990 levels by 2020 to 80 percent below 1990 levels by 2050, and for SB 32, to 40 percent below 1990 levels by 2030. Statewide plans and regulations (such as GHG emissions standards for vehicles, the Low Carbon Fuel Standard, Cap-and-Trade, and renewable energy) are being implemented at the Statewide level, and compliance at a project level is not addressed.

The proposed Project proposes replacement of the existing concrete water tank with a steel water tank and development of ancillary structures. The Project would not require additional energy use or vehicular trips and consequently would not result in an increase in GHG emissions. As previously discussed, the increase in GHG emissions would be less than SCAQMD's recommended significance threshold for industrial uses. Because the operation of the Project would not result in an increase in GHG emissions, implementation of the Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. There would be no impact. There would be no significant adverse impacts related to GHG emissions; therefore, no mitigation measures are required.

**Conclusion**

Overall, the Proposed Project would be consistent with the project analyzed in the 2005 ND. Although GHG emissions were not specifically quantified as part of the 2005 ND process, the characteristics of the previously Approved Project would be similar to the Proposed Project, as detailed above. Proposed Project development would not create a new significant impact or substantial increase in the severity of previously identified effects. In regard to Section 15162 of the State CEQA Guidelines, the Proposed Project (1) would not propose substantial changes; (2) would not have circumstantial changes under which the project is undertaken; and (3) would bring about no new information of substantial importance that would (a) create new significant impacts, (b) increase the severity of previously examined effects, (c) determine that mitigation measures or alternatives previously found not to be feasible would, in fact, be feasible, or (d) introduce mitigation measures that are considerably different from those analyzed in the previous documents. For these reasons, there are no major revisions required to the GHG analysis provided in the ND.

**3.9 HAZARDS AND HAZARDOUS MATERIALS**

**3.9.1 SUMMARY OF PREVIOUS ENVIRONMENTAL ANALYSIS**

The 2005 ND stated that the Approved Project site was not known as a hazardous materials site; and that Approved Project development would not involve routine transport, use, or disposal of hazardous materials. No impacts related to hazardous materials were identified.

The 2005 ND determined that the Project site was not within two miles of an airport and concluded that no airport-related hazards would occur. The ND concluded that Approved Project development would not expose people or structures to wildland fire hazards.

**Previously Approved Measure**

As all impacts were determined to be less than significant, no mitigation measures were required for the 2005 design; however, the following mitigation measures were included in the analysis in connection with the 2005 ND; was applicable to the Approved Project; and would also be applicable to the proposed Project. The ND identified no impacts for all hazards and hazardous materials impacts, did not identify significant impacts, and did not state that mitigation measures were required to reduce impacts to less than significant.

**MM HAZ-1** Proper maintenance of all construction equipment.

**MM HAZ-2** Compliance with all applicable laws and ordinances regarding chemical cleanup.

**3.9.2 PROJECT ENVIRONMENTAL REVIEW**

The information in this Section is based partly on the Radius Map Report for Lower Busch Tank completed by Environmental Data Resources, Inc. (EDR) on July 16, 2019; a complete copy of this report is included as Appendix E to this Addendum.

The Proposed Project includes the following components differing from the Approved Project: installation of safety lights; installation of a tank-mounted blower with ducting connected to the tank headspace; relocation of two 5,000-gallon temporary storage tanks to the northwest corner of the Project site from another site several miles away; removal of standing remnants of three burned trees from the Project site; and replacement of chain link fencing and gates on the site perimeter.

Existing conditions on and next to the site differ from those of 2003 identified in the ND in that several trees onsite and next to the east site boundary burned in 2018; standing remnants of three burned trees are present in the southwest part of the site.

	New Significant Environmental Effect Caused by a Change in the Project or Circumstances	Substantial Increase in the Severity of a Previously Identified Significant Effect Caused by a Change in the Project or Circumstances	New or Substantially More Severe Significant Impacts Shown by New Information	Ability to Substantially Reduce a Significant Effect Shown by New Information but Declined by Proponent
3.9.2 Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	No	No	No	No
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	No	No	No	No
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	No	No	No	No

	New Significant Environmental Effect Caused by a Change in the Project or Circumstances	Substantial Increase in the Severity of a Previously Identified Significant Effect Caused by a Change in the Project or Circumstances	New or Substantially More Severe Significant Impacts Shown by New Information	Ability to Substantially Reduce a Significant Effect Shown by New Information but Declined by Proponent
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	No	No	No	No
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	No	No	No	No

**Impact Discussion**

**Would the project:**

**a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?**

**No Subsequent Analysis Required.** Project construction would involve use of hazardous materials including fuels, lubricants, cleansers, paints and other coatings, and pesticides. In compliance with MM HAZ-1, hazardous materials would be used, stored, transported, and disposed of in compliance with regulations of several agencies including the Occupational Safety and Health Administration, USEPA, US Department of Transportation, Department of Toxic Substances Control, and Los Angeles County Fire Department. Regulatory compliance would reduce hazards arising from routine transport, use, and disposal of hazardous materials (refer to RR HAZ-1).

The changes to the Project compared to the Approved Project would not involve use of substantial amounts of hazardous materials and thus would not cause substantial hazards arising from routine transport, use, or disposal of hazardous materials. No new or increased impacts would occur; no mitigation is required; and no subsequent analysis is needed.

**b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?**

**No Subsequent Analysis Required.** Pursuant to the Los Angeles County Fire Department Hazardous Materials Management Program, the project construction contractor would train workers on containment and cleanup of hazardous materials spills (refer to MM HAZ-2); would keep equipment and supplies for containing and cleaning up spills on-site; and would contact the appropriate authorities immediately in the event of a spill of hazardous materials that could not be safely contained and cleaned up by on-site personnel (LACoFD 2009). No substantial hazards would arise from use of hazardous materials by project construction. Any hazardous materials



found during project construction requiring off-site transport would be transported by a licensed hazardous waste transporter in accordance with RR HAZ-1 set forth below., No new significant impact would occur.

Project operation would involve use of only very small amounts of hazardous materials for cleaning, maintenance, and disinfection purposes; such use would not pose substantial hazards to the public or the environment.

The changes to the Project compared to the Approved Project would not involve use of substantial amounts of hazardous materials and would not interfere with compliance with regulations governing hazardous materials use; and thus would not increase hazards from accidental release of hazardous materials. No mitigation is required and no subsequent analysis is needed.

**c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?**

**No Subsequent Analysis Required.** There are no schools within 0.25 mile of the Project site. Proposed project development would not subject people at schools to hazards from hazardous materials. No new impact would occur, no mitigation is required and no subsequent analysis is needed.

**d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?**

**No Subsequent Analysis Required.** The Project site is not listed as a hazardous materials site on any of the databases searched as part of the environmental database search conducted by EDR on July 16, 2019. One site is listed within 0.25 mile of the Project site: the property at 5911 Busch Drive, about 1,100 feet south-southwest of the Project site, is listed as a site not currently generating hazardous waste (Resource Conservation and Recovery Act [RCRA] Non-Generator/No Longer Regulated [NonGen / NLR]) (EDR 2019). That site is not an environmental concern for the Proposed Project. The changes to the Project relative to the Approved Project would not cause hazards related to listed hazardous materials sites. No new or increased impacts would occur; no mitigation is required; and no subsequent analysis is needed.

**e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?**

**No Subsequent Analysis Required.** There are no airports within two miles of the Project site, and the site is not in an airport land use plan (LACALUC 2019). Proposed project development would not cause hazards or excessive noise for people on the Project site. The changes to the Project compared to the Approved Project would not affect airport-related hazards. No mitigation is required and no subsequent analysis is needed.

**f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?**

**No Subsequent Analysis Required.** The Proposed Project would provide adequate emergency access to the site. The two existing locking gates, one near the northeast corner of the site and one near the southeast, would be replaced by two new locking gates in similar positions. None of the changes to the Project, compared to the Approved Project, would affect implementation of an

emergency response plan. Proposed project implementation would have slight favorable impact on water storage capacity for fire flow in the Project site environs, and thus would have a slight favorable impact on emergency response capability. No new or increased adverse impact would occur. No mitigation is required, and no subsequent analysis is needed.

**g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?**

**No Subsequent Analysis Required.** The Project site is in a Very High Fire Hazard Severity Zone mapped by the California Department of Forestry and Fire Protection (CAL FIRE 2019). The project would involve removal of the existing concrete tank and construction of a steel tank and steel fencing. The proposed improvements are non-flammable and would not provide wildfire fuel or otherwise exacerbate wildfire hazards on or near the Project site. Some construction activities, including welding and cutting, generate sparks that could pose a wildfire ignition hazard. Project design feature PDF HAZ-1 is incorporated into the project requiring use of standard equipment and techniques to minimize fire hazards from hot work, including keeping combustible materials clear of hot work areas; use of fire-retardant blankets to cover combustible materials when removal of such materials from near hot work areas is impracticable; and inspection of the work site at completion of hot work for any potential ignition. Landscaping along the fence immediately outside of the east Project site boundary that was proposed as part of the Approved Project has been deleted from the Proposed Project, thus slightly reducing future wildfire fuel next to the Project site. The changes to the Project compared to the Approved Project would not affect wildfire hazards. The change to the existing setting (burning of vegetation) since 2003 reduces wildfire fuel onsite. No new or increased adverse impact would occur. No mitigation is required, and no subsequent analysis is needed.

**Conclusion**

Overall, the Proposed Project would be consistent with the project analyzed in the 2005 ND. The ND concluded that Approved Project implementation would not cause impacts to hazards and hazardous materials. As detailed above, the Proposed Project would not introduce any new hazardous conditions to the Project site and the current site conditions would be consistent with what was analyzed in the 2005 ND. Proposed project development would not create a new significant impact or substantial increase in the severity of previously identified effects. In regard to Section 15162 of the State CEQA Guidelines, the Proposed Project (1) would not propose substantial changes; (2) would not have circumstantial changes under which the project is undertaken; and (3) would bring about no new information of substantial importance that would (a) create new significant impacts, (b) increase the severity of previously examined effects, (c) determine that mitigation measures or alternatives previously found not to be feasible would, in fact, be feasible, or (d) introduce mitigation measures that are considerably different from those analyzed in the previous documents. For these reasons, there are no major revisions required to the hazards and hazardous materials analysis provided in the ND.

**Project Design Feature and Regulatory Requirement**

The following Project Design Feature would be applicable to the proposed Project. Because this is a design feature of the Proposed Project, it does not constitute new mitigation.

**PDF HAZ-1** During construction activities, LACDPW shall employ standard equipment and techniques to minimize fire hazards from activities generating sparks, such as welding and cutting (“hot work”); including keeping combustible materials clear of hot work areas; use of fire-retardant blankets to cover combustible materials when

removal of such materials from near hot work areas is impracticable; and inspection of the work site at completion of hot work for any potential ignition.

The following regulatory requirement would be applicable to the proposed Project. Because this regulatory requirement is intended to ensure compliance with an existing law or regulation, it does not constitute new mitigation.

**RR HAZ-1** During construction activities, hazardous materials encountered on the Project site requiring off-site disposal shall be transported off site by a properly licensed hazardous waste hauler who shall be in compliance with all applicable State and federal requirements, including California Department of Transportation (Caltrans) regulations. Hazardous materials that may be encountered during Proposed Project implementation shall be handled, treated, and/or disposed of in accordance with applicable regulations and/or the requirements of the local oversight agency(ies). The County shall confirm this requirement is included in the Contractor Specifications, and contractor compliance with this requirement shall be performed to the satisfaction of the County of Los Angeles Department of Public Works.

### **3.10 HYDROLOGY AND WATER QUALITY**

#### **3.10.1 SUMMARY OF PREVIOUS ENVIRONMENTAL ANALYSIS**

The 2005 ND concluded that Approved Project development would comply with Best Management Practices pursuant to National Pollutant Discharge Elimination System requirements, and thus would not impact water quality. Approved Project construction would not impact groundwater supplies. Project development would not impact drainage patterns; erosion; or runoff rate or volume. Project development would not impact the capacity of existing or planned stormwater drainage facilities, nor would it place housing in a 100-year flood zone. Development would not expose people or structures to flood hazards, such as being located in a dam inundation area. Proposed project development would not be subject to flooding by seiche, tsunami, or mudflow.

#### **Previously Approved Measure**

As all impacts were determined to be less than significant, no mitigation measures were required for the 2005 design; however, the following measure was included in the analysis in connection with the 2005 ND; was applicable to the Approved Project; and would also be applicable to the proposed Project. The ND identified no impacts for all hydrology and water quality impacts, did not identify significant impacts, and did not state that mitigation measures were required to reduce impacts to less than significant.

**MM WQ-1** Compliance with all applicable Best Management Practices as required by the National Pollutant Discharge Elimination System permit issued to the County by the Regional Water Quality Control Board.

Procedures and measures for compliance with National Pollutant Discharge Elimination System requirements for projects under Los Angeles County jurisdiction are set forth in the Low Impact Development Standards Manual (LID Manual) issued by Los Angeles County Public Works in 2014.

### 3.10.2 PROJECT ENVIRONMENTAL REVIEW

The Proposed Project includes the following components differing from the Approved Project: installation of safety lights; installation of a tank-mounted blower with ducting connected to the tank headspace; relocation of two 5,000-gallon temporary storage tanks to the northwest corner of the Project site from another site several miles away; removal of standing remnants of three burned trees from the Project site; and replacement of chain link fencing and gates on the site perimeter.

Existing conditions on and next to the site differ from those analyzed in the 2005 ND in that several trees onsite and next to the east site boundary burned in 2018; standing remnants of three burned trees are present in the southwest part of the site.

	New Significant Environmental Effect Caused by a Change in the Project or Circumstances	Substantial Increase in the Severity of a Previously Identified Significant Effect Caused by a Change in the Project or Circumstances	New or Substantially More Severe Significant Impacts Shown by New Information	Ability to Substantially Reduce a Significant Effect Shown by New Information but Declined by Proponent
<b>3.10.2 Would the project:</b>				
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	No	No	No	No
b. Substantially decrease groundwater supplies or substantially interfere with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	No	No	No	No
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i. Result in substantial erosion or siltation on- or offsite?				
ii. Substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or offsite?	No	No	No	No
iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	No	No	No	No
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	No	No	No	No

	New Significant Environmental Effect Caused by a Change in the Project or Circumstances	Substantial Increase in the Severity of a Previously Identified Significant Effect Caused by a Change in the Project or Circumstances	New or Substantially More Severe Significant Impacts Shown by New Information	Ability to Substantially Reduce a Significant Effect Shown by New Information but Declined by Proponent
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	No	No	No	No

**Impact Discussion**

**Would the project:**

**a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?**

**No Subsequent Analysis Required.** Proposed project construction would generate pollutants including fuels, lubricants, paints and other coatings, asphalt, concrete, and trash and debris, that could contaminate stormwater. Proposed project construction would include implementation of Best Management Practices required by the District per Mitigation Measure WQ-1 stated above and project design feature PDF WQ-1 set forth below. Project operation would generate negligible pollutants that could contaminate stormwater. The changes to the Project compared to the Approved Project would not generate substantial amounts of pollutants that could contaminate stormwater. The change to the existing setting since 2003 (burning of vegetation) would not affect pollutant generation by Project implementation. No new or increased adverse impact would occur. No mitigation is required, and no subsequent analysis is needed.

**b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?**

**No Subsequent Analysis Required.** Due to the nature of the Proposed Project as a water storage facility, Project development would not decrease groundwater supplies. The Project site is not used for groundwater recharge, and development would not impact recharge. The changes to the Project compared to the Approved Project would not affect groundwater supplies or recharge. No new or increased impact would occur; no mitigation is required; and no subsequent analysis is needed.

**c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:**

**(i) result in substantial erosion or siltation on- or off-site;**

**No Subsequent Analysis Required.** Consistent with the finding of the ND, Proposed project development would not substantially change the drainage pattern onsite. The site grading plan shows a slight south slope with elevations ranging from about 319 feet AMSL at the northeast corner of the site to 315 feet AMSL at the southwest corner. Most of the site would remain paved with asphalt. Therefore, development is not expected to change runoff rate or volume from the

site. Project development would not cause substantial erosion or siltation on- or off-site due to the lack of exposed erodible soil onsite and because development would not change the amount of runoff from the site. The changes to the Project compared to the Approved Project would not involve substantial ground disturbance; and would not interfere with implementation of erosion control and sediment control BMPs by the Project; and, thus, would not cause new or increased erosion or siltation impacts. No mitigation is required; and no subsequent analysis is needed.

**(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;**

**No Subsequent Analysis Required.** Project development would not change the amount or rate of runoff from the site. Proposed project development includes installation of a parkway drain designed to capture overflow from the tank to Busch Drive. The changes to the Project compared to the Approved Project would not create substantial amount of new impervious area and thus would not substantially increase the amount of runoff from the Project site. No new or increased impact would occur; no mitigation is required; and no subsequent analysis is needed.

**(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or**

**No Subsequent Analysis Required.** Proposed project development includes installation of a parkway drain designed to capture overflow from the tank to Busch Drive. Proposed project development would not increase the amount of runoff from the site, as the entire site is already impervious. The changes to the Project compared to the Approved Project would not substantially increase runoff from the site and would not affect the capacity of existing or planned stormwater drainage systems. No new or increased impact would occur; no mitigation is required; and no subsequent analysis is needed.

**(iv) impede or redirect flood flows?**

**No Subsequent Analysis Required.** The Project site is in an area of unknown flood hazard (Zone D designated by the Federal Emergency Management Agency) (FEMA 2019). The site is in the upper part of a slope on the east side of a small canyon; thus, flooding is not expected onsite. Project development would not cause or exacerbate flooding. The changes to the Project compared to the Approved Project would not affect flood flows. The change to the existing setting since 2003 (burning of trees) would not affect flood flows. No new or increased impact would occur; no mitigation is required; and no subsequent analysis is needed.

**d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?**

**No Subsequent Analysis Required.** The Project site is not in a flood zone.

A seiche is a surface wave created when an inland water body is shaken, usually by an earthquake. The design of the proposed tank would be based on the estimated peak ground acceleration onsite of 0.90g, which has an average return period of 2,475 years. Proposed project development includes installation of a parkway drain draining overflow from the tank to Busch Drive. Thus, Proposed Project development would not pose substantial flood hazards to people or structures downslope from the tank due to tank failure resulting from an earthquake. No new substantial impact would occur.

A tsunami is an ocean wave caused by a sudden displacement of the ocean floor, most often due to earthquakes. The Project site is at an elevation of over 300 feet AMSL and is not in a tsunami flood zone. No new significant impact would occur.

The changes to the Project compared to the Approved Project would not affect flood hazards onsite and thus would not affect the potential for release of pollutants due to flooding. No new or increased impact would occur; no mitigation is required; and no subsequent analysis is needed.

**e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?**

**No Subsequent Analysis Required.** The Los Angeles Regional Water Quality Control Board (LARWQCB) adopted the Water Quality Control Plan (WQCP) for the LARWQCB region in 1994. The WQCP sets forth beneficial uses, water quality objectives, and implementation actions aimed at achieving objectives, for water bodies in the region. Proposed project implementation would not conflict with the WQCP.

The changes to the Project relative to the Approved Project would not affect implementation of the WQCP. No new or increased impact would occur; no mitigation is required; and no subsequent analysis is needed.

**Conclusion**

Overall, the Proposed Project would be consistent with the project analyzed in the 2005 ND. The ND concluded that Approved Project implementation would not impact hydrology and water quality. As detailed above, the Proposed Project would be developed within the same physical area as the Approved Project and the physical characteristics would be substantially similar to the Approved Project. Therefore, Proposed project development would not create a new significant impact or substantial increase in the severity of previously identified effects. In regard to Section 15162 of the State CEQA Guidelines, the Proposed Project (1) would not propose substantial changes; (2) would not have circumstantial changes under which the project is undertaken; and (3) would bring about no new information of substantial importance that would (a) create new significant impacts, (b) increase the severity of previously examined effects, (c) determine that mitigation measures or alternatives previously found not to be feasible would, in fact, be feasible, or (d) introduce mitigation measures that are considerably different from those analyzed in the previous documents. For these reasons, there are no major revisions required to the hydrology and water quality analysis provided in the ND.

**Project Design Feature**

The following project design feature would be applicable to the proposed Project. Because this is a design feature of the Proposed Project, it does not constitute new mitigation.

**PDF WQ-1** Pursuant to Waste Discharge Requirements for Municipal Storm Water and Urban Runoff Discharges within County of Los Angeles, and the Incorporated Cities Therein, Except the City of Long Beach (Order No. R4-2012-0175), NPDES No. CAS004001), of which the City of Malibu is a co-permittee, the contractor shall develop and incorporate BMPs for reducing or eliminating construction-related pollutants in site runoff. The County shall confirm this requirement is included in the Contractor Specifications, and contractor compliance with this requirement shall be performed to the satisfaction of the County of Los Angeles Department of Public Works.

Procedures and measures for compliance with Order No. R4-2012-0175 for projects under Los Angeles County jurisdiction are set forth in the Low Impact Development Standards Manual (LID Manual) issued by Los Angeles County Public Works in 2014. No mitigation is required to ensure implementation of this PDF.

**3.11 LAND USE AND PLANNING**

**3.11.1 SUMMARY OF PREVIOUS ENVIRONMENTAL ANALYSIS**

The ND determined that Approved Project development would not divide an established community; would not conflict with land use policies; and would not conflict with a habitat conservation plan or natural community conservation plan.

**3.11.2 PROJECT ENVIRONMENTAL REVIEW**

The Proposed Project includes the following components differing from the Approved Project: installation of safety lights; installation of a tank-mounted blower with ducting connected to the tank headspace; relocation of two 5,000-gallon temporary storage tanks to the northwest corner of the Project site from another site several miles away; removal of standing remnants of three burned trees from the Project site; and replacement of chain link fencing and gates on the site perimeter.

Existing conditions on and next to the site differ from those of 2003 identified in the ND in that several trees onsite and next to the east site boundary burned in 2018; standing remnants of three burned trees are present in the southwest part of the site.

	New Significant Environmental Effect Caused by a Change in the Project or Circumstances	Substantial Increase in the Severity of a Previously Identified Significant Effect Caused by a Change in the Project or Circumstances	New or Substantially More Severe Significant Impacts Shown by New Information	Ability to Substantially Reduce a Significant Effect Shown by New Information but Declined by Proponent
3.11.2 Would the project:				
a. Physically divide an established community?	No	No	No	No
b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	No	No	No	No

**Impact Discussion**

**Would the project:**

**a) Physically divide an established community?**

**No Subsequent Analysis Required.** Proposed project development would not divide an established community. The new tank would be built within the same parcel containing the existing tank. Security fencing is in place on the Project site perimeter, and the site is not used as an access way through the surrounding neighborhood. The changes to the Project relative to the



Approved Project would occur within the Project site (except for removal of the two temporary storage tanks from their current site approximately 10 miles east of the Project site) and would have no impact respecting division of an established community. No new or increased impact would occur; no mitigation is required; and no subsequent analysis is needed.

**b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?**

**No Subsequent Analysis Required.** The existing General Plan land use designation onsite is Rural Residential, which permits large lot single-family development with lots ranging from 1 to 40 acres. The existing zoning district onsite is RR2, Rural Residential, permitting single-family residential units on lots of two acres or larger. Public water system tanks are not specified as a permitted use in Rural Residential zoning districts.<sup>6</sup> Water tanks are required for maintaining necessary water pressure in the City and are considered critical public facilities. Thus, while water tanks are not specified as permitted uses in the RR2 zoning district, the use is not considered to conflict with policies for that district. Additionally, the proposed height of 26 feet would be consistent with Variance No 13-042 approved by the City of Malibu in July 2020. The changes to the Project relative to the Approved Project would not cause any conflicts with existing land use regulations for the Project site. No new or increased impact would occur; no mitigation is required; and no subsequent analysis is needed.

The Project site is not in a habitat conservation plan or natural community conservation plan, and Proposed Project development would not conflict with such a plan. No new or increased impact would occur; no mitigation is required; and no subsequent analysis is needed.

## **Conclusion**

Overall, the Proposed Project would be consistent with the project analyzed in the 2005 ND. The ND concluded that Approved Project implementation would not impact land use and planning. As detailed above, the Proposed Project would be developed within the same physical area and would be subject to the same land use regulations as the Approved Project. Due to the similarity between the Approved Project and the Proposed Project, Proposed Project development would not create a new significant impact or substantial increase in the severity of previously identified effects. In regard to Section 15162 of the State CEQA Guidelines, the Proposed Project (1) would not propose substantial changes; (2) would not have circumstantial changes under which the project is undertaken; and (3) would bring about no new information of substantial importance that would (a) create new significant impacts, (b) increase the severity of previously examined effects, (c) determine that mitigation measures or alternatives previously found not to be feasible would, in fact, be feasible, or (d) introduce mitigation measures that are considerably different from those analyzed in the previous documents. For these reasons, there are no major revisions required to the land use and planning analysis provided in the 2005 ND.

## **3.12 MINERAL RESOURCES**

### **3.12.1 SUMMARY OF PREVIOUS ENVIRONMENTAL ANALYSIS**

The ND concluded that no impact to mineral resources would occur; and stated that the Project site is not identified as a mining site in the local general plan or other land use plan.

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<sup>6</sup> The City of Malibu Municipal Code specifies permitted uses for all five Rural Residential zoning districts combined, not for each of the five districts separately.

### 3.12.2 PROJECT ENVIRONMENTAL REVIEW

The Proposed Project includes the following components differing from the Approved Project: installation of safety lights; installation of a tank-mounted blower with ducting connected to the tank headspace; relocation of two 5,000-gallon temporary storage tanks to the northwest corner of the Project site from another site several miles away; removal of standing remnants of three burned trees from the Project site; and replacement of chain link fencing and gates on the site perimeter.

Existing conditions on and next to the site differ from those of 2003 identified in the ND in that several trees onsite and next to the east site boundary burned in 2018; standing remnants of three burned trees are present in the southwest part of the site.

	New Significant Environmental Effect Caused by a Change in the Project or Circumstances	Substantial Increase in the Severity of a Previously Identified Significant Effect Caused by a Change in the Project or Circumstances	New or Substantially More Severe Significant Impacts Shown by New Information	Ability to Substantially Reduce a Significant Effect Shown by New Information but Declined by Proponent
3.12.2 Would the project:				
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	No	No	No	No
b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	No	No	No	No

### Impact Discussion

#### Would the project:

- a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?**

**No Subsequent Analysis Required.** The Project site is mapped in Mineral Resource Zone 3 (MRZ-3) by the California Geological Survey, indicating that the area contains mineral resources, the significance of which cannot be determined from available data (CGS 1981). No mines are mapped near the Project site on the Mines Online map maintained by the Office of Mine Reclamation (OMR 2019).

The site is developed with a water tank and is not available for mining. In addition, mining is incompatible with surrounding residential uses. Proposed project development would not cause a loss of availability of a known mineral resource. The changes to the Project relative to the Approved Project would not affect availability of mineral resources or incompatibility of mining with surrounding land uses. No new or increased impact would occur; no mitigation is required; and no subsequent analysis is needed.

**b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?**

**No Subsequent Analysis Required.** The California Geological Survey has not mapped mineral resources in the Malibu area (Malibu 1995). No subsequent analysis is needed.

**Conclusion**

Overall, the Proposed Project would be consistent with the project analyzed in the 2005 ND. The ND concluded that Approved Project implementation would not impact mineral resources. As detailed above, the Proposed Project would be developed within the same physical area as the Approved Project. Therefore, Proposed Project development would not create a new significant impact or substantial increase in the severity of previously identified effects. In regard to Section 15162 of the State CEQA Guidelines, the Proposed Project (1) would not propose substantial changes; (2) would not have circumstantial changes under which the project is undertaken; and (3) would bring about no new information of substantial importance that would (a) create new significant impacts, (b) increase the severity of previously examined effects, (c) determine that mitigation measures or alternatives previously found not to be feasible would, in fact, be feasible, or (d) introduce mitigation measures that are considerably different from those analyzed in the previous documents. For these reasons, there are no major revisions required to the mineral resources analysis provided in the ND.

**3.13 NOISE**

The information in this Section is based on the Noise Calculations for Lower Busch Tank included as Appendix E to this Addendum.

**3.13.1 SUMMARY OF PREVIOUS ENVIRONMENTAL ANALYSIS**

The 2005 ND determined, regarding construction noise, that construction would be temporary and would comply with existing regulations of the US Occupational Safety and Health Administration and limits on construction hours set forth the Los Angeles County noise control ordinance. Construction noise impact was identified as less than significant. The ND concluded that construction vibration impacts would be short-term and less than significant. The ND determined that the Approved Project did not propose noise-generating features that would cause a permanent increase in noise and that operational noise impacts would be less than significant. The ND stated that the Project site is not within two miles of an airport and that Approved Project development would not cause airport-related noise impacts.

**3.13.2 PROJECT ENVIRONMENTAL REVIEW**

The Proposed Project includes the following components differing from the Approved Project: installation of safety lights; installation of a tank-mounted blower with ducting connected to the tank headspace; relocation of two 5,000-gallon temporary storage tanks to the northwest corner of the Project site from another site several miles away; removal of standing remnants of three burned trees from the Project site; and replacement of chain link fencing and gates on the site perimeter.

Existing conditions on and next to the site differ from those of 2003 identified in the ND in that several trees onsite and next to the east site boundary burned in 2018; standing remnants of three burned trees are present in the southwest part of the site.

## **Sensitive Receptors**

Noise-sensitive receptors are generally considered to be humans who are engaged in activities that may be subject to the stress of significant interference from noise. The nearest sensitive receptors to the Project site are residential uses located adjacent to the Project site and across Busch Drive. More specifically, the Project site is located within an established and fully developed residential community, with detached single-family homes that border the Project site to the north (approximately 170 feet), west (approximately 140 feet), and south (approximately 80 feet), and across Busch Drive to the east (approximately 160 feet).

## **City of Malibu Noise Element and Municipal Code**

The City of Malibu has established guidelines and standards in the General Plan and the Municipal Code.

### ***General Plan Noise Element***

The City of Malibu is affected by several different sources of noise, including automobile traffic, commercial activity, periodic nuisances such as construction, and other sources typical of urban and suburban areas. The predominant noise source in Malibu is vehicular traffic from Pacific Coast Highway, the major canyon roads, and the local arterials. Stationary sources within the City include a wide range of recreational, commercial, and business activities. The Noise Element of the General Plan is intended to identify these sources and provide objectives and policies that ensure that noise from these sources does not create an unacceptable noise environment (Malibu 1995).

The Noise Element of the General Plan acknowledges that noise from major roadways may affect sensitive receptors; the dominant noise source in Malibu is roadway traffic from Pacific Coast Highway (PCH) which runs east/west throughout the City. Additional roadway traffic noise arises from some of the canyon roads including, Malibu Canyon Road and Kanan Dume Road which run north/south.

The following policy measures are applicable to the Project:

- |                |  |
|----------------|--|
| Policy N-1.1.1 | The City shall protect residences, parks and recreational areas from excessive noise to permit the enjoyment of activities.            |
| Policy N-1.1.2 | The City shall protect noise sensitive land uses from negative impacts of proximity to noise generating uses.                          |
| Policy N-1.1.4 | The City shall work with businesses and residents in a joint effort to plan, control, and attain an acceptable noise environment.      |
| Policy N-1.1.5 | The City shall encourage new construction and remodels which utilize designs and materials that reduce exposure to noise sources.      |
| Policy N-1.1.6 | The City shall review proposed development to ensure the average ambient noise is as low as feasible to maintain the rural atmosphere. |

The City adopted eight (8) measure to ensure these policies are implemented into practice:

**N Implementation Measure 1:** Adopt a noise control ordinance to minimize or eliminate unacceptable noise levels.

**N Implementation Measure 2:** Limit maximum permissible noise levels from all sources, including but not limited to filming, motorized vehicles, construction, leaf blowers and other landscaping equipment.

**N Implementation Measure 3:** Maintain the Building Code Sound Transmission Control Standards of the State Building Code, Title 24, Part 2, Appendix 35 within the City's adopted Building Code.

**N Implementation Measure 5:** Restrict the hours and days of construction, grading, and filming to reduce noise from this source.

**N Implementation Measure 6:** Require an acoustical analysis as part of proposed development to ensure that noise mitigation is included in the project where activities associated with proposed uses are likely to produce noise levels exceeding the adopted City noise level standards, at existing or planned noise-sensitive uses, including but not limited to, residences, schools, hospitals, long term in-patient medical treatment and care facilities, churches and libraries,

**N Implementation Measure 7:** Use site planning and project design as noise mitigations to achieve the specified standards for transportation or non-transportation sources.

**N Implementation Measure 8:** Use open space, wherever practical, to provide an adequate spatial separator between noise sources and sensitive land uses. Use noise barriers as a supplemental means of achieving the noise standards after all feasible design related noise mitigation measures have been integrated into the project.

**N Implementation Measure 10:** Incorporate the consideration of noise impacts on significant wildlife habitats into the development review process.

The Noise Element contains guidelines for noise-compatible land use for long-term operations, as shown in Table 24, City of Malibu Guidelines for Noise Compatible Land Uses.

While the compatibility guidelines in Table 10 below show the degree of noise exposure that is considered acceptable, the Noise Element also provides exterior noise standards for non-transportation and transportation sources, as shown in Table 11, City of Malibu Maximum Allowable Noise Exposure Transportation Noise Sources and Table 12, Maximum Exterior Noise Limits Non-Transportation Sources.

**TABLE 10  
CITY OF MALIBU GUIDELINES FOR NOISE COMPATIBLE LAND USES**

Land Use Category	Community Noise Exposure Ldn or CNEL, DBA						
	55	60	65	70	75	80	85
Residential – Low density single family, duplex, mobile homes							
Residential – Multi-family and Mixed Commercial/ Residential Use							
Transient Lodging – Motels, Hotels							
Schools, Libraries, Churches, Hospitals, Nursing Homes							
Auditoriums, Concert Halls, Amphitheaters							
Sports Arena, Outdoor Spectator Sports							
Playgrounds, Neighborhood Parks							
Golf Courses, Riding Stables, Water Recreation, Cemeteries							
Office Buildings, Business Commercial and Professional							
Industrial, Manufacturing, Utilities, Agriculture							
 <p><b>NORMALLY ACCEPTABLE</b></p> <p>Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirement.</p>		 <p><b>NORMALLY UNACCEPTABLE</b></p> <p>If new construction or development proceeds, an analysis of the noise reduction requirements should be made and needed noise insulation features included in the design.</p>					
 <p><b>CONDITIONALLY ACCEPTABLE</b></p> <p>New construction or development should be undertaken after an analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.</p>		 <p><b>CLEARLY UNACCEPTABLE</b></p> <p>New construction or development should generally not be undertaken, unless it can be demonstrated that an interior level of 45 dBA can be achieved.</p>					
Source: Malibu 1995.							

**TABLE 11  
MAXIMUM ALLOWABLE NOISE EXPOSURE TRANSPORTATION  
NOISE SOURCES**

Land Use	Outdoor Activity Areas <sup>1</sup> L <sub>dn</sub> /CNEL, dB	Interior Spaces	
		L <sub>dn</sub> /CNEL, dB	L <sub>eq</sub> /dB <sup>2</sup>
Residential	50 <sup>3</sup>	45	—
Transient housing	60 <sup>3</sup>	45	—
Hospitals, long term in-patient medical treatment and care facilities	60 <sup>3</sup>	45	—
Theaters, auditoria, music halls	60 <sup>3</sup>	—	35
Churches and meeting halls	60 <sup>3</sup>	—	40
Office buildings	60 <sup>3</sup>	—	45
Schools, libraries and museums, child care	60 <sup>3</sup>	—	45
Playgrounds and neighborhood parks	70	—	—

dBA: A-weighted decibels; L<sub>eq</sub>: equivalent noise level; CNEL: Community Noise Level Equivalent.

<sup>1</sup> Where the location of outdoor activity areas is unknown, the exterior noise level standard shall be applied to the property line of the receiving land use.

<sup>2</sup> As determined for a typical worst-case hour during periods of use.

<sup>3</sup> Where it is not possible to reduce noise in outdoor activity areas to 50 dB L<sub>dn</sub>/CNEL or less using practical application of the best-available noise reduction measures, an exterior noise level of up to 65 dB L<sub>dn</sub>/CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table.

Source: Malibu Noise Element of the General Plan, Table 6-5 (Malibu 1995).

**TABLE 12  
MAXIMUM ALLOWABLE NOISE EXPOSURE NON-TRANSPORTATION  
NOISE SOURCES**

Receiving Land Use Category	General Plan Land Use Districts	Time Period	Noise Level dBA	
			L <sub>eq</sub>	L <sub>max</sub>
Rural	All RR Zones and PRF, CR, AH, OS	7:00 a.m. to 7:00 p.m.	55	75
		7:00 p.m. to 10:00 p.m.	50	65
		10:00 p.m. to 7:00 a.m.	40	55
Other Residential	All SFR, MFR and MFBF Zones	7:00 a.m. to 7:00 p.m.	55	75
		7:00 p.m. to 10:00 p.m.	50	65
		10:00 p.m. to 7:00 a.m.	45	60
Commercial, Industrial	CN, CC, CV, CG, and I Zones	7:00 a.m. to 7:00 p.m.	65	85
		7:00 p.m. to 7:00 a.m.	60	70

dBA: A-weighted decibels; L<sub>eq</sub>: equivalent noise level; L<sub>max</sub>: Maximum Noise Level.

Source: Malibu Noise Element of the General Plan, Table 6-4 (Malibu 1995).

**Municipal Code**

The City’s Municipal Code (Chapter 8, Noise Control Ordinance of the City of Malibu) is the City’s Noise Ordinance. As stated in the Municipal Code, “In order to control unnecessary, excessive and annoying noise and vibration in the city, it is declared to be the policy of the city to prohibit

such noise and vibration (§ 8.24.020).” The following sections of the Noise Ordinance are applicable to the proposed Project:

**8.24.040 Prohibited Noises.**

No person shall make, or cause or suffer, or permit to be made upon any premises owned, occupied or controlled by such person, any unnecessary noises, sounds or vibrations which are physically annoying to reasonable persons of ordinary sensitivity or which are so harsh or so prolonged or unnatural or unusual in their use, time, or place as to occasion unnecessary discomfort to any persons within the neighborhood from which the noises emanate or which interfere with the peace and comfort of the residents or their guests, or the operators or customers in places of business in the vicinity, or which may detrimentally or adversely affect such residences or places of business. (Prior code § 4203)

**8.24.050 Prohibited Acts.**

- A. Unnecessary noises: the unnecessary making of, or knowingly and unnecessarily permitting to be made, any loud, boisterous or unusual noise, disturbance, commotion or vibration in any boarding facility, dwelling, place of business or other structure, or upon any public street, park or other place or building, except the ordinary and usual sounds, noises, commotion or vibration incidental to the operation of said places when conducted in accordance with the usual and normal standard of practice applicable thereto and in a manner which will not disturb the peace and comfort of adjacent residences or which will not detrimentally affect the operators or customers of adjacent places of business
- D. Engines, motors and mechanical devices near residential district: except as provided in subsection G of this section regarding construction-related noise, the sustained operation or use between the hours of ten p.m. and seven a.m. of any electric or gasoline powered motor or engine or the repair, modification, reconstruction, testing or operation of any automobile, motorcycle, machine or mechanical device or other contrivance or facility unless such motor, engine, automobile, motorcycle, machine or mechanical device is enclosed within a sound insulated structure so as to prevent noise and sound from being plainly audible at a distance of fifty (50) feet from such structure, or within ten (10) feet of any residence;
- G. Construction: operating or causing the operation of any tools, equipment, impact devices, derricks or hoists used in construction, chilling, repair, alteration, demolition or earthwork, on weekdays between the hours of seven p.m. and seven a.m., before eight a.m. or after five p.m. on Saturday, or at any time on Sundays or holidays, except as provided in Section 8.24.060(D);
- K. Leaf blowers: the use or operation of any portable machine powered with a combustion or gasoline engine used to blow leaves, dirt and other debris off sidewalks, driveways, lawns and other surfaces; in addition, until August 1, 2019 the use or operation, in the area of the city west of Malibu Canyon Road extending to the western boundary of the city, of any portable machine used to blow leaves, dirt and other debris off sidewalks, driveways, lawns and other surfaces including any fire debris.



**8.24.060 Exemptions.**

D. Construction—Special Circumstances. The provisions of Section 8.24.050 do not apply to any person who performs construction, repair, excavation or earthmoving work pursuant to the expressed written permission of the city manager to perform such work at times prohibited in Section 8.24.050. The applicant must submit to the city manager an application in writing, stating the reasons for the request and the facts upon which such reasons are based. The city manager may grant written permission for the construction if he or she finds that:

1. The work proposed to be done is in the public interest,
2. Hardship, injustice or unreasonable delay would result from the interruption thereof during the hours and days specified in Section 8.24.050, or
3. The building or structure involved is devoted or intended to be devoted to a use immediately incident to public defense.

Any applicant dissatisfied with the decision of the city manager may appeal to the city council by filing a notice of appeal with the city clerk within ten (10) days after notice of the city manager's decision. The city council shall, within thirty (30) days of filing the appeal, affirm, reverse or modify the decision of the city manager.

The provisions of Section 8.24.050 do not apply to the construction, repair, or excavation during prohibited hours as may be necessary for the preservation of life or property, when such necessity arises during such hours as the offices of the city are closed, or where such necessity requires immediate action prior to the time at which it would be possible to obtain a permit pursuant to this section. The person doing such construction, repair or excavation shall obtain a permit therefor within one business day of such construction, repair or excavation;

**8.24.070 Enforcement.**

The city manager shall have primary responsibility for the enforcement of the noise regulations contained herein. Nothing in this chapter shall prevent the city manager from obtaining voluntary compliance by way of warning, notice or education. (Prior code § 4206)

	New Significant Environmental Effect Caused by a Change in the Project or Circumstances	Substantial Increase in the Severity of a Previously Identified Significant Effect Caused by a Change in the Project or Circumstances	New or Substantially More Severe Significant Impacts Shown by New Information	Ability to Substantially Reduce a Significant Effect Shown by New Information but Declined by Proponent
<b>3.13.2 Would the project:</b>				
a. Result in a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	No	No	No	No
b. Result in generation of excessive groundborne vibration or groundborne noise levels?	No	No	No	No
c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels??	No	No	No	No

**Impact Discussion**

**Would the project:**

- a) **Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?**

***Project-Related Temporary Noise Increases***

**No Subsequent Analysis Required.** Temporary noise increases associated with the Project would occur during the construction phase. Construction activities are anticipated to involve demolition of existing structures and pavement, excavation for parking, utilities and water tank foundations, and construction of the tank and ancillary structures. Construction activities are anticipated to start and finish in approximately 8 months in 2021. All construction activities would occur within the hours specified by the Noise Ordinance.

It is estimated that a total of approximately 245 tons of debris would be exported off site during demolition activities. It is also anticipated that 400 cubic yards of soil would be removed from the site and 600 cubic yards of soil would be imported. During the demolition and excavation activities, trucks are expected to enter and leave the Project site on a regular basis during working hours. The number of truck trips traveling along the City-designated truck routes would vary daily depending on the nature of the construction activity at the site. Demolition debris removal from the Project site would generate an estimated 41 trips over 3 weeks. On average it is anticipated that 3 to 4 truck trips per day would occur during that phase. Excavation is anticipated to generate

a total of 166 total truck trips over a 5 to 6 week period with an average of 2 truck trips per day. The addition of 2 to 4 haul truck trips per day would not result in a substantial change in noise levels along local truck routes. Thus, this impact would be less than significant; no new impacts would occur.

In typical construction projects (such as the proposed Project), demolition and grading activities generate the highest noise levels since these phases involve use of the largest equipment. During demolition and grading, persons in the immediate vicinity of the construction site would experience short-term noise impacts related to the operation of heavy construction equipment such as bulldozers, hoe-rams, excavators, and dump trucks. Noise levels would fluctuate depending on equipment type, duration of use, and distance between noise source and receiver. The operation of heavy equipment may occur adjacent to existing residential uses.

Local residential uses would be subject to elevated noise levels due to the operation of Project-related construction equipment. Construction activities would be carried out in discrete steps, each of which has its own mix of equipment and, consequently, its own noise characteristics. These various sequential phases would change the character of the noise levels surrounding the construction site as work progresses. Construction noise levels reported in the USEPA's *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances* were used to estimate future construction noise levels for the Project (USEPA 1971). Typically, the estimated construction noise levels are governed primarily by equipment that produces the highest noise levels. Construction noise levels for each generalized construction phase (ground-clearing/demolition, excavation, foundation construction, building construction, paving, and site cleanup) are based on a typical construction equipment mix for a public works project and do not include use of atypical, very loud, and vibration-intensive equipment (e.g., pile drivers).

The degree to which noise-sensitive receptors are affected by construction activities depends heavily on their proximity. Estimated noise levels attributable to construction of the proposed Project are shown in Table 13, Construction Noise Levels at Noise Sensitive Uses, and calculations are included in Appendix F, *Noise Calculations* (Psomas 2019c).

**TABLE 13  
CONSTRUCTION NOISE LEVELS AT NOISE-SENSITIVE USES**

Construction Phase	Noise Levels (Leq dBA)			
	Residential Uses to the North of the Project Site	Residential Uses to the West of the Project Site	Residential Uses to the South of the Project Site	Residential Use to the East of the Project Site
	Max (60 ft)	Avg (75 ft)	Avg (60 ft)	Avg (100 ft)
Ground Clearing/Demolition	82	80	82	78
Excavation	77	75	77	73
Foundation Construction	76	74	76	72
Building Construction	73	71	73	69
Paving and Site Cleanup	73	71	73	69

Leq dBA: Average noise energy level; Max: maximum; avg: average; ft: feet  
 Note: Noise levels from construction activities do not take into account attenuation provided by intervening structures.  
 Source: USEPA 1971.

Table 13 shows both the average noise levels for construction equipment. Average noise levels represent the noise exposure to sensitive uses based on the distance to the center of the Project

site. Noise levels from general Project-related construction activities would range from 69 to 82 dBA  $L_{eq}$  for average noise levels. The development of the proposed Project would comply with Municipal Code Section 8.24.050.G, which establishes restrictions for construction activities. With the incorporation of the restrictions of construction noise generation to the least noise sensitive portions of the day per Municipal Code Section 8.24.050.G, the relatively short construction duration and the lack of high magnitude noise sources (pile driving), the Project would result in less than significant temporary noise impacts.

The changes to the Proposed project compared to the Approved Project would not involve substantial construction effort and thus would not generate construction noise considerably greater than that estimated in the ND. Change to the existing setting since 2003 (burning of trees) slightly reduces the site clearance effort needed in preparation for Proposed project construction (some of the trees that would have been removed by the Approved Project burned and were subsequently removed).

### ***Permanent Project-Related Noise Increases***

Permanent sources of noise associated with the Project involves vehicle trips traveling to and from the Project site, property maintenance activities (landscaping) and mechanical sources of noise.

#### Noise Generated by Project Traffic

**No Subsequent Analysis Required.** The Project would not generate additional vehicle trips associated with maintenance of the water tank than currently occurs. As such, there would be no noise increases associated with project related traffic noise. The impact on traffic noise levels would be less than significant and no mitigation is required. The changes to the Proposed project compared to the Approved Project would not generate operational vehicle trips and thus would not generate traffic noise.

#### Noise Generated by On-Site Sources

**No Subsequent Analysis Required.** The primary on-site noise is generated by operation of the pump stations outside of the tank, inside circulation of water, and the vent and blower. Noise generated by these sources is regulated under Municipal Code Section 8.24.050.D which requires that any mechanical device to be enclosed within a sound insulated structure to prevent noise and sound from being plainly audible at a distance of fifty (50) feet from such structure, or within ten (10) feet of any residence. Compliance with this requirement would result in less than significant impacts related to stationary sources of noise.

The Proposed project would include installation of one tank-mounted blower with ducting connected to the tank headspace; the blower would be encased in all-weather sound panels to absorb noise. The blower and sound panels were not part of the Approved Project.

### **b) Would the project result in generation of excessive groundborne vibration or groundborne noise levels?**

**No Subsequent Analysis Required.** There are no applicable City standards for structural damage from vibration. The California Department of Transportation (Caltrans) vibration damage potential guideline thresholds are shown in Table 14, Vibration Damage Threshold Criteria.

**TABLE 14  
VIBRATION DAMAGE 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	0.20	0.10
Historic and some old buildings	0.50	0.25
Older residential structures	0.50	0.30
New residential structures	1.00	0.50
Modern industrial/commercial buildings	2.00	0.50

ppv: peak particle velocity; in/sec: inch(es) per second.  
 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.  
 Source: Caltrans 2013.

The nearest structures to the Project site are residential uses located adjacent to the Projects northern, western and southern property lines. In terms of classifications in Table 14, the structures to the east and west are conservatively considered “new residential structures” for purposes of this analysis. Therefore, the criterion for a significant impact for continuous/frequency intermittent sources is 0.5 peak particle velocity (ppv) inches per second for new residential structures. Similar to structural damage from vibration, there are no applicable quantitative standards in the City’s Municipal Code for human annoyance from construction vibration. The Caltrans vibration annoyance potential guideline thresholds are shown in Table 15, Vibration Annoyance Criteria. Based on the guidance in Table 15, the “strongly perceptible” vibration level of 0.9 ppv in/sec is used in this analysis as the threshold for a potentially significant vibration impact for human annoyance.

**TABLE 15  
VIBRATION ANNOYANCE CRITERIA**

Average Human Response	ppv (in/sec)
Severe	2.000
Strongly perceptible	0.900
Distinctly perceptible	0.240
Barely perceptible	0.035

ppv: peak particle velocity; in/sec: inch(es) per second.  
 Source: Caltrans 2013.

Conventional construction equipment would be used for demolition and grading activities, with no pile driving or blasting equipment. Table 16, Vibration Levels for Construction Equipment summarizes typical vibration levels measured during construction activities for various vibration-inducing equipment at a distance of 25 feet.

**TABLE 16  
VIBRATION LEVELS FOR CONSTRUCTION EQUIPMENT**

Equipment	ppv at 25 ft (in/sec)
Vibratory roller	0.210
Large bulldozer	0.089
Caisson drilling	0.089
Loaded trucks	0.076
Jackhammer	0.035
Small bulldozer	0.003
ppv: peak particle velocity; ft: feet; in/sec: inches per second. Source: Caltrans 2013; Federal Transit Administration 2006.	

Demolition, grading, and construction would occur up to the property lines and off-site land uses could occur relatively close to the property lines. Residential structures to the west, south and east of the Project site are being reconstructed due to the Woolsey fire. As such, the distance from construction activities to the nearest buildings cannot be readily discerned. However, it is anticipated that the nearest offsite structures would not occur closer than 15 feet from construction activities. As such, worst-case vibration levels occurring at this distance was assessed. Table 17, Vibration Annoyance Criteria at Sensitive Uses, shows the vibration annoyance criteria from construction-generated vibration activities proposed at the Project site. Table 17, Vibration Annoyance Criteria at Sensitive Uses, shows the ppv relative to uses proximate to the Project site.

**TABLE 17  
VIBRATION ANNOYANCE CRITERIA AT SENSITIVE USES**

Equipment	Vibration Levels (ppv)
	Residential Uses Proximate to the Project Site
	(ppv @ 15 ft)
Vibratory roller	0.452
Large bulldozer	0.191
Small bulldozer	0.006
Jackhammer	0.075
Loaded trucks	0.164
<b>Criteria</b>	<b>0.9</b>
<b>Exceeds Criteria?</b>	<b>No</b>
ppv: peak particle velocity; Max: maximum; avg: average; ft: feet Note: Calculations can be found in Appendix F). Source: USEPA 1971	

As shown in Table 17, ppv would not exceed the criteria threshold when construction activities occur under worst-case (i.e., closest to the receptor) exposure conditions. These vibration levels represent conditions when construction activities occur closest to receptor locations. Construction-related vibration would be substantially less when construction activities are located further away. Because vibration levels would be below the significance thresholds, vibration generated by the Project's construction equipment would not be expected to generate strongly perceptible levels of vibration at the nearest uses and would result in less than significant vibration impacts related to vibration annoyance.

Table 18, Structural Damage Criteria at Sensitive Uses, shows the peak particle velocity levels (ppv) relative to structural damage to sensitive uses from vibration activities.

**TABLE 18  
STRUCTURAL DAMAGE CRITERIA AT NEARBY STRUCTURES**

Equipment	Vibration Levels (ppv)
	Residential Uses Proximate to the Project Site
	(ppv @ 15 ft)
Vibratory roller	0.452
Large bulldozer	0.191
Small bulldozer	0.006
Jackhammer	0.075
Loaded trucks	0.164
<b>Criteria</b>	<b>0.5</b>
<b>Exceeds Criteria?</b>	<b>No</b>
ppv: peak particle velocity; Max: maximum; avg: average; ft: feet Source: USEPA 1971 (Calculations can be found in Attachment B). <sup>2</sup> Jackhammering assumed to maintain a clearance of at least 5 feet from adjacent offsite buildings. Note: Calculations can be found in Appendix F). Source: USEPA 1971	

As shown in Table 18, all ppv levels would be below the structural damage threshold at 15 feet or further from nearby off-site structures. As such, potential impacts associated with cosmetic structural damage would be less than significant.

Operation of the components of the Proposed project differing from the Approved Project would not generate substantial ground vibration. Installation of the referenced components would not involve use of construction equipment generating substantial ground vibration. No new or increased impact would occur; no mitigation is required; and no subsequent analysis is needed.

- c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the project area to excessive noise levels?**

**No Subsequent Analysis Required.** The Project site is not within 2.0 miles of an airport. There are no private airstrips in the Project area or in the City. The nearest public airport is the Santa Monica Airport, which is 21 miles east of the Project site. The Project site is not within the planning areas (including the Runway Protection Zones, Safety Compatibility Zones, and Airport Impact Zones) for these airports. Therefore, the Project would not expose people residing or working in the Project area to excessive noise levels from airport operations. Changes to the Proposed project relative to the Approved Project would not affect aviation-related noise levels. No new or increased impact would occur; no mitigation is required; and no subsequent analysis is needed.

**Conclusion**

Overall, the Proposed Project would be consistent with the project analyzed in the 2005 ND. The ND concluded that impacts of Approved Project implementation to noise would be less than significant. As detailed above, the Proposed Project would generate a similar level of noise impacts and would impact the same type of uses as the Approved Project. The only notable

differences would be the addition of a blower and sound panels which would not create a significant noise impact. Proposed Project development would not create a new significant impact or substantial increase in the severity of previously identified effects. In regard to Section 15162 of the State CEQA Guidelines, the Proposed Project (1) would not propose substantial changes; (2) would not have circumstantial changes under which the project is undertaken; and (3) would bring about no new information of substantial importance that would (a) create new significant impacts, (b) increase the severity of previously examined effects, (c) determine that mitigation measures or alternatives previously found not to be feasible would, in fact, be feasible, or (d) introduce mitigation measures that are considerably different from those analyzed in the previous documents. For these reasons, there are no major revisions required to the noise analysis provided in the ND.

### 3.14 POPULATION AND HOUSING

#### 3.14.1 SUMMARY OF PREVIOUS ENVIRONMENTAL ANALYSIS

The 2005 ND concluded that Approved Project development would not cause population and housing impacts: development would not directly or indirectly cause population growth; and would not displace housing or residents.

#### 3.14.2 PROJECT ENVIRONMENTAL REVIEW

The Proposed Project includes the following components differing from the Approved Project: installation of safety lights; installation of a tank-mounted blower with ducting connected to the tank headspace; relocation of two 5,000-gallon temporary storage tanks to the northwest corner of the Project site from another site several miles away; removal of standing remnants of three burned trees from the Project site; and replacement of chain link fencing and gates on the site perimeter.

Existing conditions on and next to the site differ from those of 2003 identified in the ND in that several trees onsite and next to the east site boundary burned in 2018; standing remnants of three burned trees are present in the southwest part of the site.

	New Significant Environmental Effect Caused by a Change in the Project or Circumstances	Substantial Increase in the Severity of a Previously Identified Significant Effect Caused by a Change in the Project or Circumstances	New or Substantially More Severe Significant Impacts Shown by New Information	Ability to Substantially Reduce a Significant Effect Shown by New Information but Declined by Proponent
3.14.2 Would the project:				
a. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	No	No	No	No
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	No	No	No	No



## **Impact Discussion**

### **Would the project:**

- a) **Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?**

**No Subsequent Analysis Required.** The proposed replacement of an existing tank would serve existing residents and planned population growth in the City of Malibu and would not induce unplanned growth. The Proposed Project does not propose extension of infrastructure; water inlet and outlet connections would be to existing water mains in Busch Drive. Project development would also not extend roadways to open new areas up for development. Changes to the Proposed project relative to the Approved Project would not develop new homes or businesses, or extend infrastructure, and thus would not induce population growth in the region. No new or increased impact would occur; no mitigation is required; and no subsequent analysis is needed.

- b) **Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?**

**No New Impact.** There are no residents or housing onsite, and development would not displace residents or housing. Changes to the Proposed project relative to the Approved Project would not displace housing or residents. No new or increased impact would occur; no mitigation is required; and no subsequent analysis is needed.

## **Conclusion**

Overall, the Proposed Project would be consistent with the project analyzed in the 2005 ND. The ND concluded that Approved Project implementation would not impact population and housing. As detailed above and consistent with the Approved Project, the Proposed Project would not directly generate additional population and would serve the existing residents and planned population growth in the City of Malibu. Proposed project development would not create a new significant impact or substantial increase in the severity of previously identified effects. In regard to Section 15162 of the State CEQA Guidelines, the Proposed Project (1) would not propose substantial changes; (2) would not have circumstantial changes under which the project is undertaken; and (3) would bring about no new information of substantial importance that would (a) create new significant impacts, (b) increase the severity of previously examined effects, (c) determine that mitigation measures or alternatives previously found not to be feasible would, in fact, be feasible, or (d) introduce mitigation measures that are considerably different from those analyzed in the previous documents. For these reasons, there are no major revisions required to the population and housing analysis provided in the ND.

### **3.15 PUBLIC SERVICES**

#### **3.15.1 SUMMARY OF PREVIOUS ENVIRONMENTAL ANALYSIS**

The 2005 ND concluded that Approved Project development would not affect public services or require construction of altered facilities for fire protection, police protection, schools, parks, or other public facilities; and that no impact would occur.

### 3.15.2 PROJECT ENVIRONMENTAL REVIEW

The Proposed Project includes the following components differing from the Approved Project: installation of safety lights; installation of a tank-mounted blower with ducting connected to the tank headspace; relocation of two 5,000-gallon temporary storage tanks to the northwest corner of the Project site from another site several miles away; removal of standing remnants of three burned trees from the Project site; and replacement of chain link fencing and gates on the site perimeter.

Existing conditions on and next to the site differ from those of 2003 identified in the ND in that several trees onsite and next to the east site boundary burned in 2018; standing remnants of three burned trees are present in the southwest part of the site.

	New Significant Environmental Effect Caused by a Change in the Project or Circumstances	Substantial Increase in the Severity of a Previously Identified Significant Effect Caused by a Change in the Project or Circumstances	New or Substantially More Severe Significant Impacts Shown by New Information	Ability to Substantially Reduce a Significant Effect Shown by New Information but Declined by Proponent
3.15.2 a. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
Fire protection?	No	No	No	No
Police protection?	No	No	No	No
Schools?	No	No	No	No
Parks?	No	No	No	No
Other public facilities?	No	No	No	No

### Impact Discussion

**Would the project:**

- a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:**

**Fire protection?**

**No Subsequent Analysis Required.** The proposed tank, pipes, fencing, and pavement would all be constructed of nonflammable materials; therefore, development would not increase demands for fire protection. Components of the Proposed project differing from the Approved Project would consist of the same types of materials as proposed in the Approved Project; and would not add people or new or intensified land uses to the site. Thus, the changes would not affect demand for fire protection. No new or increased impact would occur; no mitigation is required; and no subsequent analysis is needed.

### **Police protection?**

**No Subsequent Analysis Required.** The site would be fenced with locked gates on the Busch Avenue frontage; thus, the proposed tank would not increase demands for police protection. Changes to the Proposed project relative to the Approved Project would not add people or new or intensified land uses to the site, and thus would not affect demands for police protection. No subsequent analysis is required.

### **Schools?**

**No Subsequent Analysis Required.** Project development, including changes to the Proposed project relative to the Approved Project, would not add households to the area and thus would not increase demands for schools. No subsequent analysis is required.

### **Parks?**

**No Subsequent Analysis Required.** Project development, including changes to the Proposed project compared to the Approved Project, would not increase population on or near the site and thus would not increase demands for parks. No subsequent analysis is required.

### **Other public facilities?**

**No Subsequent Analysis Required.** Development of the Proposed project, including changes to the project compared to the Approved project, would not increase population on or near the site and thus would not increase demands for libraries. No subsequent analysis is required.

### **Conclusion**

Overall, the Proposed Project would be consistent with the project analyzed in the 2005 ND. The ND concluded that Approved Project implementation would not impact public services. As detailed above and consistent with the Approved Project, the Proposed Project would implement infrastructure improvements and would not increase demand for public services. Proposed project development would not create a new significant impact or substantial increase in the severity of previously identified effects. In regard to Section 15162 of the State CEQA Guidelines, the Proposed Project (1) would not propose substantial changes; (2) would not have circumstantial changes under which the project is undertaken; and (3) would bring about no new information of substantial importance that would (a) create new significant impacts, (b) increase the severity of previously examined effects, (c) determine that mitigation measures or alternatives previously found not to be feasible would, in fact, be feasible, or (d) introduce mitigation measures that are considerably different from those analyzed in the previous documents. For these reasons, there are no major revisions required to the public services analysis provided in the ND.

## **3.16 RECREATION**

### **3.16.1 SUMMARY OF PREVIOUS ENVIRONMENTAL ANALYSIS**

The ND determined that Approved Project development would not increase use of existing parks, and that no impact would occur.

### **3.16.2 PROJECT ENVIRONMENTAL REVIEW**

The Proposed Project includes the following components differing from the Approved Project: installation of safety lights; installation of a tank-mounted blower with ducting connected to the

tank headspace; relocation of two 5,000-gallon temporary storage tanks to the northwest corner of the Project site from another site several miles away; removal of standing remnants of three burned trees from the Project site; and replacement of chain link fencing and gates on the site perimeter.

Existing conditions on and next to the site differ from those of 2003 identified in the ND in that several trees onsite and next to the east site boundary burned in 2018; standing remnants of three burned trees are present in the southwest part of the site.

	New Significant Environmental Effect Caused by a Change in the Project or Circumstances	Substantial Increase in the Severity of a Previously Identified Significant Effect Caused by a Change in the Project or Circumstances	New or Substantially More Severe Significant Impacts Shown by New Information	Ability to Substantially Reduce a Significant Effect Shown by New Information but Declined by Proponent
3.16.2 Would the project:				
a. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.	No	No	No	No
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.	No	No	No	No

**Impact Discussion**

**Would the project:**

**a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?**

**No Subsequent Analysis Required.** Development of the Proposed project, including changes to the project compared to the Approved project, would not increase population on or near the Project site and would not impact use of existing parks. No new or increased impact would occur; no mitigation is required; and no subsequent analysis is needed.

**b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?**

**No Subsequent Analysis Required.** The Proposed Project, including changes to the project compared to the Approved project, does not include development of new parks and would not require development of new parks. No subsequent analysis is needed.

## **Conclusion**

Overall, the Proposed Project would be consistent with the project analyzed in the 2005 ND. The ND concluded that Approved Project implementation would not impact recreation facilities. As detailed above and consistent with the Approved Project, the Proposed Project would implement infrastructure improvements and would not increase demand for recreation. Proposed project development would not create a new significant impact or substantial increase in the severity of previously identified effects. In regard to Section 15162 of the State CEQA Guidelines, the Proposed Project (1) would not propose substantial changes; (2) would not have circumstantial changes under which the project is undertaken; and (3) would bring about no new information of substantial importance that would (a) create new significant impacts, (b) increase the severity of previously examined effects, (c) determine that mitigation measures or alternatives previously found not to be feasible would, in fact, be feasible, or (d) introduce mitigation measures that are considerably different from those analyzed in the previous documents. For these reasons, there are no major revisions required to the recreation analysis provided in the ND.

### **3.17 TRANSPORTATION/TRAFFIC**

#### **3.17.1 SUMMARY OF PREVIOUS ENVIRONMENTAL ANALYSIS**

The ND determined that Approved Project construction would cause a short-term traffic increase on area roadways and that the increase would be a less than significant traffic. The ND found that development would not affect air traffic patterns. Development was found to have no impact on hazards due to design features and no impact on emergency access. The ND concluded that no impact to alternative transportation would occur.

#### **Previously Approved Measures**

As all impacts were determined to be less than significant, no mitigation measures were required for the 2005 design; however, the following mitigation measures were included in the analysis in connection with the 2005 ND; was applicable to the Approved Project; and would also be applicable to the proposed Project. The ND identified no impact or less than significant impacts for all transportation/traffic impacts, did not identify significant impacts, and did not state that mitigation measures were required to reduce impacts to less than significant.

**MM TRANS-1** Advance notification of all street and/or lane closures and detours to all emergency service agencies.

**MM TRANS-2** Clear delineations and barricades to designate through traffic lanes.

**MM TRANS-3** Compliance with all applicable laws and ordinances regarding the transportation routes for the haul of material.

#### **3.17.2 PROJECT ENVIRONMENTAL REVIEW**

The Proposed Project includes the following components differing from the Approved Project: installation of safety lights; installation of a tank-mounted blower with ducting connected to the tank headspace; relocation of two 5,000-gallon temporary storage tanks to the northwest corner of the Project site from another site several miles away; removal of standing remnants of three burned trees from the Project site; and replacement of chain link fencing and gates on the site perimeter.

Existing conditions on and next to the site differ from those of 2003 identified in the ND in that several trees onsite and next to the east site boundary burned in 2018; standing remnants of three burned trees are present in the southwest part of the site.

	New Significant Environmental Effect Caused by a Change in the Project or Circumstances	Substantial Increase in the Severity of a Previously Identified Significant Effect Caused by a Change in the Project or Circumstances	New or Substantially More Severe Significant Impacts Shown by New Information	Ability to Substantially Reduce a Significant Effect Shown by New Information but Declined by Proponent
<b>3.17.2 Would the project:</b>				
a. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	No	No	No	No
b. Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?	No	No	No	No
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	No	No	No	No
d. Result in inadequate emergency access?	No	No	No	No

**Would the project:**

**a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?**

**No Subsequent Analysis Required.** Busch Drive is a two-lane roadway. The intersection of Busch Drive and Merritt Drive, located approximately 0.25 mile south of the Project site, is controlled by a cross-street stop on Merritt Drive. The intersection of Busch Drive with Pacific Coast Highway (SR-1), about 0.9 mile south of the Project site, is signalized. Busch Drive intersects Harvester Road about 450 feet south of the Project site; Calpine Drive about 850 feet north of the Project site; and Cuthbert Road approximately 0.2 mile north of the site. The intersections of Busch Drive with Harvester Road and Calpine Drive are controlled by cross-street stops on Harvester Road and Calpine Drive, respectively; while the intersection of Busch Drive and Cuthbert Road is uncontrolled.

Proposed project construction is estimated to involve about 12 construction workers and a total of approximately 50 haul trips for removing demolition debris and transporting building materials to the site. Demolition and construction combined are expected to last for approximately eight months. As discussed previously in Section 3.3, Air Quality, construction would add a very small number of trips to area roadways. This relatively small number of additional trips would not conflict with a plan, policy, or program addressing the circulation system.

Similar to existing conditions with the existing tank located on the Project site, the Proposed Project would require occasional trips associated with maintenance activities, averaging

approximately one round trip per week. Operational traffic would not have any adverse impact on the circulation system.

Proposed project development would not impact transit, pedestrian, or bicycle facilities. There are no sidewalks or bicycle facilities on Busch Drive near the site frontage, and no transit service on Busch Drive.

Changes to the Proposed project relative to the Approved Project would not generate operational trips and would only minimally effect construction trips (for instance, one or two truck round trips for transport of the temporary storage tanks), and thus would not cause conflicts with policies addressing the circulation system. No new or increased impact would occur; no mitigation is required; and no subsequent analysis is needed.

**b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?**

**No Subsequent Analysis Required.** As discussed previously, construction would generate a small number of daily trips for about eight months' duration, and project operation would generate only occasional trips averaging one round trip per week.<sup>7</sup> Changes to the Proposed project relative to the Approved Project would not generate operational trips and would only minimally effect construction trips. Thus, transportation impacts can be determined to be less than significant without a vehicle miles traveled (VMT) analysis. No new or increased impact would occur; no mitigation is required; and no subsequent analysis is needed.

**c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?**

**No Subsequent Analysis Required.** The Proposed Project includes replacement of two gates providing access to the site from Busch Drive: one at the northeast corner of the site and one near the southeast corner. The gated would be kept locked during Project operation. As identified in the 2005 ND, the Proposed Project does not involve any design features that are known to constitute safety hazards. Changes to the Proposed project relative to the Approved Project would be onsite and would not involve a hazardous design feature or introduce incompatible uses to area roadways. No new or increased impact would occur; no mitigation is required; and no subsequent analysis is needed.

**d) Result in inadequate emergency access?**

**No Subsequent Analysis Required.** The Proposed Project would provide adequate emergency access to the site. The two existing locking gates would be replaced by two new locking gates in similar positions. Project construction traffic would be managed in accordance with the Federal Highway Administration's (FHWA's) *Manual on Uniform Traffic Control Devices* (FHWA 2009) and applicable City of Malibu requirements to limit roadway obstruction and the need for temporary detours (see Project Design Feature TRANS-1 set forth below). Changes to the Proposed project relative to the Approved Project would be onsite and would not affect emergency access to the site or surrounding properties. No new or increased impact would occur; no mitigation is required; and no subsequent analysis is needed.

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<sup>7</sup> The maximum number of pieces of off-road equipment per construction phase used in the air quality analysis is five, in the demolition phase; thus, construction worker commute trips are expected to be no more than 10 round trips per day.

## **Conclusion**

Overall, the Proposed Project would be consistent with the project analyzed in the 2005 ND. The ND concluded that impacts of Approved Project implementation to transportation would be less than significant. As detailed above, changes to the Proposed project relative to the Approved Project would not generate operational trips and would only minimally effect construction trips. Proposed project development would not create a new significant impact or substantial increase in the severity of previously identified effects. In regard to Section 15162 of the State CEQA Guidelines, the Proposed Project (1) would not propose substantial changes; (2) would not have circumstantial changes under which the project is undertaken; and (3) would bring about no new information of substantial importance that would (a) create new significant impacts, (b) increase the severity of previously examined effects, (c) determine that mitigation measures or alternatives previously found not to be feasible would, in fact, be feasible, or (d) introduce mitigation measures that are considerably different from those analyzed in the previous documents. For these reasons, there are no major revisions required to the transportation analysis provided in the ND.

## **Project Design Feature**

The following Project Design Feature would be applicable to the proposed Project. Because this is a design feature of the Proposed Project, it does not constitute new mitigation.

**PDF TRANS-1** Construction traffic would be managed in compliance with the Federal Highway Administration's (FHWA's) *Manual on Uniform Traffic Control Devices* (FHWA 2009) and applicable City of Malibu requirements to limit roadway obstruction and the need for temporary detours. During times of heavy truck traffic, a flag person may be stationed at the Project site entrance to ensure the safety of through traffic.

## **3.18 TRIBAL CULTURAL RESOURCES**

### **3.18.1 SUMMARY OF PREVIOUS ENVIRONMENTAL ANALYSIS**

Tribal cultural resources were not analyzed separately in the 2005 ND as the CEQA Guidelines were updated to add a Section on Tribal Cultural Resources in 2016—after AB 52 passed in 2014 (Public Resources Code Sections 21073 et seq.)—requiring tribal consultation respecting impacts to tribal cultural resources and evaluation of such impacts under CEQA. Cultural resources analyzed in the Cultural Resources section of the ND included archaeological resources, which would include tribal cultural resources. No significant impacts to archaeological resources were identified in the 2005 ND. One measure was included in the ND for cultural resources impacts and one project design feature is incorporated into this Addendum.

### **Previously Approved Measure**

As all impacts were determined to be less than significant, no mitigation measures were required for the 2005 design; however, the following mitigation measure was included in the analysis in connection with the 2005 ND for cultural resources; was applicable to the Approved Project; and would also be applicable to the proposed Project. The ND identified no impacts for cultural resource impacts, did not identify significant impacts, and did not state that mitigation measures were required to reduce impacts to less than significant.

**MM CULT-1** If any cultural resources, including human remains, are discovered during construction, the contractor shall cease excavation and contact a specialist to examine the Project sites as required by project specifications.



### 3.18.2 PROJECT ENVIRONMENTAL REVIEW

The Proposed Project includes the following components differing from the Approved Project: installation of safety lights; installation of a tank-mounted blower with ducting connected to the tank headspace; relocation of two 5,000-gallon temporary storage tanks to the northwest corner of the Project site from another site several miles away; removal of standing remnants of three burned trees from the Project site; and replacement of chain link fencing and gates on the site perimeter.

Existing conditions on and next to the site differ from those of 2003 identified in the ND in that several trees onsite and next to the east site boundary burned in 2018; standing remnants of three burned trees are present in the southwest part of the site.

	New Significant Environmental Effect Caused by a Change in the Project or Circumstances	Substantial Increase in the Severity of a Previously Identified Significant Effect Caused by a Change in the Project or Circumstances	New or Substantially More Severe Significant Impacts Shown by New Information	Ability to Substantially Reduce a Significant Effect Shown by New Information but Declined by Proponent
<b>3.18.2 Would the project:</b>				
a. Cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is	No	No	No	No
i. listed or eligible for listing in the California Register or in a local register of historical resources as defined in PRC Section 50201(k)?				
ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	No	No	No	No

## **Impact Discussion**

### **Would the project:**

- a) **Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:**
- i) **Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or**

**No Subsequent Analysis Required.** AB 52 requires notification to Native American tribes of projects that have a Notice of Preparation or Notice of Negative Declaration or mitigated negative declaration on or after July 1, 2015; thus, AB 52 is not required because this Addendum is a continuation of an existing CEQA document from 2005. No resource listed on the California Register of Historical Resources was identified on the project site in the Cultural Resources Records Search conducted for this Addendum. The ND did not identify significant cultural resources on or near the project site. This analysis applies to both the Proposed project and the Approved project.

- ii) **A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.**

**No Subsequent Analysis Required.** As stated previously in the analysis for Section 3.17.2.a.i, AB 52 requires notification to Native American tribes of projects requiring public notification on or after July 1, 20. This Addendum does not require notification because it is a continuation of an existing CEQA review to a previously approved ND in 2005; and thus does not require AB 52. The District has not identified resources on or near the project site considered significant pursuant to California Public Resources Code Section 5024.1. Therefore, no impact to tribal cultural resources known to the District to be significant would occur. This analysis applies to both the Proposed project and the Approved project.

## **Conclusion**

Overall, the Proposed Project would be consistent with the project analyzed in the 2005 ND. The ND did not specifically address tribal cultural resources; however, the ND concluded that Approved Project implementation would not impact archaeological resources. As detailed above, the Proposed Project would be located within the same area as the previously Approved Project; therefore, the sensitivity of the site in relation to tribal cultural resources has not changed since the 2005 ND was approved. Proposed project development would not create a new significant impact or substantial increase in the severity of previously identified effects. In regard to Section 15162 of the State CEQA Guidelines, the Proposed Project (1) would not propose substantial changes; (2) would not have circumstantial changes under which the project is undertaken; and (3) would bring about no new information of substantial importance that would (a) create new significant impacts, (b) increase the severity of previously examined effects, (c) determine that mitigation measures or alternatives previously found not to be feasible would, in fact, be feasible, or (d) introduce mitigation measures that are considerably different from those analyzed in the

previous documents. For these reasons, there are no major revisions required to the tribal cultural resources analysis provided in the ND.

### **Regulatory Requirement**

The following regulatory requirement, as described in the Cultural Resources Section of this Addendum, also applies to tribal cultural resources. Because the regulatory requirement is intended to ensure compliance with an existing law or regulation, it does not constitute new mitigation.

**RR CULT-1** In accordance with Section 7050.5 of the *California Health and Safety Code*, if human remains are found during ground-disturbing activities, no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall occur until the County Coroner has determined, within two working days of notification of the discovery, the appropriate treatment and disposition of the human remains. The County Coroner shall be notified within 24 hours of the discovery. If the County Coroner determines that the remains are or are believed to be Native American, s/he shall notify the Native American Heritage Commission (NAHC) in Sacramento within 24 hours of the discovery. In accordance with Section 5097.98 of the *California Public Resources Code*, the NAHC must immediately notify those persons it believes to be the most likely descended from the deceased Native American. The descendants shall complete their inspection within 48 hours of being granted access to the site by the property owner. The property owner would then determine, in consultation with a designated Native American representative, the final disposition of the human remains (14 *California Code of Regulations* §15064.5[e]). The District shall comply with these requirements.

## **3.19 UTILITIES**

### **3.19.1 SUMMARY OF PREVIOUS ENVIRONMENTAL ANALYSIS**

The 2005 ND concluded that Approved Project development would not impact wastewater treatment requirements; wastewater treatment or water treatment capacity; water supplies; or solid waste disposal capacity. The Approved Project included installation of a short section of 24-inch-diameter drain pipe for onsite drainage. The proposed drain pipe was found not to cause any significant impact.

### **3.19.2 PROJECT ENVIRONMENTAL REVIEW**

The Proposed Project includes the following components differing from the Approved Project: installation of safety lights; installation of a tank-mounted blower with ducting connected to the tank headspace; relocation of two 5,000-gallon temporary storage tanks to the northwest corner of the Project site from another site several miles away; removal of standing remnants of three burned trees from the Project site; and replacement of chain link fencing and gates on the site perimeter.

Existing conditions on and next to the site differ from those of 2003 identified in the ND in that several trees onsite and next to the east site boundary burned in 2018; standing remnants of three burned trees are present in the southwest part of the site.

	New Significant Environmental Effect Caused by a Change in the Project or Circumstances	Substantial Increase in the Severity of a Previously Identified Significant Effect Caused by a Change in the Project or Circumstances	New or Substantially More Severe Significant Impacts Shown by New Information	Ability to Substantially Reduce a Significant Effect Shown by New Information but Declined by Proponent
<b>3.19.2 Would the project:</b>				
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	No	No	No	No
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	No	No	No	No
c. Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	No	No	No	No
d. Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	No	No	No	No
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	No	No	No	No

**Impact Discussion**

**Would the project:**

- a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?**

**Water Facilities**

**No Subsequent Analysis Required.** Proposed project development would not require the District to obtain additional water supplies. The proposed tank is larger than the existing tank by 85,000 gallons or about 28 percent compared to the existing tank. The proposed increase in District storage capacity would not require additional supplies or impact water demands or require construction of new water treatment facilities; rather, it would create additional storage for water supplies. Changes to the Proposed project compared to the Approved project would not affect

water supplies or demands or require construction of new water treatment facilities. No new or increased impact would occur; no mitigation is required; and no subsequent analysis is needed.

### **Wastewater Treatment Facilities**

**No Subsequent Analysis Required.** Proposed Project development would not generate wastewater and would not impact wastewater treatment capacity. No new or increased impact would occur; no mitigation is required; and no subsequent analysis is needed.

### **Storm Drainage Facilities**

**No Subsequent Analysis Required.** The Proposed Project includes installation of a proposed 24-inch-diameter drain pipe for onsite drainage, the construction of which would be confined to the defined Project footprint. The proposed drain pipe would not adversely affect storm drainage capacity offsite. Changes to the Proposed project compared to the Approved project would not increase runoff from the Project site and would not require installation of new or expanded offsite storm drainage facilities. No new or increased impact would occur; no mitigation is required; and no subsequent analysis is needed.

### **Electric Power Facilities**

**No Subsequent Analysis Required.** Southern California Edison (SCE) provides electricity to the Project site. SCE's service area spans much of southern California from Orange and Riverside counties on the south to Santa Barbara County on the west to Mono County on the north (CEC 2015). Total electricity consumption in SCE's service area was 106,080 gigawatt-hours (GWh) in 2015 and is forecasted to increase to 120,780 GWh in 2028 for the mid-demand scenario (CEC 2018); one GWh is equivalent to one million kilowatt-hours. Proposed project construction and operation would use small amounts of electricity. Most electrical equipment used in project construction would be powered by portable generators. Electricity use during project operation would consist of a tank-mounted blower; lights; and the pump on the inlet pipe. The blower and safety lights are changes to the Proposed project compared to the Approved project. The blower and safety lights would not use substantial amounts of electricity; for instance, the blower would operate for two hours at dusk. Project development would not require relocation or construction of new or expanded electric facilities. No new or increased impact would occur; no mitigation is required; and no subsequent analysis is needed.

### **Natural Gas Facilities**

**No Subsequent Analysis Required.** The project does not propose use of natural gas, and project development would not require construction of new or expanded natural gas facilities. No subsequent analysis is needed.

#### **b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?**

**No Subsequent Analysis Required.** The project would involve construction of a new, replacement water tank and would not result in an increase demand for water supply. No subsequent analysis is needed.

- c) **Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?**

**No Subsequent Analysis Required.** The project would involve construction of a new, replacement water tank and would not result in an increase in wastewater generation, nor would the project create a need for wastewater treatment. No subsequent analysis is needed.

- d) **Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?**

**No Subsequent Analysis Required.** Demolition, site grading, and construction would generate construction and demolition debris. Project operation would generate minimal amounts of solid waste. In 2018 about 96 percent of the solid waste landfilled from Malibu was disposed of at three landfills: the Calabasas Landfill near the City of Calabasas; the Simi Valley Landfill and Recycling Center near the City of Simi Valley in Ventura County; and Sunshine Canyon City/County Landfill in the Community of Sylmar in the City of Los Angeles. The three landfills combined have permitted disposal capacities of 24,850 tons per day (tpd); actual disposal amounts of 11,562 tpd; and residual disposal capacities of 13,288 tpd (CalRecycle 2019a; CalRecycle 2019b).<sup>8</sup> There is sufficient solid waste processing and disposal capacity in the region for project-generated solid waste. No new or increased impact would occur; no mitigation is required; and no subsequent analysis is needed.

- e) **Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?**

**No Subsequent Analysis Required.** At least 65 percent of nonhazardous construction and demolition debris would be recycled and/or salvaged for reuse, in accordance with 2016 California Green Building Standards Code (CALGreen; Title 24, California Code of Regulations, Part 11), Section 5.408. Construction waste disposal would conform with state and local standards. No subsequent analysis is needed.

### **Conclusion**

Overall, the Proposed Project would be consistent with the project analyzed in the 2005 ND. The ND concluded that Approved Project implementation would not impact utilities and service systems. As detailed above, the Proposed Project would implement the same type of infrastructure improvements as the Approved Project; therefore, Proposed Project development would not create a new significant impact or substantial increase in the severity of previously identified effects. In regard to Section 15162 of the State CEQA Guidelines, the Proposed Project (1) would not propose substantial changes; (2) would not have circumstantial changes under which the project is undertaken; and (3) would bring about no new information of substantial importance that would (a) create new significant impacts, (b) increase the severity of previously examined effects, (c) determine that mitigation measures or alternatives previously found not to be feasible would, in fact, be feasible, or (d) introduce mitigation measures that are considerably different from those analyzed in the previous documents. For these reasons, there are no major revisions required to the utilities and service systems analysis provided in the ND.

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<sup>8</sup> Actual daily disposal amounts are estimated based on annual disposal amounts based on operation 300 days per year; that is, six days per week less certain holidays.

### 3.20 WILDFIRE

#### 3.20.1 SUMMARY OF PREVIOUS ENVIRONMENTAL ANALYSIS

The ND concluded that Approved Project development would not expose people or structures to wildland fire hazards. The ND analyzed wildfire hazards in the Hazards and Hazardous Materials section; as Wildfire was added as a separate CEQA topical section in 2018.

#### Previously Approved Measures

The following mitigation measures were included in the analysis in connection with the 2005 ND; are incorporated into the Transportation Section of this Addendum; and would also be applicable to the proposed Project respecting wildfire impacts. The ND identified no impacts for wildfire impacts, did not identify significant impacts, and did not state that mitigation measures were required to reduce impacts to less than significant.

**MM TRANS-1** Advance notification of all street and/or lane closures and detours to all emergency service agencies.

**MM TRANS-2** Clear delineations and barricades to designate through traffic lanes.

#### 3.20.2 PROJECT ENVIRONMENTAL REVIEW

The Proposed Project includes the following components differing from the Approved Project: installation of safety lights; installation of a tank-mounted blower with ducting connected to the tank headspace; relocation of two 5,000-gallon temporary storage tanks to the northwest corner of the Project site from another site several miles away; removal of standing remnants of three burned trees from the Project site; and replacement of chain link fencing and gates on the site perimeter.

Existing conditions on and next to the site differ from those of 2003 identified in the ND in that several trees onsite and next to the east site boundary burned in 2018; standing remnants of three burned trees are present in the southwest part of the site.

	New Significant Environmental Effect Caused by a Change in the Project or Circumstances	Substantial Increase in the Severity of a Previously Identified Significant Effect Caused by a Change in the Project or Circumstances	New or Substantially More Severe Significant Impacts Shown by New Information	Ability to Substantially Reduce a Significant Effect Shown by New Information but Declined by Proponent
3.20.2 Would the project:				
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	No	No	No	No
b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks of, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	No	No	No	No

	New Significant Environmental Effect Caused by a Change in the Project or Circumstances	Substantial Increase in the Severity of a Previously Identified Significant Effect Caused by a Change in the Project or Circumstances	New or Substantially More Severe Significant Impacts Shown by New Information	Ability to Substantially Reduce a Significant Effect Shown by New Information but Declined by Proponent
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts on the environment?	No	No	No	No
d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	No	No	No	No

**Impact Discussion**

**If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:**

**a) Substantially impair an adopted emergency response plan or emergency evacuation plan?**

**No Subsequent Analysis Required.** Proposed project development would not impair implementation of an emergency response plan; development would have a slight favorable impact on water storage available for fire flow and would have a favorable impact on the condition of a component tank in the District’s water system. Proposed project development would not interfere with emergency access to the Project site and surrounding areas after implementation of Mitigation Measures TRANS-1 and TRANS-2 set forth in the 2005 ND and incorporated in this Addendum; and Project Design Feature TRANS-1 incorporated into this Addendum. Changes to the Project, compared to the Approved Project, would not affect implementation of an emergency response plan. Proposed project implementation would have slight favorable impact on water storage capacity for fire flow in the Project site environs, and thus would have a slight favorable impact on emergency response capability. No new or increased adverse impact would occur; no mitigation is required, and no subsequent analysis is needed.

**b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?**

**No Subsequent Analysis Required.** Proposed project development would not exacerbate wildfire risks. At project completion the Project site would be developed with a water tank and asphalt pavement, much as in existing conditions. Project development would not add wildfire fuel to the site and would not increase wildfire risks. Project components changed compared to the Approved Project would be constructed of nonflammable materials, consistent with the Approved project. No new or increased adverse impact would occur; no mitigation is required, and no subsequent analysis is needed.



- c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?**

**No Subsequent Analysis Required.** Proposed project development would involve replacement of inlet and outlet pipes onsite and connecting to water mains in Busch Drive next to the Project site; and a parkway drain conveying overflow from the tank to Busch Drive. Installation of such infrastructure would not exacerbate fire risks. Changes to the Proposed project compared to the Approved project would not exacerbate fire risk (such as by adding fuel or ignition sources to the site). No new or increased adverse impact would occur; no mitigation is required, and no subsequent analysis is needed.

- d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?**

**No Subsequent Analysis Required.** Development of the Proposed Project would not cause flood hazards. The Project site at project completion would consist of a tank and pavement, similar to existing conditions, and development would not increase runoff rate or volume from the site. Project development would include installation of a parkway drain and a short section of 24-inch drain pipe. Changes to the Proposed project compared to the Approved project would not increase wildfire risks; and thus would not increase hazards subsequent to wildfire such as flooding or slope instability. No new or increased adverse impact would occur; no mitigation is required, and no subsequent analysis is needed.

### **Conclusion**

Overall, the Proposed Project would be consistent with the project analyzed in the 2005 ND. As detailed above, the Proposed Project would occur on the same general site as the Approved Project and would be subject to the same hazards as previously identified. Proposed project development would not create a new significant impact or substantial increase in the severity of previously identified effects. In regard to Section 15162 of the State CEQA Guidelines, the Proposed Project (1) would not propose substantial changes; (2) would not have circumstantial changes under which the project is undertaken; and (3) would bring about no new information of substantial importance that would (a) create new significant impacts, (b) increase the severity of previously examined effects, (c) determine that mitigation measures or alternatives previously found not to be feasible would, in fact, be feasible, or (d) introduce mitigation measures that are considerably different from those analyzed in the previous documents. For these reasons, there are no major revisions required to the wildfire analysis provided in the ND.

### **Project Design Feature**

The following Project Design Feature, as described in the Transportation Section of this Addendum, also applies to wildfire impacts regarding emergency evacuation plans. Because this is a design feature of the Proposed Project, it does not constitute new mitigation.

- PDF TRANS-1** Construction traffic would be managed in compliance with the Federal Highway Administration's (FHWA's) *Manual on Uniform Traffic Control Devices* (FHWA 2009) and applicable City of Malibu requirements to limit roadway obstruction and the need for temporary detours. During times of heavy truck traffic, a flag person may be stationed at the Project site entrance to ensure the safety of through traffic.

### 3.21 MANDATORY FINDINGS OF SIGNIFICANCE

#### 3.21.1 SUMMARY OF PREVIOUS ENVIRONMENTAL ANALYSIS

The Proposed Project includes the following components differing from the Approved Project: installation of safety lights; installation of a tank-mounted blower with ducting connected to the tank headspace; relocation of two 5,000-gallon temporary storage tanks to the northwest corner of the Project site from another site several miles away; removal of standing remnants of three burned trees from the Project site; and replacement of chain link fencing and gates on the site perimeter.

Existing conditions on and next to the site differ from those of 2003 identified in the ND in that several trees onsite and next to the east site boundary burned in 2018; standing remnants of three burned trees are present in the southwest part of the site.

#### 3.21.2 PROJECT ENVIRONMENTAL REVIEW

	New Significant Environmental Effect Caused by a Change in the Project or Circumstances	Substantial Increase in the Severity of a Previously Identified Significant Effect Caused by a Change in the Project or Circumstances	New or Substantially More Severe Significant Impacts Shown by New Information	Ability to Substantially Reduce a Significant Effect Shown by New Information but Declined by Proponent
3.21.2 Would the project:				
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	No	No	No	No
b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental efforts of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probably future projects)?	No	No	No	No
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	No	No	No	No

## **Impact Discussion**

### **Does the Project:**

- a) **Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?**

**No Subsequent Analysis Required.** Based on findings in this environmental review, the Proposed Project does not have the potential to degrade the quality of the environment, substantially reduce habitat of a fish and wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or eliminate important examples of the major periods of California history or prehistory as analyzed in the 2005 ND. Therefore, the impact of the Proposed Project on a plant community is not expected to cause an adverse impact to the environment. Changes to the Proposed project compared to the Approved project would not cause substantial adverse effects to the environment or to biological or cultural resources, as substantiated throughout Section 3 of this Addendum. No new or increased adverse impact would occur; no mitigation is required, and no subsequent analysis is needed.

- b) **Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental efforts of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probably future projects)?**

The purpose of the Proposed Project is to replace the aging water tank and to maintain current water service for the residents. The Proposed Project is not part of a series of projects at Lower Busch Tank. The City of Malibu Planning Department website does not list Proposed Projects within 0.5 mile of the Modified Project site (Malibu 2020). Water Works District 29 does not list Priority Projects near enough to the Modified Project site such that impacts of those projects would combine with impacts of the Modified Project to cause significant cumulative impacts. The nearest District priority project to the Modified Project site is a Creek Crossing Project near the intersection of Bonsall Drive and SR-1 approximately 0.9 mile south of the Modified Project site (WWD29 2020). No related projects are identified in this Addendum, and cumulative impacts would be less than significant. This finding is consistent with the ND. Changes to the Proposed project compared to the Approved project would not result in cumulatively considerable impacts. No new or increased adverse impact would occur; no mitigation is required, and no subsequent analysis is needed. Proposed Project

- c) **Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?**

**No Subsequent Analysis Required.** The Proposed Project would not have a direct or indirect detrimental environmental impact on human beings, either directly or indirectly, consistent with the finding of the 2005 ND. Changes to the Proposed project compared to the Approved project would not cause significant effects on human beings, as substantiated throughout Section 3 of this Addendum. No subsequent analysis is needed.

## **Conclusion**

Overall, the Proposed Project would be consistent with the project analyzed in the 2005 ND. As detailed above, the Proposed Project would occur on the same general site as the Approved Project and would be subject to the same environmental effects as previously identified. Proposed project development would not create a new significant impact or substantial increase in the severity of previously identified effects. In regard to Section 15162 of the State CEQA Guidelines, the Proposed Project (1) would not propose substantial changes; (2) would not have circumstantial changes under which the project is undertaken; and (3) would bring about no new information of substantial importance that would (a) create new significant impacts, (b) increase the severity of previously examined effects, (c) determine that mitigation measures or alternatives previously found not to be feasible would, in fact, be feasible, or (d) introduce mitigation measures that are considerably different from those analyzed in the previous documents. For these reasons, there are no major revisions required to the mandatory findings of significance provided in the ND.

## SECTION 4.0 SUMMARY OF FINDINGS

An Addendum to an EIR is the appropriate tool to evaluate the environmental effects associated with minor modifications to previously approved projects. If the lead agency finds that pursuant to State CEQA Guidelines Section 15162 no new effects could occur or new mitigation measures would be required, the lead agency (District) can prepare an addendum and no new environmental document would be required.

According to State CEQA Guidelines Section 15164(a), "the lead agency or a responsible agency shall prepare an addendum to a previously certified EIR if some changes or additions are necessary but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred." An addendum may be prepared if only minor technical changes or additions are necessary. A brief explanation of the decision not to prepare a subsequent EIR must also be provided in the addendum, findings, or the public record. Pursuant to Section 15162 of the State CEQA Guidelines, no subsequent EIR may be required for the project unless the County determines, on the basis of substantial evidence, that one or more of the following conditions are met:

- (a) *When an EIR has been certified or a negative declaration adopted for a project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in the light of the whole record, one or more of the following:*
- 1) *Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;*
  - 2) *Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or*
  - 3) *New information of substantial importance which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the negative declaration was adopted, shows any of the following:*
    - (A) *The project will have one or more significant effects not discussed in the previous EIR or negative declaration;*
    - (B) *Significant effects previously examined will be substantially more severe than shown in the previous EIR;*
    - (C) *Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measures or alternative; or*
    - (D) *Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.*

As demonstrated in this Addendum, the District, as the Lead Agency, has determined that pursuant to State CEQA Guidelines Section 15162, the proposed Lower Busch Tank replacement would not cause new significant impacts, nor would it substantially increase the severity of impacts evaluated and determined in the 2005 ND. Because the Proposed Project would not meet any of the conditions identified in Section 15162 of the State CEQA Guidelines requiring preparation of a subsequent or supplemental EIR, an Addendum to the ND is the appropriate document type for the Proposed Project and no new environmental document would be required.

As all impacts were determined to be less than significant, and no mitigation measures were required in the 2005 ND. While the adoption of mitigation measures is not required if significant impacts are not identified, it is not prohibited for a project proponent to voluntarily agree to measures to further minimize a less than significant environmental effect, thus, although not required to reduce impacts to less than significant, the 2005 ND and Addendum includes measures, project design features, and regulatory requirements to ensure compliance with applicable regulatory requirements and standard construction practices.

**SECTION 5.0 REPORT PREPARERS**

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Civil Engineer ..... Eduardo Maguino  
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Principal Deputy County Counsel ..... Lauren Dods  
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**5.2 CONSULTANT**

**Psomas**

Principal ..... Jim Hunter  
Senior Project Manager ..... Jennifer Marks  
Senior Word Processor ..... Sheryl Kristal

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## **APPENDIX A**

### **AIR QUALITY AND GREENHOUSE GAS ANALYSIS**

Lower Busch Tanks - Los Angeles-South Coast County, Annual

**Lower Busch Tanks**  
**Los Angeles-South Coast County, Annual**

**1.0 Project Characteristics**

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**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	10.00	1000sqft	0.23	10,000.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	33
<b>Climate Zone</b>	8			<b>Operational Year</b>	2021
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MW hr)</b>	702.44	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

**1.3 User Entered Comments & Non-Default Data**

Lower Busch Tanks - Los Angeles-South Coast County, Annual

Project Characteristics -

Land Use -

Construction Phase - Project construction schedule

Off-road Equipment - Estimated by developer

Off-road Equipment - Estimated by developer

Off-road Equipment - Estimated by developer

Off-road Equipment - Estimated by developer

Off-road Equipment - Estimated by developer

Off-road Equipment - Estimated by developer

Off-road Equipment - Estimated by developer

Demolition -

Grading -

Construction Off-road Equipment Mitigation - pdf

Trips and VMT - Based on data request

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3

Lower Busch Tanks - Los Angeles-South Coast County, Annual

tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	10.00	16.00
tblConstructionPhase	NumDays	2.00	22.00
tblConstructionPhase	NumDays	100.00	103.00
tblConstructionPhase	NumDays	5.00	10.00
tblConstructionPhase	NumDays	5.00	10.00
tblGrading	MaterialExported	0.00	400.00
tblGrading	MaterialImported	0.00	600.00
tblOffRoadEquipment	HorsePower	158.00	97.00
tblOffRoadEquipment	LoadFactor	0.38	0.37
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	4.00	8.00
tblTripsAndVMT	HaulingTripLength	20.00	25.00
tblTripsAndVMT	HaulingTripLength	20.00	25.00
tblTripsAndVMT	HaulingTripNumber	29.00	42.00



Lower Busch Tanks - Los Angeles-South Coast County, Annual

tblTripsAndVMT	HaulingTripNumber	125.00	168.00
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## 2.0 Emissions Summary

### 2.1 Overall Construction

#### Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.0921	0.7880	0.7045	1.3200e-003	0.0217	0.0369	0.0586	7.7700e-003	0.0347	0.0424	0.0000	113.9334	113.9334	0.0268	0.0000	114.6034
<b>Maximum</b>	<b>0.0921</b>	<b>0.7880</b>	<b>0.7045</b>	<b>1.3200e-003</b>	<b>0.0217</b>	<b>0.0369</b>	<b>0.0586</b>	<b>7.7700e-003</b>	<b>0.0347</b>	<b>0.0424</b>	<b>0.0000</b>	<b>113.9334</b>	<b>113.9334</b>	<b>0.0268</b>	<b>0.0000</b>	<b>114.6034</b>

#### Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.0714	0.7510	0.7365	1.3200e-003	0.0147	0.0371	0.0518	4.7000e-003	0.0363	0.0410	0.0000	113.9333	113.9333	0.0268	0.0000	114.6033
<b>Maximum</b>	<b>0.0714</b>	<b>0.7510</b>	<b>0.7365</b>	<b>1.3200e-003</b>	<b>0.0147</b>	<b>0.0371</b>	<b>0.0518</b>	<b>4.7000e-003</b>	<b>0.0363</b>	<b>0.0410</b>	<b>0.0000</b>	<b>113.9333</b>	<b>113.9333</b>	<b>0.0268</b>	<b>0.0000</b>	<b>114.6033</b>

Lower Busch Tanks - Los Angeles-South Coast County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	22.42	4.69	-4.54	0.00	32.21	-0.65	11.57	39.51	-4.61	3.46	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
6	12-30-2020	3-29-2021	0.2011	0.1722
7	3-30-2021	6-29-2021	0.2662	0.2540
8	6-30-2021	9-29-2021	0.3668	0.3578
		Highest	0.3668	0.3578

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	8.0000e-004	0.0000	1.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.5000e-004	2.5000e-004	0.0000	0.0000	2.6000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>8.0000e-004</b>	<b>0.0000</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.5000e-004</b>	<b>2.5000e-004</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.6000e-004</b>

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**2.2 Overall Operational**

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	8.0000e-004	0.0000	1.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.5000e-004	2.5000e-004	0.0000	0.0000	2.6000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>8.0000e-004</b>	<b>0.0000</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.5000e-004</b>	<b>2.5000e-004</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.6000e-004</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**3.0 Construction Detail**

**Construction Phase**

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	2/11/2021	3/4/2021	5	16	
2	Grading	Grading	3/5/2021	4/5/2021	5	22	
3	Trenching	Trenching	4/7/2021	5/6/2021	5	22	
4	Building Construction	Building Construction	5/10/2021	9/29/2021	5	103	
5	Paving	Paving	10/1/2021	10/14/2021	5	10	
6	Architectural Coating	Architectural Coating	10/18/2021	10/29/2021	5	10	

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 0.23**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 600 (Architectural Coating – sqft)**

**OffRoad Equipment**

## Lower Busch Tanks - Los Angeles-South Coast County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	1	8.00	158	0.38
Demolition	Other Construction Equipment	1	8.00	172	0.42
Demolition	Rubber Tired Dozers	0	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Concrete/Industrial Saws	0	8.00	81	0.73
Grading	Excavators	1	8.00	158	0.38
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Trenching	Concrete/Industrial Saws	0	8.00	81	0.73
Trenching	Excavators	1	6.00	97	0.37
Trenching	Graders	0	8.00	187	0.41
Trenching	Rubber Tired Dozers	0	1.00	247	0.40
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cranes	0	4.00	231	0.29
Building Construction	Forklifts	0	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving	Cement and Mortar Mixers	0	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Welders	2	8.00	46	0.45

Trips and VMT

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Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	42.00	14.70	6.90	25.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	168.00	14.70	6.90	25.00	LD_Mix	HDT_Mix	HHDT
Trenching	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	4	4.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	1.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Use Cleaner Engines for Construction Equipment

Water Exposed Area

**3.2 Demolition - 2021**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.1500e-003	0.0000	3.1500e-003	4.8000e-004	0.0000	4.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0105	0.0993	0.1151	1.8000e-004		5.3900e-003	5.3900e-003		5.0700e-003	5.0700e-003	0.0000	15.5508	15.5508	3.8900e-003	0.0000	15.6480
<b>Total</b>	<b>0.0105</b>	<b>0.0993</b>	<b>0.1151</b>	<b>1.8000e-004</b>	<b>3.1500e-003</b>	<b>5.3900e-003</b>	<b>8.5400e-003</b>	<b>4.8000e-004</b>	<b>5.0700e-003</b>	<b>5.5500e-003</b>	<b>0.0000</b>	<b>15.5508</b>	<b>15.5508</b>	<b>3.8900e-003</b>	<b>0.0000</b>	<b>15.6480</b>

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**3.2 Demolition - 2021**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.1000e-004	6.7900e-003	1.6200e-003	2.0000e-005	4.5000e-004	2.0000e-005	4.7000e-004	1.2000e-004	2.0000e-005	1.4000e-004	0.0000	1.9495	1.9495	1.3000e-004	0.0000	1.9528
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.5000e-004	3.5000e-004	3.9300e-003	1.0000e-005	1.1400e-003	1.0000e-005	1.1500e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	1.0285	1.0285	3.0000e-005	0.0000	1.0292
<b>Total</b>	<b>6.6000e-004</b>	<b>7.1400e-003</b>	<b>5.5500e-003</b>	<b>3.0000e-005</b>	<b>1.5900e-003</b>	<b>3.0000e-005</b>	<b>1.6200e-003</b>	<b>4.2000e-004</b>	<b>3.0000e-005</b>	<b>4.5000e-004</b>	<b>0.0000</b>	<b>2.9780</b>	<b>2.9780</b>	<b>1.6000e-004</b>	<b>0.0000</b>	<b>2.9820</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.2300e-003	0.0000	1.2300e-003	1.9000e-004	0.0000	1.9000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.1500e-003	0.0870	0.1280	1.8000e-004		5.1500e-003	5.1500e-003		5.1500e-003	5.1500e-003	0.0000	15.5508	15.5508	3.8900e-003	0.0000	15.6480
<b>Total</b>	<b>4.1500e-003</b>	<b>0.0870</b>	<b>0.1280</b>	<b>1.8000e-004</b>	<b>1.2300e-003</b>	<b>5.1500e-003</b>	<b>6.3800e-003</b>	<b>1.9000e-004</b>	<b>5.1500e-003</b>	<b>5.3400e-003</b>	<b>0.0000</b>	<b>15.5508</b>	<b>15.5508</b>	<b>3.8900e-003</b>	<b>0.0000</b>	<b>15.6480</b>

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**3.2 Demolition - 2021**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.1000e-004	6.7900e-003	1.6200e-003	2.0000e-005	4.5000e-004	2.0000e-005	4.7000e-004	1.2000e-004	2.0000e-005	1.4000e-004	0.0000	1.9495	1.9495	1.3000e-004	0.0000	1.9528
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.5000e-004	3.5000e-004	3.9300e-003	1.0000e-005	1.1400e-003	1.0000e-005	1.1500e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	1.0285	1.0285	3.0000e-005	0.0000	1.0292
<b>Total</b>	<b>6.6000e-004</b>	<b>7.1400e-003</b>	<b>5.5500e-003</b>	<b>3.0000e-005</b>	<b>1.5900e-003</b>	<b>3.0000e-005</b>	<b>1.6200e-003</b>	<b>4.2000e-004</b>	<b>3.0000e-005</b>	<b>4.5000e-004</b>	<b>0.0000</b>	<b>2.9780</b>	<b>2.9780</b>	<b>1.6000e-004</b>	<b>0.0000</b>	<b>2.9820</b>

**3.3 Grading - 2021**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					8.3400e-003	0.0000	8.3400e-003	4.5600e-003	0.0000	4.5600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.0500e-003	0.0701	0.0788	1.2000e-004		3.7300e-003	3.7300e-003		3.4300e-003	3.4300e-003	0.0000	10.5275	10.5275	3.4000e-003	0.0000	10.6126
<b>Total</b>	<b>7.0500e-003</b>	<b>0.0701</b>	<b>0.0788</b>	<b>1.2000e-004</b>	<b>8.3400e-003</b>	<b>3.7300e-003</b>	<b>0.0121</b>	<b>4.5600e-003</b>	<b>3.4300e-003</b>	<b>7.9900e-003</b>	<b>0.0000</b>	<b>10.5275</b>	<b>10.5275</b>	<b>3.4000e-003</b>	<b>0.0000</b>	<b>10.6126</b>



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**3.3 Grading - 2021**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	8.5000e-004	0.0271	6.5000e-003	8.0000e-005	1.8000e-003	9.0000e-005	1.8900e-003	5.0000e-004	8.0000e-005	5.8000e-004	0.0000	7.7981	7.7981	5.2000e-004	0.0000	7.8112
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.7000e-004	3.7000e-004	4.1600e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2200e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0878	1.0878	3.0000e-005	0.0000	1.0886
<b>Total</b>	<b>1.3200e-003</b>	<b>0.0275</b>	<b>0.0107</b>	<b>9.0000e-005</b>	<b>3.0100e-003</b>	<b>1.0000e-004</b>	<b>3.1100e-003</b>	<b>8.2000e-004</b>	<b>9.0000e-005</b>	<b>9.1000e-004</b>	<b>0.0000</b>	<b>8.8859</b>	<b>8.8859</b>	<b>5.5000e-004</b>	<b>0.0000</b>	<b>8.8998</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.2500e-003	0.0000	3.2500e-003	1.7800e-003	0.0000	1.7800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9400e-003	0.0612	0.0880	1.2000e-004		3.5200e-003	3.5200e-003		3.5200e-003	3.5200e-003	0.0000	10.5275	10.5275	3.4000e-003	0.0000	10.6126
<b>Total</b>	<b>2.9400e-003</b>	<b>0.0612</b>	<b>0.0880</b>	<b>1.2000e-004</b>	<b>3.2500e-003</b>	<b>3.5200e-003</b>	<b>6.7700e-003</b>	<b>1.7800e-003</b>	<b>3.5200e-003</b>	<b>5.3000e-003</b>	<b>0.0000</b>	<b>10.5275</b>	<b>10.5275</b>	<b>3.4000e-003</b>	<b>0.0000</b>	<b>10.6126</b>

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**3.3 Grading - 2021**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	8.5000e-004	0.0271	6.5000e-003	8.0000e-005	1.8000e-003	9.0000e-005	1.8900e-003	5.0000e-004	8.0000e-005	5.8000e-004	0.0000	7.7981	7.7981	5.2000e-004	0.0000	7.8112
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.7000e-004	3.7000e-004	4.1600e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2200e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0878	1.0878	3.0000e-005	0.0000	1.0886
<b>Total</b>	<b>1.3200e-003</b>	<b>0.0275</b>	<b>0.0107</b>	<b>9.0000e-005</b>	<b>3.0100e-003</b>	<b>1.0000e-004</b>	<b>3.1100e-003</b>	<b>8.2000e-004</b>	<b>9.0000e-005</b>	<b>9.1000e-004</b>	<b>0.0000</b>	<b>8.8859</b>	<b>8.8859</b>	<b>5.5000e-004</b>	<b>0.0000</b>	<b>8.8998</b>

**3.4 Trenching - 2021**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.5000e-003	0.0357	0.0431	6.0000e-005		2.0700e-003	2.0700e-003		1.9000e-003	1.9000e-003	0.0000	5.2188	5.2188	1.6900e-003	0.0000	5.2610
<b>Total</b>	<b>3.5000e-003</b>	<b>0.0357</b>	<b>0.0431</b>	<b>6.0000e-005</b>		<b>2.0700e-003</b>	<b>2.0700e-003</b>		<b>1.9000e-003</b>	<b>1.9000e-003</b>	<b>0.0000</b>	<b>5.2188</b>	<b>5.2188</b>	<b>1.6900e-003</b>	<b>0.0000</b>	<b>5.2610</b>

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**3.4 Trenching - 2021**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.7000e-004	3.7000e-004	4.1600e-003	1.0000e-005	2.2500e-003	1.0000e-005	2.2600e-003	5.8000e-004	1.0000e-005	5.9000e-004	0.0000	1.0878	1.0878	3.0000e-005	0.0000	1.0886
<b>Total</b>	<b>4.7000e-004</b>	<b>3.7000e-004</b>	<b>4.1600e-003</b>	<b>1.0000e-005</b>	<b>2.2500e-003</b>	<b>1.0000e-005</b>	<b>2.2600e-003</b>	<b>5.8000e-004</b>	<b>1.0000e-005</b>	<b>5.9000e-004</b>	<b>0.0000</b>	<b>1.0878</b>	<b>1.0878</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>1.0886</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.4600e-003	0.0334	0.0451	6.0000e-005		2.3400e-003	2.3400e-003		2.3400e-003	2.3400e-003	0.0000	5.2188	5.2188	1.6900e-003	0.0000	5.2610
<b>Total</b>	<b>1.4600e-003</b>	<b>0.0334</b>	<b>0.0451</b>	<b>6.0000e-005</b>		<b>2.3400e-003</b>	<b>2.3400e-003</b>		<b>2.3400e-003</b>	<b>2.3400e-003</b>	<b>0.0000</b>	<b>5.2188</b>	<b>5.2188</b>	<b>1.6900e-003</b>	<b>0.0000</b>	<b>5.2610</b>

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**3.4 Trenching - 2021**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.7000e-004	3.7000e-004	4.1600e-003	1.0000e-005	2.2500e-003	1.0000e-005	2.2600e-003	5.8000e-004	1.0000e-005	5.9000e-004	0.0000	1.0878	1.0878	3.0000e-005	0.0000	1.0886
<b>Total</b>	<b>4.7000e-004</b>	<b>3.7000e-004</b>	<b>4.1600e-003</b>	<b>1.0000e-005</b>	<b>2.2500e-003</b>	<b>1.0000e-005</b>	<b>2.2600e-003</b>	<b>5.8000e-004</b>	<b>1.0000e-005</b>	<b>5.9000e-004</b>	<b>0.0000</b>	<b>1.0878</b>	<b>1.0878</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>1.0886</b>

**3.5 Building Construction - 2021**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0619	0.5012	0.3949	7.2000e-004		0.0235	0.0235		0.0222	0.0222	0.0000	59.3780	59.3780	0.0155	0.0000	59.7645
<b>Total</b>	<b>0.0619</b>	<b>0.5012</b>	<b>0.3949</b>	<b>7.2000e-004</b>		<b>0.0235</b>	<b>0.0235</b>		<b>0.0222</b>	<b>0.0222</b>	<b>0.0000</b>	<b>59.3780</b>	<b>59.3780</b>	<b>0.0155</b>	<b>0.0000</b>	<b>59.7645</b>

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**3.5 Building Construction - 2021**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.2000e-004	0.0102	2.7600e-003	3.0000e-005	6.5000e-004	2.0000e-005	6.7000e-004	1.9000e-004	2.0000e-005	2.1000e-004	0.0000	2.5389	2.5389	1.6000e-004	0.0000	2.5428
Worker	8.9000e-004	6.9000e-004	7.7900e-003	2.0000e-005	2.2600e-003	2.0000e-005	2.2800e-003	6.0000e-004	2.0000e-005	6.2000e-004	0.0000	2.0372	2.0372	6.0000e-005	0.0000	2.0387
<b>Total</b>	<b>1.2100e-003</b>	<b>0.0109</b>	<b>0.0106</b>	<b>5.0000e-005</b>	<b>2.9100e-003</b>	<b>4.0000e-005</b>	<b>2.9500e-003</b>	<b>7.9000e-004</b>	<b>4.0000e-005</b>	<b>8.3000e-004</b>	<b>0.0000</b>	<b>4.5761</b>	<b>4.5761</b>	<b>2.2000e-004</b>	<b>0.0000</b>	<b>4.5815</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0562	0.4928	0.3991	7.2000e-004		0.0240	0.0240		0.0232	0.0232	0.0000	59.3780	59.3780	0.0155	0.0000	59.7644
<b>Total</b>	<b>0.0562</b>	<b>0.4928</b>	<b>0.3991</b>	<b>7.2000e-004</b>		<b>0.0240</b>	<b>0.0240</b>		<b>0.0232</b>	<b>0.0232</b>	<b>0.0000</b>	<b>59.3780</b>	<b>59.3780</b>	<b>0.0155</b>	<b>0.0000</b>	<b>59.7644</b>

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**3.5 Building Construction - 2021**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.2000e-004	0.0102	2.7600e-003	3.0000e-005	6.5000e-004	2.0000e-005	6.7000e-004	1.9000e-004	2.0000e-005	2.1000e-004	0.0000	2.5389	2.5389	1.6000e-004	0.0000	2.5428
Worker	8.9000e-004	6.9000e-004	7.7900e-003	2.0000e-005	2.2600e-003	2.0000e-005	2.2800e-003	6.0000e-004	2.0000e-005	6.2000e-004	0.0000	2.0372	2.0372	6.0000e-005	0.0000	2.0387
<b>Total</b>	<b>1.2100e-003</b>	<b>0.0109</b>	<b>0.0106</b>	<b>5.0000e-005</b>	<b>2.9100e-003</b>	<b>4.0000e-005</b>	<b>2.9500e-003</b>	<b>7.9000e-004</b>	<b>4.0000e-005</b>	<b>8.3000e-004</b>	<b>0.0000</b>	<b>4.5761</b>	<b>4.5761</b>	<b>2.2000e-004</b>	<b>0.0000</b>	<b>4.5815</b>

**3.6 Paving - 2021**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.7300e-003	0.0281	0.0308	5.0000e-005		1.5500e-003	1.5500e-003		1.4300e-003	1.4300e-003	0.0000	4.0088	4.0088	1.3000e-003	0.0000	4.0412
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>2.7300e-003</b>	<b>0.0281</b>	<b>0.0308</b>	<b>5.0000e-005</b>		<b>1.5500e-003</b>	<b>1.5500e-003</b>		<b>1.4300e-003</b>	<b>1.4300e-003</b>	<b>0.0000</b>	<b>4.0088</b>	<b>4.0088</b>	<b>1.3000e-003</b>	<b>0.0000</b>	<b>4.0412</b>

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**3.6 Paving - 2021**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	1.3000e-004	1.5100e-003	0.0000	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3956	0.3956	1.0000e-005	0.0000	0.3959
<b>Total</b>	<b>1.7000e-004</b>	<b>1.3000e-004</b>	<b>1.5100e-003</b>	<b>0.0000</b>	<b>4.4000e-004</b>	<b>0.0000</b>	<b>4.4000e-004</b>	<b>1.2000e-004</b>	<b>0.0000</b>	<b>1.2000e-004</b>	<b>0.0000</b>	<b>0.3956</b>	<b>0.3956</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.3959</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.1200e-003	0.0238	0.0345	5.0000e-005		1.4500e-003	1.4500e-003		1.4500e-003	1.4500e-003	0.0000	4.0088	4.0088	1.3000e-003	0.0000	4.0412
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>1.1200e-003</b>	<b>0.0238</b>	<b>0.0345</b>	<b>5.0000e-005</b>		<b>1.4500e-003</b>	<b>1.4500e-003</b>		<b>1.4500e-003</b>	<b>1.4500e-003</b>	<b>0.0000</b>	<b>4.0088</b>	<b>4.0088</b>	<b>1.3000e-003</b>	<b>0.0000</b>	<b>4.0412</b>

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**3.6 Paving - 2021**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	1.3000e-004	1.5100e-003	0.0000	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3956	0.3956	1.0000e-005	0.0000	0.3959
<b>Total</b>	<b>1.7000e-004</b>	<b>1.3000e-004</b>	<b>1.5100e-003</b>	<b>0.0000</b>	<b>4.4000e-004</b>	<b>0.0000</b>	<b>4.4000e-004</b>	<b>1.2000e-004</b>	<b>0.0000</b>	<b>1.2000e-004</b>	<b>0.0000</b>	<b>0.3956</b>	<b>0.3956</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.3959</b>

**3.7 Architectural Coating - 2021**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.3900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0900e-003	7.6300e-003	9.0900e-003	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004	0.0000	1.2766	1.2766	9.0000e-005	0.0000	1.2788
<b>Total</b>	<b>2.4800e-003</b>	<b>7.6300e-003</b>	<b>9.0900e-003</b>	<b>1.0000e-005</b>		<b>4.7000e-004</b>	<b>4.7000e-004</b>		<b>4.7000e-004</b>	<b>4.7000e-004</b>	<b>0.0000</b>	<b>1.2766</b>	<b>1.2766</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>1.2788</b>



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**3.7 Architectural Coating - 2021**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	2.0000e-005	1.9000e-004	0.0000	5.0000e-005	0.0000	6.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0495	0.0495	0.0000	0.0000	0.0495
<b>Total</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>1.9000e-004</b>	<b>0.0000</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>6.0000e-005</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.0495</b>	<b>0.0495</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0495</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.3900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.0000e-004	6.7800e-003	9.1600e-003	1.0000e-005		4.8000e-004	4.8000e-004		4.8000e-004	4.8000e-004	0.0000	1.2766	1.2766	9.0000e-005	0.0000	1.2788
<b>Total</b>	<b>1.6900e-003</b>	<b>6.7800e-003</b>	<b>9.1600e-003</b>	<b>1.0000e-005</b>		<b>4.8000e-004</b>	<b>4.8000e-004</b>		<b>4.8000e-004</b>	<b>4.8000e-004</b>	<b>0.0000</b>	<b>1.2766</b>	<b>1.2766</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>1.2788</b>

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**3.7 Architectural Coating - 2021**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	2.0000e-005	1.9000e-004	0.0000	5.0000e-005	0.0000	6.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0495	0.0495	0.0000	0.0000	0.0495
<b>Total</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>1.9000e-004</b>	<b>0.0000</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>6.0000e-005</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.0495</b>	<b>0.0495</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0495</b>

**4.0 Operational Detail - Mobile**

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**4.1 Mitigation Measures Mobile**

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891

5.0 Energy Detail

Historical Energy Use: N



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**5.2 Energy by Land Use - Natural Gas**

**Mitigated**

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**5.3 Energy by Land Use - Electricity**

**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

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**5.3 Energy by Land Use - Electricity**

**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	8.0000e-004	0.0000	1.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.5000e-004	2.5000e-004	0.0000	0.0000	2.6000e-004
Unmitigated	8.0000e-004	0.0000	1.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.5000e-004	2.5000e-004	0.0000	0.0000	2.6000e-004

Lower Busch Tanks - Los Angeles-South Coast County, Annual

**6.2 Area by SubCategory**

**Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.4000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	6.5000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	1.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.5000e-004	2.5000e-004	0.0000	0.0000	2.6000e-004
<b>Total</b>	<b>8.0000e-004</b>	<b>0.0000</b>	<b>1.3000e-004</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.5000e-004</b>	<b>2.5000e-004</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.6000e-004</b>

**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.4000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	6.5000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	1.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.5000e-004	2.5000e-004	0.0000	0.0000	2.6000e-004
<b>Total</b>	<b>8.0000e-004</b>	<b>0.0000</b>	<b>1.3000e-004</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.5000e-004</b>	<b>2.5000e-004</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.6000e-004</b>

**7.0 Water Detail**

Lower Busch Tanks - Los Angeles-South Coast County, Annual

**7.1 Mitigation Measures Water**

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

**7.2 Water by Land Use**

**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>



Lower Busch Tanks - Los Angeles-South Coast County, Annual

**7.2 Water by Land Use**

**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

**Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

Lower Busch Tanks - Los Angeles-South Coast County, Annual

**8.2 Waste by Land Use**

**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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Lower Busch Tanks - Los Angeles-South Coast County, Annual

**10.0 Stationary Equipment**

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**Fire Pumps and Emergency Generators**

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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**Boilers**

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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**User Defined Equipment**

Equipment Type	Number
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**11.0 Vegetation**

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Lower Busch Tanks - Los Angeles-South Coast County, Summer

**Lower Busch Tanks**  
**Los Angeles-South Coast County, Summer**

**1.0 Project Characteristics**

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**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	10.00	1000sqft	0.23	10,000.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	33
<b>Climate Zone</b>	8			<b>Operational Year</b>	2021
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MW hr)</b>	702.44	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

**1.3 User Entered Comments & Non-Default Data**

Lower Busch Tanks - Los Angeles-South Coast County, Summer

Project Characteristics -

Land Use -

Construction Phase - Project construction schedule

Off-road Equipment - Estimated by developer

Off-road Equipment - Estimated by developer

Off-road Equipment - Estimated by developer

Off-road Equipment - Estimated by developer

Off-road Equipment - Estimated by developer

Off-road Equipment - Estimated by developer

Off-road Equipment - Estimated by developer

Demolition -

Grading -

Construction Off-road Equipment Mitigation - pdf

Trips and VMT - Based on data request

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3

Lower Busch Tanks - Los Angeles-South Coast County, Summer

tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	10.00	16.00
tblConstructionPhase	NumDays	2.00	22.00
tblConstructionPhase	NumDays	100.00	103.00
tblConstructionPhase	NumDays	5.00	10.00
tblConstructionPhase	NumDays	5.00	10.00
tblGrading	MaterialExported	0.00	400.00
tblGrading	MaterialImported	0.00	600.00
tblOffRoadEquipment	HorsePower	158.00	97.00
tblOffRoadEquipment	LoadFactor	0.38	0.37
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	4.00	8.00
tblTripsAndVMT	HaulingTripLength	20.00	25.00
tblTripsAndVMT	HaulingTripLength	20.00	25.00
tblTripsAndVMT	HaulingTripNumber	29.00	42.00

Lower Busch Tanks - Los Angeles-South Coast County, Summer

tblTripsAndVMT	HaulingTripNumber	125.00	168.00
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**2.0 Emissions Summary**

**2.1 Overall Construction (Maximum Daily Emission)**

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	1.3968	13.2733	15.1138	0.0262	1.0366	0.6782	1.3839	0.4899	0.6379	0.8098	0.0000	2,561.0095	2,561.0095	0.5579	0.0000	2,574.9576
<b>Maximum</b>	<b>1.3968</b>	<b>13.2733</b>	<b>15.1138</b>	<b>0.0262</b>	<b>1.0366</b>	<b>0.6782</b>	<b>1.3839</b>	<b>0.4899</b>	<b>0.6379</b>	<b>0.8098</b>	<b>0.0000</b>	<b>2,561.0095</b>	<b>2,561.0095</b>	<b>0.5579</b>	<b>0.0000</b>	<b>2,574.9576</b>

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	1.1147	11.7290	16.7264	0.0262	0.5742	0.6477	1.0037	0.2371	0.6475	0.7250	0.0000	2,561.0094	2,561.0094	0.5579	0.0000	2,574.9576
<b>Maximum</b>	<b>1.1147</b>	<b>11.7290</b>	<b>16.7264</b>	<b>0.0262</b>	<b>0.5742</b>	<b>0.6477</b>	<b>1.0037</b>	<b>0.2371</b>	<b>0.6475</b>	<b>0.7250</b>	<b>0.0000</b>	<b>2,561.0094</b>	<b>2,561.0094</b>	<b>0.5579</b>	<b>0.0000</b>	<b>2,574.9576</b>

## Lower Busch Tanks - Los Angeles-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	20.20	11.63	-10.67	0.00	44.60	4.50	27.47	51.61	-1.51	10.48	0.00	0.00	0.00	0.00	0.00	0.00



Lower Busch Tanks - Los Angeles-South Coast County, Summer

**2.2 Overall Operational**

**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.4000e-003	1.0000e-005	1.0200e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.1900e-003	2.1900e-003	1.0000e-005		2.3300e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>4.4000e-003</b>	<b>1.0000e-005</b>	<b>1.0200e-003</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>2.1900e-003</b>	<b>2.1900e-003</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>2.3300e-003</b>

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.4000e-003	1.0000e-005	1.0200e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.1900e-003	2.1900e-003	1.0000e-005		2.3300e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>4.4000e-003</b>	<b>1.0000e-005</b>	<b>1.0200e-003</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>2.1900e-003</b>	<b>2.1900e-003</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>2.3300e-003</b>

Lower Busch Tanks - Los Angeles-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	2/11/2021	3/4/2021	5	16	
2	Grading	Grading	3/5/2021	4/5/2021	5	22	
3	Trenching	Trenching	4/7/2021	5/6/2021	5	22	
4	Building Construction	Building Construction	5/10/2021	9/29/2021	5	103	
5	Paving	Paving	10/1/2021	10/14/2021	5	10	
6	Architectural Coating	Architectural Coating	10/18/2021	10/29/2021	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.23

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 600 (Architectural Coating – sqft)

#### OffRoad Equipment

## Lower Busch Tanks - Los Angeles-South Coast County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	1	8.00	158	0.38
Demolition	Other Construction Equipment	1	8.00	172	0.42
Demolition	Rubber Tired Dozers	0	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Concrete/Industrial Saws	0	8.00	81	0.73
Grading	Excavators	1	8.00	158	0.38
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Trenching	Concrete/Industrial Saws	0	8.00	81	0.73
Trenching	Excavators	1	6.00	97	0.37
Trenching	Graders	0	8.00	187	0.41
Trenching	Rubber Tired Dozers	0	1.00	247	0.40
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cranes	0	4.00	231	0.29
Building Construction	Forklifts	0	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving	Cement and Mortar Mixers	0	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Welders	2	8.00	46	0.45

Trips and VMT

Lower Busch Tanks - Los Angeles-South Coast County, Summer

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	42.00	14.70	6.90	25.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	168.00	14.70	6.90	25.00	LD_Mix	HDT_Mix	HHDT
Trenching	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	4	4.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	1.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Use Cleaner Engines for Construction Equipment

Water Exposed Area

**3.2 Demolition - 2021**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3932	0.0000	0.3932	0.0595	0.0000	0.0595			0.0000			0.0000
Off-Road	1.3148	12.4159	14.3913	0.0223		0.6743	0.6743		0.6342	0.6342		2,142.731 2	2,142.731 2	0.5357		2,156.124 6
<b>Total</b>	<b>1.3148</b>	<b>12.4159</b>	<b>14.3913</b>	<b>0.0223</b>	<b>0.3932</b>	<b>0.6743</b>	<b>1.0675</b>	<b>0.0595</b>	<b>0.6342</b>	<b>0.6938</b>		<b>2,142.731 2</b>	<b>2,142.731 2</b>	<b>0.5357</b>		<b>2,156.124 6</b>

Lower Busch Tanks - Los Angeles-South Coast County, Summer

**3.2 Demolition - 2021**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0263	0.8190	0.1989	2.4900e-003	0.0574	2.6800e-003	0.0600	0.0157	2.5600e-003	0.0183		270.2382	270.2382	0.0178		270.6839
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0557	0.0383	0.5236	1.4900e-003	0.1453	1.1700e-003	0.1465	0.0385	1.0800e-003	0.0396		148.0401	148.0401	4.3600e-003		148.1491
<b>Total</b>	<b>0.0821</b>	<b>0.8573</b>	<b>0.7225</b>	<b>3.9800e-003</b>	<b>0.2027</b>	<b>3.8500e-003</b>	<b>0.2065</b>	<b>0.0543</b>	<b>3.6400e-003</b>	<b>0.0579</b>		<b>418.2783</b>	<b>418.2783</b>	<b>0.0222</b>		<b>418.8330</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1534	0.0000	0.1534	0.0232	0.0000	0.0232			0.0000			0.0000
Off-Road	0.5191	10.8717	16.0039	0.0223		0.6438	0.6438		0.6438	0.6438	0.0000	2,142.7312	2,142.7312	0.5357		2,156.1246
<b>Total</b>	<b>0.5191</b>	<b>10.8717</b>	<b>16.0039</b>	<b>0.0223</b>	<b>0.1534</b>	<b>0.6438</b>	<b>0.7972</b>	<b>0.0232</b>	<b>0.6438</b>	<b>0.6671</b>	<b>0.0000</b>	<b>2,142.7312</b>	<b>2,142.7312</b>	<b>0.5357</b>		<b>2,156.1246</b>

Lower Busch Tanks - Los Angeles-South Coast County, Summer

**3.2 Demolition - 2021**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0263	0.8190	0.1989	2.4900e-003	0.0574	2.6800e-003	0.0600	0.0157	2.5600e-003	0.0183		270.2382	270.2382	0.0178		270.6839
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0557	0.0383	0.5236	1.4900e-003	0.1453	1.1700e-003	0.1465	0.0385	1.0800e-003	0.0396		148.0401	148.0401	4.3600e-003		148.1491
<b>Total</b>	<b>0.0821</b>	<b>0.8573</b>	<b>0.7225</b>	<b>3.9800e-003</b>	<b>0.2027</b>	<b>3.8500e-003</b>	<b>0.2065</b>	<b>0.0543</b>	<b>3.6400e-003</b>	<b>0.0579</b>		<b>418.2783</b>	<b>418.2783</b>	<b>0.0222</b>		<b>418.8330</b>

**3.3 Grading - 2021**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7579	0.0000	0.7579	0.4146	0.0000	0.4146			0.0000			0.0000
Off-Road	0.6409	6.3685	7.1669	0.0109		0.3387	0.3387		0.3116	0.3116		1,054.9611	1,054.9611	0.3412		1,063.4910
<b>Total</b>	<b>0.6409</b>	<b>6.3685</b>	<b>7.1669</b>	<b>0.0109</b>	<b>0.7579</b>	<b>0.3387</b>	<b>1.0966</b>	<b>0.4146</b>	<b>0.3116</b>	<b>0.7261</b>		<b>1,054.9611</b>	<b>1,054.9611</b>	<b>0.3412</b>		<b>1,063.4910</b>

Lower Busch Tanks - Los Angeles-South Coast County, Summer

**3.3 Grading - 2021**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0766	2.3826	0.5785	7.2500e-003	0.1669	7.7900e-003	0.1747	0.0457	7.4500e-003	0.0532		786.1475	786.1475	0.0519		787.4440
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0429	0.0295	0.4028	1.1400e-003	0.1118	9.0000e-004	0.1127	0.0296	8.3000e-004	0.0305		113.8770	113.8770	3.3600e-003		113.9609
<b>Total</b>	<b>0.1194</b>	<b>2.4121</b>	<b>0.9812</b>	<b>8.3900e-003</b>	<b>0.2787</b>	<b>8.6900e-003</b>	<b>0.2873</b>	<b>0.0754</b>	<b>8.2800e-003</b>	<b>0.0837</b>		<b>900.0244</b>	<b>900.0244</b>	<b>0.0552</b>		<b>901.4048</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2956	0.0000	0.2956	0.1617	0.0000	0.1617			0.0000			0.0000
Off-Road	0.2672	5.5636	7.9974	0.0109		0.3201	0.3201		0.3201	0.3201	0.0000	1,054.9611	1,054.9611	0.3412		1,063.4910
<b>Total</b>	<b>0.2672</b>	<b>5.5636</b>	<b>7.9974</b>	<b>0.0109</b>	<b>0.2956</b>	<b>0.3201</b>	<b>0.6157</b>	<b>0.1617</b>	<b>0.3201</b>	<b>0.4818</b>	<b>0.0000</b>	<b>1,054.9611</b>	<b>1,054.9611</b>	<b>0.3412</b>		<b>1,063.4910</b>

Lower Busch Tanks - Los Angeles-South Coast County, Summer

**3.3 Grading - 2021**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0766	2.3826	0.5785	7.2500e-003	0.1669	7.7900e-003	0.1747	0.0457	7.4500e-003	0.0532		786.1475	786.1475	0.0519		787.4440
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0429	0.0295	0.4028	1.1400e-003	0.1118	9.0000e-004	0.1127	0.0296	8.3000e-004	0.0305		113.8770	113.8770	3.3600e-003		113.9609
<b>Total</b>	<b>0.1194</b>	<b>2.4121</b>	<b>0.9812</b>	<b>8.3900e-003</b>	<b>0.2787</b>	<b>8.6900e-003</b>	<b>0.2873</b>	<b>0.0754</b>	<b>8.2800e-003</b>	<b>0.0837</b>		<b>900.0244</b>	<b>900.0244</b>	<b>0.0552</b>		<b>901.4048</b>

**3.4 Trenching - 2021**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3178	3.2483	3.9180	5.4000e-003		0.1880	0.1880		0.1730	0.1730		522.9806	522.9806	0.1691		527.2092
<b>Total</b>	<b>0.3178</b>	<b>3.2483</b>	<b>3.9180</b>	<b>5.4000e-003</b>		<b>0.1880</b>	<b>0.1880</b>		<b>0.1730</b>	<b>0.1730</b>		<b>522.9806</b>	<b>522.9806</b>	<b>0.1691</b>		<b>527.2092</b>



Lower Busch Tanks - Los Angeles-South Coast County, Summer

**3.4 Trenching - 2021**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0429	0.0295	0.4028	1.1400e-003	0.2090	9.0000e-004	0.2099	0.0535	8.3000e-004	0.0543		113.8770	113.8770	3.3600e-003		113.9609
<b>Total</b>	<b>0.0429</b>	<b>0.0295</b>	<b>0.4028</b>	<b>1.1400e-003</b>	<b>0.2090</b>	<b>9.0000e-004</b>	<b>0.2099</b>	<b>0.0535</b>	<b>8.3000e-004</b>	<b>0.0543</b>		<b>113.8770</b>	<b>113.8770</b>	<b>3.3600e-003</b>		<b>113.9609</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1329	3.0352	4.0986	5.4000e-003		0.2127	0.2127		0.2127	0.2127	0.0000	522.9806	522.9806	0.1691		527.2092
<b>Total</b>	<b>0.1329</b>	<b>3.0352</b>	<b>4.0986</b>	<b>5.4000e-003</b>		<b>0.2127</b>	<b>0.2127</b>		<b>0.2127</b>	<b>0.2127</b>	<b>0.0000</b>	<b>522.9806</b>	<b>522.9806</b>	<b>0.1691</b>		<b>527.2092</b>

Lower Busch Tanks - Los Angeles-South Coast County, Summer

**3.4 Trenching - 2021**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0429	0.0295	0.4028	1.1400e-003	0.2090	9.0000e-004	0.2099	0.0535	8.3000e-004	0.0543		113.8770	113.8770	3.3600e-003		113.9609
<b>Total</b>	<b>0.0429</b>	<b>0.0295</b>	<b>0.4028</b>	<b>1.1400e-003</b>	<b>0.2090</b>	<b>9.0000e-004</b>	<b>0.2099</b>	<b>0.0535</b>	<b>8.3000e-004</b>	<b>0.0543</b>		<b>113.8770</b>	<b>113.8770</b>	<b>3.3600e-003</b>		<b>113.9609</b>

**3.5 Building Construction - 2021**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2028	9.7312	7.6677	0.0140		0.4556	0.4556		0.4310	0.4310		1,270.9336	1,270.9336	0.3309		1,279.2054
<b>Total</b>	<b>1.2028</b>	<b>9.7312</b>	<b>7.6677</b>	<b>0.0140</b>		<b>0.4556</b>	<b>0.4556</b>		<b>0.4310</b>	<b>0.4310</b>		<b>1,270.9336</b>	<b>1,270.9336</b>	<b>0.3309</b>		<b>1,279.2054</b>

Lower Busch Tanks - Los Angeles-South Coast County, Summer

**3.5 Building Construction - 2021**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	6.0800e-003	0.1942	0.0508	5.1000e-004	0.0128	4.0000e-004	0.0132	3.6900e-003	3.8000e-004	4.0700e-003		54.9761	54.9761	3.2400e-003		55.0571
Worker	0.0172	0.0118	0.1611	4.6000e-004	0.0447	3.6000e-004	0.0451	0.0119	3.3000e-004	0.0122		45.5508	45.5508	1.3400e-003		45.5844
<b>Total</b>	<b>0.0232</b>	<b>0.2060</b>	<b>0.2119</b>	<b>9.7000e-004</b>	<b>0.0575</b>	<b>7.6000e-004</b>	<b>0.0583</b>	<b>0.0156</b>	<b>7.1000e-004</b>	<b>0.0163</b>		<b>100.5269</b>	<b>100.5269</b>	<b>4.5800e-003</b>		<b>100.6415</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0915	9.5698	7.7496	0.0140		0.4654	0.4654		0.4497	0.4497	0.0000	1,270.9336	1,270.9336	0.3309		1,279.2054
<b>Total</b>	<b>1.0915</b>	<b>9.5698</b>	<b>7.7496</b>	<b>0.0140</b>		<b>0.4654</b>	<b>0.4654</b>		<b>0.4497</b>	<b>0.4497</b>	<b>0.0000</b>	<b>1,270.9336</b>	<b>1,270.9336</b>	<b>0.3309</b>		<b>1,279.2054</b>

## Lower Busch Tanks - Los Angeles-South Coast County, Summer

**3.5 Building Construction - 2021****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	6.0800e-003	0.1942	0.0508	5.1000e-004	0.0128	4.0000e-004	0.0132	3.6900e-003	3.8000e-004	4.0700e-003		54.9761	54.9761	3.2400e-003		55.0571
Worker	0.0172	0.0118	0.1611	4.6000e-004	0.0447	3.6000e-004	0.0451	0.0119	3.3000e-004	0.0122		45.5508	45.5508	1.3400e-003		45.5844
<b>Total</b>	<b>0.0232</b>	<b>0.2060</b>	<b>0.2119</b>	<b>9.7000e-004</b>	<b>0.0575</b>	<b>7.6000e-004</b>	<b>0.0583</b>	<b>0.0156</b>	<b>7.1000e-004</b>	<b>0.0163</b>		<b>100.5269</b>	<b>100.5269</b>	<b>4.5800e-003</b>		<b>100.6415</b>

**3.6 Paving - 2021****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5451	5.6132	6.1648	9.1300e-003		0.3105	0.3105		0.2856	0.2856		883.7936	883.7936	0.2858		890.9395
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>0.5451</b>	<b>5.6132</b>	<b>6.1648</b>	<b>9.1300e-003</b>		<b>0.3105</b>	<b>0.3105</b>		<b>0.2856</b>	<b>0.2856</b>		<b>883.7936</b>	<b>883.7936</b>	<b>0.2858</b>		<b>890.9395</b>

Lower Busch Tanks - Los Angeles-South Coast County, Summer

**3.6 Paving - 2021**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0343	0.0236	0.3222	9.1000e-004	0.0894	7.2000e-004	0.0901	0.0237	6.7000e-004	0.0244		91.1016	91.1016	2.6800e-003		91.1687
<b>Total</b>	<b>0.0343</b>	<b>0.0236</b>	<b>0.3222</b>	<b>9.1000e-004</b>	<b>0.0894</b>	<b>7.2000e-004</b>	<b>0.0901</b>	<b>0.0237</b>	<b>6.7000e-004</b>	<b>0.0244</b>		<b>91.1016</b>	<b>91.1016</b>	<b>2.6800e-003</b>		<b>91.1687</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2239	4.7579	6.9028	9.1300e-003		0.2908	0.2908		0.2908	0.2908	0.0000	883.7936	883.7936	0.2858		890.9395
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>0.2239</b>	<b>4.7579</b>	<b>6.9028</b>	<b>9.1300e-003</b>		<b>0.2908</b>	<b>0.2908</b>		<b>0.2908</b>	<b>0.2908</b>	<b>0.0000</b>	<b>883.7936</b>	<b>883.7936</b>	<b>0.2858</b>		<b>890.9395</b>

Lower Busch Tanks - Los Angeles-South Coast County, Summer

**3.6 Paving - 2021**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0343	0.0236	0.3222	9.1000e-004	0.0894	7.2000e-004	0.0901	0.0237	6.7000e-004	0.0244		91.1016	91.1016	2.6800e-003		91.1687
<b>Total</b>	<b>0.0343</b>	<b>0.0236</b>	<b>0.3222</b>	<b>9.1000e-004</b>	<b>0.0894</b>	<b>7.2000e-004</b>	<b>0.0901</b>	<b>0.0237</b>	<b>6.7000e-004</b>	<b>0.0244</b>		<b>91.1016</b>	<b>91.1016</b>	<b>2.6800e-003</b>		<b>91.1687</b>

**3.7 Architectural Coating - 2021**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.2781					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
<b>Total</b>	<b>0.4970</b>	<b>1.5268</b>	<b>1.8176</b>	<b>2.9700e-003</b>		<b>0.0941</b>	<b>0.0941</b>		<b>0.0941</b>	<b>0.0941</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0193</b>		<b>281.9309</b>

Lower Busch Tanks - Los Angeles-South Coast County, Summer

**3.7 Architectural Coating - 2021**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	4.2900e-003	2.9500e-003	0.0403	1.1000e-004	0.0112	9.0000e-005	0.0113	2.9600e-003	8.0000e-005	3.0500e-003		11.3877	11.3877	3.4000e-004		11.3961
<b>Total</b>	<b>4.2900e-003</b>	<b>2.9500e-003</b>	<b>0.0403</b>	<b>1.1000e-004</b>	<b>0.0112</b>	<b>9.0000e-005</b>	<b>0.0113</b>	<b>2.9600e-003</b>	<b>8.0000e-005</b>	<b>3.0500e-003</b>		<b>11.3877</b>	<b>11.3877</b>	<b>3.4000e-004</b>		<b>11.3961</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.2781					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0594	1.3570	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	281.4481	281.4481	0.0193		281.9309
<b>Total</b>	<b>0.3375</b>	<b>1.3570</b>	<b>1.8324</b>	<b>2.9700e-003</b>		<b>0.0951</b>	<b>0.0951</b>		<b>0.0951</b>	<b>0.0951</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0193</b>		<b>281.9309</b>

Lower Busch Tanks - Los Angeles-South Coast County, Summer

**3.7 Architectural Coating - 2021**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	4.2900e-003	2.9500e-003	0.0403	1.1000e-004	0.0112	9.0000e-005	0.0113	2.9600e-003	8.0000e-005	3.0500e-003		11.3877	11.3877	3.4000e-004		11.3961
<b>Total</b>	<b>4.2900e-003</b>	<b>2.9500e-003</b>	<b>0.0403</b>	<b>1.1000e-004</b>	<b>0.0112</b>	<b>9.0000e-005</b>	<b>0.0113</b>	<b>2.9600e-003</b>	<b>8.0000e-005</b>	<b>3.0500e-003</b>		<b>11.3877</b>	<b>11.3877</b>	<b>3.4000e-004</b>		<b>11.3961</b>

**4.0 Operational Detail - Mobile**

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**4.1 Mitigation Measures Mobile**



Lower Busch Tanks - Los Angeles-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891

5.0 Energy Detail

Historical Energy Use: N

Lower Busch Tanks - Los Angeles-South Coast County, Summer

**5.1 Mitigation Measures Energy**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

**5.2 Energy by Land Use - NaturalGas**

**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

Lower Busch Tanks - Los Angeles-South Coast County, Summer

**5.2 Energy by Land Use - Natural Gas**

**Mitigated**

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.4000e-003	1.0000e-005	1.0200e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.1900e-003	2.1900e-003	1.0000e-005		2.3300e-003
Unmitigated	4.4000e-003	1.0000e-005	1.0200e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.1900e-003	2.1900e-003	1.0000e-005		2.3300e-003

Lower Busch Tanks - Los Angeles-South Coast County, Summer

**6.2 Area by SubCategory**

**Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	7.6000e-004					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.5400e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-004	1.0000e-005	1.0200e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.1900e-003	2.1900e-003	1.0000e-005		2.3300e-003
<b>Total</b>	<b>4.4000e-003</b>	<b>1.0000e-005</b>	<b>1.0200e-003</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>2.1900e-003</b>	<b>2.1900e-003</b>	<b>1.0000e-005</b>		<b>2.3300e-003</b>

**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	7.6000e-004					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.5400e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-004	1.0000e-005	1.0200e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.1900e-003	2.1900e-003	1.0000e-005		2.3300e-003
<b>Total</b>	<b>4.4000e-003</b>	<b>1.0000e-005</b>	<b>1.0200e-003</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>2.1900e-003</b>	<b>2.1900e-003</b>	<b>1.0000e-005</b>		<b>2.3300e-003</b>

**7.0 Water Detail**

## Lower Busch Tanks - Los Angeles-South Coast County, Summer

**7.1 Mitigation Measures Water****8.0 Waste Detail****8.1 Mitigation Measures Waste****9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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**10.0 Stationary Equipment****Fire Pumps and Emergency Generators**

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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**Boilers**

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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**User Defined Equipment**

Equipment Type	Number
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**11.0 Vegetation**

Lower Busch Tanks - Los Angeles-South Coast County, Winter

**Lower Busch Tanks**  
**Los Angeles-South Coast County, Winter**

**1.0 Project Characteristics**

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**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	10.00	1000sqft	0.23	10,000.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	33
<b>Climate Zone</b>	8			<b>Operational Year</b>	2021
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MW hr)</b>	702.44	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

**1.3 User Entered Comments & Non-Default Data**

Lower Busch Tanks - Los Angeles-South Coast County, Winter

Project Characteristics -

Land Use -

Construction Phase - Project construction schedule

Off-road Equipment - Estimated by developer

Off-road Equipment - Estimated by developer

Off-road Equipment - Estimated by developer

Off-road Equipment - Estimated by developer

Off-road Equipment - Estimated by developer

Off-road Equipment - Estimated by developer

Off-road Equipment - Estimated by developer

Demolition -

Grading -

Construction Off-road Equipment Mitigation - pdf

Trips and VMT - Based on data request

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3

Lower Busch Tanks - Los Angeles-South Coast County, Winter

tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	10.00	16.00
tblConstructionPhase	NumDays	2.00	22.00
tblConstructionPhase	NumDays	100.00	103.00
tblConstructionPhase	NumDays	5.00	10.00
tblConstructionPhase	NumDays	5.00	10.00
tblGrading	MaterialExported	0.00	400.00
tblGrading	MaterialImported	0.00	600.00
tblOffRoadEquipment	HorsePower	158.00	97.00
tblOffRoadEquipment	LoadFactor	0.38	0.37
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	4.00	8.00
tblTripsAndVMT	HaulingTripLength	20.00	25.00
tblTripsAndVMT	HaulingTripLength	20.00	25.00
tblTripsAndVMT	HaulingTripNumber	29.00	42.00



Lower Busch Tanks - Los Angeles-South Coast County, Winter

tblTripsAndVMT	HaulingTripNumber	125.00	168.00
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## 2.0 Emissions Summary

### 2.1 Overall Construction (Maximum Daily Emission)

#### Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	1.4036	13.2905	15.0787	0.0261	1.0366	0.6782	1.3840	0.4899	0.6379	0.8099	0.0000	2,548.5129	2,548.5129	0.5582	0.0000	2,562.4678
<b>Maximum</b>	<b>1.4036</b>	<b>13.2905</b>	<b>15.0787</b>	<b>0.0261</b>	<b>1.0366</b>	<b>0.6782</b>	<b>1.3840</b>	<b>0.4899</b>	<b>0.6379</b>	<b>0.8099</b>	<b>0.0000</b>	<b>2,548.5129</b>	<b>2,548.5129</b>	<b>0.5582</b>	<b>0.0000</b>	<b>2,562.4678</b>

#### Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	1.1169	11.7462	16.6912	0.0261	0.5742	0.6477	1.0037	0.2371	0.6475	0.7250	0.0000	2,548.5129	2,548.5129	0.5582	0.0000	2,562.4678
<b>Maximum</b>	<b>1.1169</b>	<b>11.7462</b>	<b>16.6912</b>	<b>0.0261</b>	<b>0.5742</b>	<b>0.6477</b>	<b>1.0037</b>	<b>0.2371</b>	<b>0.6475</b>	<b>0.7250</b>	<b>0.0000</b>	<b>2,548.5129</b>	<b>2,548.5129</b>	<b>0.5582</b>	<b>0.0000</b>	<b>2,562.4678</b>

## Lower Busch Tanks - Los Angeles-South Coast County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	20.43	11.62	-10.69	0.00	44.60	4.49	27.48	51.61	-1.51	10.48	0.00	0.00	0.00	0.00	0.00	0.00

Lower Busch Tanks - Los Angeles-South Coast County, Winter

**2.2 Overall Operational**

**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.4000e-003	1.0000e-005	1.0200e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.1900e-003	2.1900e-003	1.0000e-005		2.3300e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>4.4000e-003</b>	<b>1.0000e-005</b>	<b>1.0200e-003</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>2.1900e-003</b>	<b>2.1900e-003</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>2.3300e-003</b>

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.4000e-003	1.0000e-005	1.0200e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.1900e-003	2.1900e-003	1.0000e-005		2.3300e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>4.4000e-003</b>	<b>1.0000e-005</b>	<b>1.0200e-003</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>2.1900e-003</b>	<b>2.1900e-003</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>2.3300e-003</b>

Lower Busch Tanks - Los Angeles-South Coast County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	2/11/2021	3/4/2021	5	16	
2	Grading	Grading	3/5/2021	4/5/2021	5	22	
3	Trenching	Trenching	4/7/2021	5/6/2021	5	22	
4	Building Construction	Building Construction	5/10/2021	9/29/2021	5	103	
5	Paving	Paving	10/1/2021	10/14/2021	5	10	
6	Architectural Coating	Architectural Coating	10/18/2021	10/29/2021	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.23

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 600 (Architectural Coating – sqft)

#### OffRoad Equipment

## Lower Busch Tanks - Los Angeles-South Coast County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	1	8.00	158	0.38
Demolition	Other Construction Equipment	1	8.00	172	0.42
Demolition	Rubber Tired Dozers	0	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Concrete/Industrial Saws	0	8.00	81	0.73
Grading	Excavators	1	8.00	158	0.38
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Trenching	Concrete/Industrial Saws	0	8.00	81	0.73
Trenching	Excavators	1	6.00	97	0.37
Trenching	Graders	0	8.00	187	0.41
Trenching	Rubber Tired Dozers	0	1.00	247	0.40
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cranes	0	4.00	231	0.29
Building Construction	Forklifts	0	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving	Cement and Mortar Mixers	0	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Welders	2	8.00	46	0.45

Trips and VMT

Lower Busch Tanks - Los Angeles-South Coast County, Winter

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	42.00	14.70	6.90	25.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	168.00	14.70	6.90	25.00	LD_Mix	HDT_Mix	HHDT
Trenching	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	4	4.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	1.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Use Cleaner Engines for Construction Equipment

Water Exposed Area

**3.2 Demolition - 2021**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3932	0.0000	0.3932	0.0595	0.0000	0.0595			0.0000			0.0000
Off-Road	1.3148	12.4159	14.3913	0.0223		0.6743	0.6743		0.6342	0.6342		2,142.731 2	2,142.731 2	0.5357		2,156.124 6
<b>Total</b>	<b>1.3148</b>	<b>12.4159</b>	<b>14.3913</b>	<b>0.0223</b>	<b>0.3932</b>	<b>0.6743</b>	<b>1.0675</b>	<b>0.0595</b>	<b>0.6342</b>	<b>0.6938</b>		<b>2,142.731 2</b>	<b>2,142.731 2</b>	<b>0.5357</b>		<b>2,156.124 6</b>

Lower Busch Tanks - Los Angeles-South Coast County, Winter

**3.2 Demolition - 2021**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0268	0.8321	0.2086	2.4500e-003	0.0574	2.7100e-003	0.0601	0.0157	2.5900e-003	0.0183		266.3891	266.3891	0.0184		266.8480
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0620	0.0424	0.4787	1.4000e-003	0.1453	1.1700e-003	0.1465	0.0385	1.0800e-003	0.0396		139.3926	139.3926	4.1000e-003		139.4952
<b>Total</b>	<b>0.0888</b>	<b>0.8745</b>	<b>0.6873</b>	<b>3.8500e-003</b>	<b>0.2027</b>	<b>3.8800e-003</b>	<b>0.2066</b>	<b>0.0543</b>	<b>3.6700e-003</b>	<b>0.0579</b>		<b>405.7817</b>	<b>405.7817</b>	<b>0.0225</b>		<b>406.3432</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1534	0.0000	0.1534	0.0232	0.0000	0.0232			0.0000			0.0000
Off-Road	0.5191	10.8717	16.0039	0.0223		0.6438	0.6438		0.6438	0.6438	0.0000	2,142.7312	2,142.7312	0.5357		2,156.1246
<b>Total</b>	<b>0.5191</b>	<b>10.8717</b>	<b>16.0039</b>	<b>0.0223</b>	<b>0.1534</b>	<b>0.6438</b>	<b>0.7972</b>	<b>0.0232</b>	<b>0.6438</b>	<b>0.6671</b>	<b>0.0000</b>	<b>2,142.7312</b>	<b>2,142.7312</b>	<b>0.5357</b>		<b>2,156.1246</b>

Lower Busch Tanks - Los Angeles-South Coast County, Winter

**3.2 Demolition - 2021**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0268	0.8321	0.2086	2.4500e-003	0.0574	2.7100e-003	0.0601	0.0157	2.5900e-003	0.0183		266.3891	266.3891	0.0184		266.8480
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0620	0.0424	0.4787	1.4000e-003	0.1453	1.1700e-003	0.1465	0.0385	1.0800e-003	0.0396		139.3926	139.3926	4.1000e-003		139.4952
<b>Total</b>	<b>0.0888</b>	<b>0.8745</b>	<b>0.6873</b>	<b>3.8500e-003</b>	<b>0.2027</b>	<b>3.8800e-003</b>	<b>0.2066</b>	<b>0.0543</b>	<b>3.6700e-003</b>	<b>0.0579</b>		<b>405.7817</b>	<b>405.7817</b>	<b>0.0225</b>		<b>406.3432</b>

**3.3 Grading - 2021**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7579	0.0000	0.7579	0.4146	0.0000	0.4146			0.0000			0.0000
Off-Road	0.6409	6.3685	7.1669	0.0109		0.3387	0.3387		0.3116	0.3116		1,054.9611	1,054.9611	0.3412		1,063.4910
<b>Total</b>	<b>0.6409</b>	<b>6.3685</b>	<b>7.1669</b>	<b>0.0109</b>	<b>0.7579</b>	<b>0.3387</b>	<b>1.0966</b>	<b>0.4146</b>	<b>0.3116</b>	<b>0.7261</b>		<b>1,054.9611</b>	<b>1,054.9611</b>	<b>0.3412</b>		<b>1,063.4910</b>



Lower Busch Tanks - Los Angeles-South Coast County, Winter

**3.3 Grading - 2021**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0781	2.4208	0.6068	7.1400e-003	0.1669	7.8900e-003	0.1748	0.0457	7.5400e-003	0.0533		774.9501	774.9501	0.0534		776.2852
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0477	0.0326	0.3683	1.0800e-003	0.1118	9.0000e-004	0.1127	0.0296	8.3000e-004	0.0305		107.2251	107.2251	3.1600e-003		107.3040
<b>Total</b>	<b>0.1258</b>	<b>2.4534</b>	<b>0.9750</b>	<b>8.2200e-003</b>	<b>0.2787</b>	<b>8.7900e-003</b>	<b>0.2874</b>	<b>0.0754</b>	<b>8.3700e-003</b>	<b>0.0838</b>		<b>882.1752</b>	<b>882.1752</b>	<b>0.0566</b>		<b>883.5892</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2956	0.0000	0.2956	0.1617	0.0000	0.1617			0.0000			0.0000
Off-Road	0.2672	5.5636	7.9974	0.0109		0.3201	0.3201		0.3201	0.3201	0.0000	1,054.9611	1,054.9611	0.3412		1,063.4910
<b>Total</b>	<b>0.2672</b>	<b>5.5636</b>	<b>7.9974</b>	<b>0.0109</b>	<b>0.2956</b>	<b>0.3201</b>	<b>0.6157</b>	<b>0.1617</b>	<b>0.3201</b>	<b>0.4818</b>	<b>0.0000</b>	<b>1,054.9611</b>	<b>1,054.9611</b>	<b>0.3412</b>		<b>1,063.4910</b>

Lower Busch Tanks - Los Angeles-South Coast County, Winter

**3.3 Grading - 2021**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0781	2.4208	0.6068	7.1400e-003	0.1669	7.8900e-003	0.1748	0.0457	7.5400e-003	0.0533		774.9501	774.9501	0.0534		776.2852
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0477	0.0326	0.3683	1.0800e-003	0.1118	9.0000e-004	0.1127	0.0296	8.3000e-004	0.0305		107.2251	107.2251	3.1600e-003		107.3040
<b>Total</b>	<b>0.1258</b>	<b>2.4534</b>	<b>0.9750</b>	<b>8.2200e-003</b>	<b>0.2787</b>	<b>8.7900e-003</b>	<b>0.2874</b>	<b>0.0754</b>	<b>8.3700e-003</b>	<b>0.0838</b>		<b>882.1752</b>	<b>882.1752</b>	<b>0.0566</b>		<b>883.5892</b>

**3.4 Trenching - 2021**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3178	3.2483	3.9180	5.4000e-003		0.1880	0.1880		0.1730	0.1730		522.9806	522.9806	0.1691		527.2092
<b>Total</b>	<b>0.3178</b>	<b>3.2483</b>	<b>3.9180</b>	<b>5.4000e-003</b>		<b>0.1880</b>	<b>0.1880</b>		<b>0.1730</b>	<b>0.1730</b>		<b>522.9806</b>	<b>522.9806</b>	<b>0.1691</b>		<b>527.2092</b>

Lower Busch Tanks - Los Angeles-South Coast County, Winter

**3.4 Trenching - 2021**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0477	0.0326	0.3683	1.0800e-003	0.2090	9.0000e-004	0.2099	0.0535	8.3000e-004	0.0543		107.2251	107.2251	3.1600e-003		107.3040
<b>Total</b>	<b>0.0477</b>	<b>0.0326</b>	<b>0.3683</b>	<b>1.0800e-003</b>	<b>0.2090</b>	<b>9.0000e-004</b>	<b>0.2099</b>	<b>0.0535</b>	<b>8.3000e-004</b>	<b>0.0543</b>		<b>107.2251</b>	<b>107.2251</b>	<b>3.1600e-003</b>		<b>107.3040</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1329	3.0352	4.0986	5.4000e-003		0.2127	0.2127		0.2127	0.2127	0.0000	522.9806	522.9806	0.1691		527.2092
<b>Total</b>	<b>0.1329</b>	<b>3.0352</b>	<b>4.0986</b>	<b>5.4000e-003</b>		<b>0.2127</b>	<b>0.2127</b>		<b>0.2127</b>	<b>0.2127</b>	<b>0.0000</b>	<b>522.9806</b>	<b>522.9806</b>	<b>0.1691</b>		<b>527.2092</b>

Lower Busch Tanks - Los Angeles-South Coast County, Winter

**3.4 Trenching - 2021**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0477	0.0326	0.3683	1.0800e-003	0.2090	9.0000e-004	0.2099	0.0535	8.3000e-004	0.0543		107.2251	107.2251	3.1600e-003		107.3040
<b>Total</b>	<b>0.0477</b>	<b>0.0326</b>	<b>0.3683</b>	<b>1.0800e-003</b>	<b>0.2090</b>	<b>9.0000e-004</b>	<b>0.2099</b>	<b>0.0535</b>	<b>8.3000e-004</b>	<b>0.0543</b>		<b>107.2251</b>	<b>107.2251</b>	<b>3.1600e-003</b>		<b>107.3040</b>

**3.5 Building Construction - 2021**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2028	9.7312	7.6677	0.0140		0.4556	0.4556		0.4310	0.4310		1,270.9336	1,270.9336	0.3309		1,279.2054
<b>Total</b>	<b>1.2028</b>	<b>9.7312</b>	<b>7.6677</b>	<b>0.0140</b>		<b>0.4556</b>	<b>0.4556</b>		<b>0.4310</b>	<b>0.4310</b>		<b>1,270.9336</b>	<b>1,270.9336</b>	<b>0.3309</b>		<b>1,279.2054</b>

Lower Busch Tanks - Los Angeles-South Coast County, Winter

**3.5 Building Construction - 2021**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	6.3800e-003	0.1938	0.0562	5.0000e-004	0.0128	4.1000e-004	0.0132	3.6900e-003	3.9000e-004	4.0800e-003		53.4691	53.4691	3.4500e-003		53.5554
Worker	0.0191	0.0131	0.1473	4.3000e-004	0.0447	3.6000e-004	0.0451	0.0119	3.3000e-004	0.0122		42.8900	42.8900	1.2600e-003		42.9216
<b>Total</b>	<b>0.0255</b>	<b>0.2068</b>	<b>0.2035</b>	<b>9.3000e-004</b>	<b>0.0575</b>	<b>7.7000e-004</b>	<b>0.0583</b>	<b>0.0156</b>	<b>7.2000e-004</b>	<b>0.0163</b>		<b>96.3592</b>	<b>96.3592</b>	<b>4.7100e-003</b>		<b>96.4770</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0915	9.5698	7.7496	0.0140		0.4654	0.4654		0.4497	0.4497	0.0000	1,270.9336	1,270.9336	0.3309		1,279.2054
<b>Total</b>	<b>1.0915</b>	<b>9.5698</b>	<b>7.7496</b>	<b>0.0140</b>		<b>0.4654</b>	<b>0.4654</b>		<b>0.4497</b>	<b>0.4497</b>	<b>0.0000</b>	<b>1,270.9336</b>	<b>1,270.9336</b>	<b>0.3309</b>		<b>1,279.2054</b>

Lower Busch Tanks - Los Angeles-South Coast County, Winter

**3.5 Building Construction - 2021**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	6.3800e-003	0.1938	0.0562	5.0000e-004	0.0128	4.1000e-004	0.0132	3.6900e-003	3.9000e-004	4.0800e-003		53.4691	53.4691	3.4500e-003		53.5554
Worker	0.0191	0.0131	0.1473	4.3000e-004	0.0447	3.6000e-004	0.0451	0.0119	3.3000e-004	0.0122		42.8900	42.8900	1.2600e-003		42.9216
<b>Total</b>	<b>0.0255</b>	<b>0.2068</b>	<b>0.2035</b>	<b>9.3000e-004</b>	<b>0.0575</b>	<b>7.7000e-004</b>	<b>0.0583</b>	<b>0.0156</b>	<b>7.2000e-004</b>	<b>0.0163</b>		<b>96.3592</b>	<b>96.3592</b>	<b>4.7100e-003</b>		<b>96.4770</b>

**3.6 Paving - 2021**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5451	5.6132	6.1648	9.1300e-003		0.3105	0.3105		0.2856	0.2856		883.7936	883.7936	0.2858		890.9395
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>0.5451</b>	<b>5.6132</b>	<b>6.1648</b>	<b>9.1300e-003</b>		<b>0.3105</b>	<b>0.3105</b>		<b>0.2856</b>	<b>0.2856</b>		<b>883.7936</b>	<b>883.7936</b>	<b>0.2858</b>		<b>890.9395</b>

Lower Busch Tanks - Los Angeles-South Coast County, Winter

**3.6 Paving - 2021**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0382	0.0261	0.2946	8.6000e-004	0.0894	7.2000e-004	0.0901	0.0237	6.7000e-004	0.0244		85.7801	85.7801	2.5200e-003		85.8432
<b>Total</b>	<b>0.0382</b>	<b>0.0261</b>	<b>0.2946</b>	<b>8.6000e-004</b>	<b>0.0894</b>	<b>7.2000e-004</b>	<b>0.0901</b>	<b>0.0237</b>	<b>6.7000e-004</b>	<b>0.0244</b>		<b>85.7801</b>	<b>85.7801</b>	<b>2.5200e-003</b>		<b>85.8432</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2239	4.7579	6.9028	9.1300e-003		0.2908	0.2908		0.2908	0.2908	0.0000	883.7936	883.7936	0.2858		890.9395
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>0.2239</b>	<b>4.7579</b>	<b>6.9028</b>	<b>9.1300e-003</b>		<b>0.2908</b>	<b>0.2908</b>		<b>0.2908</b>	<b>0.2908</b>	<b>0.0000</b>	<b>883.7936</b>	<b>883.7936</b>	<b>0.2858</b>		<b>890.9395</b>

Lower Busch Tanks - Los Angeles-South Coast County, Winter

**3.6 Paving - 2021**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0382	0.0261	0.2946	8.6000e-004	0.0894	7.2000e-004	0.0901	0.0237	6.7000e-004	0.0244		85.7801	85.7801	2.5200e-003		85.8432
<b>Total</b>	<b>0.0382</b>	<b>0.0261</b>	<b>0.2946</b>	<b>8.6000e-004</b>	<b>0.0894</b>	<b>7.2000e-004</b>	<b>0.0901</b>	<b>0.0237</b>	<b>6.7000e-004</b>	<b>0.0244</b>		<b>85.7801</b>	<b>85.7801</b>	<b>2.5200e-003</b>		<b>85.8432</b>

**3.7 Architectural Coating - 2021**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.2781					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
<b>Total</b>	<b>0.4970</b>	<b>1.5268</b>	<b>1.8176</b>	<b>2.9700e-003</b>		<b>0.0941</b>	<b>0.0941</b>		<b>0.0941</b>	<b>0.0941</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0193</b>		<b>281.9309</b>



Lower Busch Tanks - Los Angeles-South Coast County, Winter

**3.7 Architectural Coating - 2021**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	4.7700e-003	3.2600e-003	0.0368	1.1000e-004	0.0112	9.0000e-005	0.0113	2.9600e-003	8.0000e-005	3.0500e-003		10.7225	10.7225	3.2000e-004		10.7304
<b>Total</b>	<b>4.7700e-003</b>	<b>3.2600e-003</b>	<b>0.0368</b>	<b>1.1000e-004</b>	<b>0.0112</b>	<b>9.0000e-005</b>	<b>0.0113</b>	<b>2.9600e-003</b>	<b>8.0000e-005</b>	<b>3.0500e-003</b>		<b>10.7225</b>	<b>10.7225</b>	<b>3.2000e-004</b>		<b>10.7304</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.2781					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0594	1.3570	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	281.4481	281.4481	0.0193		281.9309
<b>Total</b>	<b>0.3375</b>	<b>1.3570</b>	<b>1.8324</b>	<b>2.9700e-003</b>		<b>0.0951</b>	<b>0.0951</b>		<b>0.0951</b>	<b>0.0951</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0193</b>		<b>281.9309</b>

Lower Busch Tanks - Los Angeles-South Coast County, Winter

**3.7 Architectural Coating - 2021**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	4.7700e-003	3.2600e-003	0.0368	1.1000e-004	0.0112	9.0000e-005	0.0113	2.9600e-003	8.0000e-005	3.0500e-003		10.7225	10.7225	3.2000e-004		10.7304
<b>Total</b>	<b>4.7700e-003</b>	<b>3.2600e-003</b>	<b>0.0368</b>	<b>1.1000e-004</b>	<b>0.0112</b>	<b>9.0000e-005</b>	<b>0.0113</b>	<b>2.9600e-003</b>	<b>8.0000e-005</b>	<b>3.0500e-003</b>		<b>10.7225</b>	<b>10.7225</b>	<b>3.2000e-004</b>		<b>10.7304</b>

**4.0 Operational Detail - Mobile**

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**4.1 Mitigation Measures Mobile**

Lower Busch Tanks - Los Angeles-South Coast County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891

5.0 Energy Detail

Historical Energy Use: N

Lower Busch Tanks - Los Angeles-South Coast County, Winter

**5.1 Mitigation Measures Energy**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

**5.2 Energy by Land Use - NaturalGas**

**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

Lower Busch Tanks - Los Angeles-South Coast County, Winter

**5.2 Energy by Land Use - Natural Gas**

**Mitigated**

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.4000e-003	1.0000e-005	1.0200e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.1900e-003	2.1900e-003	1.0000e-005		2.3300e-003
Unmitigated	4.4000e-003	1.0000e-005	1.0200e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.1900e-003	2.1900e-003	1.0000e-005		2.3300e-003

Lower Busch Tanks - Los Angeles-South Coast County, Winter

**6.2 Area by SubCategory**

**Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	7.6000e-004					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.5400e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-004	1.0000e-005	1.0200e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.1900e-003	2.1900e-003	1.0000e-005		2.3300e-003
<b>Total</b>	<b>4.4000e-003</b>	<b>1.0000e-005</b>	<b>1.0200e-003</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>2.1900e-003</b>	<b>2.1900e-003</b>	<b>1.0000e-005</b>		<b>2.3300e-003</b>

**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	7.6000e-004					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.5400e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-004	1.0000e-005	1.0200e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.1900e-003	2.1900e-003	1.0000e-005		2.3300e-003
<b>Total</b>	<b>4.4000e-003</b>	<b>1.0000e-005</b>	<b>1.0200e-003</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>2.1900e-003</b>	<b>2.1900e-003</b>	<b>1.0000e-005</b>		<b>2.3300e-003</b>

**7.0 Water Detail**

## Lower Busch Tanks - Los Angeles-South Coast County, Winter

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**7.1 Mitigation Measures Water****8.0 Waste Detail**

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**8.1 Mitigation Measures Waste****9.0 Operational Offroad**

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Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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**10.0 Stationary Equipment**

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**Fire Pumps and Emergency Generators**

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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**Boilers**

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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**User Defined Equipment**

Equipment Type	Number
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**11.0 Vegetation**

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**APPENDIX B**  
**CULTURAL RECORDS SEARCH**



9/17/19

22 w/in 1 mile

21 pre  
1 hist.

### Resource List

Lower Busch Tank 3DPWI52201

Primary No.	Trinomial	Other IDs	Type	Age	Attribute codes	Recorded by	Reports
P-19-000198	CA-LAN-000198	Resource Name - Zuma Creek "D"; Other - LA-16	Site	Prehistoric	AP15 (Habitation debris)	1953 (EBERHART)	LA-00549, LA-00832, LA-02636, LA-02786, LA-02914, LA-02973, LA-03583, LA-04288, LA-05307, LA-05388, LA-08556, LA-08568, LA-09685, LA-09686, LA-10466, LA-10649, LA-12326
P-19-000200	CA-LAN-000200	Resource Name - Zuma Creek "F"; Other - LA-18	Site	Prehistoric, Unknown	AP02 (Lithic scatter)	1953 (Hal Eberhart)	LA-00117, LA-00278, LA-03583, LA-05276, LA-05280, LA-05665, LA-08556, LA-08621, LA-09385, LA-09386, LA-09685, LA-11564, LA-12326
P-19-000201	CA-LAN-000201	Resource Name - Zuma Creek Site "G"; Other - LA-19; Zuma Beach Site	Site	Prehistoric	AP09 (Burials); AP15 (Habitation debris)	1951 (Peck); 1995 (Chester King)	LA-00117, LA-00278, LA-01538, LA-03234, LA-03583, LA-04779, LA-04798, LA-05276, LA-08556, LA-08621, LA-09385, LA-09386, LA-09685, LA-10460, LA-11563, LA-11564, LA-12193, LA-12326, VN-01359
P-19-000292	CA-LAN-000292		Site	Prehistoric	AP02 (Lithic scatter); AP09 (Burials); AP15 (Habitation debris); AP16 (Other) - Shell beads	1963 (N. Leonard); 1998 (R. Wlodarski, D. Larson, HEART)	LA-00549, LA-02845, LA-03583, LA-04032, LA-08842, LA-09687, LA-11536, LA-12326, LA-12582

~~Pre~~ Pre  
~~Historic~~ historic

**Resource List**

Lower Busch Tank 3DPWI52201

Primary No.	Trinomial	Other IDs	Type	Age	Attribute codes	Recorded by	Reports
P-19-000335	CA-LAN-000335	Resource Name - Morning View Site	Site	Prehistoric	AP02 (Lithic scatter); AP15 (Habitation debris); AP16 (Other)	1965 (C. Singer); 1966 (Charthoff & Colton); 1994 (Robert Wlodarski, HEART); 1998 (C. King, Topanga Anthropological Consultants)	LA-01538, LA-01724, LA-02834, LA-03099, LA-03273, LA-03534, LA-03538, LA-03583, LA-03636, LA-04026, LA-04375, LA-04376, LA-05311, LA-08287, LA-08569, LA-08596, LA-08617, LA-08621, LA-08849, LA-08918, LA-08978, LA-09385, LA-09386, LA-09688, LA-10365, LA-10413, LA-10464, LA-10748, LA-10847, LA-11508, LA-11563, LA-11564, LA-11626, LA-12326, LA-12637, LA-12686
P-19-000513	CA-LAN-000513		Site	Prehistoric	AP02 (Lithic scatter)	1972 (Decker); 1982 (C.A. Singer); 2000 (C. King, Topanga Anthropological Consultants)	LA-01120, LA-01194, LA-01470, LA-01678, LA-02834, LA-02931, LA-03034, LA-03351, LA-03481, LA-03583, LA-03636, LA-04026, LA-05311, LA-05659, LA-08566, LA-08918, LA-10365, LA-10413, LA-10847, LA-11626, LA-12637, LA-12686
P-19-001012	CA-LAN-001012	Resource Name - Equivocado Site	Site	Prehistoric	AP02 (Lithic scatter)	1979 (Clay A. Singer)	LA-00434, LA-00549, LA-01538, LA-01646, LA-02845, LA-06895, LA-08556, LA-12326

# Resource List

Lower Busch Tank 3DPWI52201

Primary No.	Trinomial	Other IDs	Type	Age	Attribute codes	Recorded by	Reports
P-19-001121	CA-LAN-001121		Site	Prehistoric	AP02 (Lithic scatter)	1981 (C.C. Martinez & C.A. Singer); 1999 (C. King, Topanga Anthropological Consultants)	LA-01103, LA-02834, LA-05267, LA-05280, LA-05282, LA-08556, LA-08621, LA-09385, LA-09386, LA-09685, LA-10847, LA-11508, LA-11563, LA-11564, LA-12326, LA-12773
P-19-002048	CA-LAN-002048	Resource Name - CAVALLERI RD. SITE	Site	Prehistoric	AP02 (Lithic scatter); AP15 (Habitation debris)	1992 (Chester King, Topanga Anthropological Consultants)	LA-02845, LA-03456, LA-03480
P-19-002143	CA-LAN-002143	Resource Name - 30411 PCH; Other - 93-184	Site	Prehistoric	AP02 (Lithic scatter); AP15 (Habitation debris)	1993 (Chester King, Topanga Anthropological Consultants)	LA-02885, LA-02912, LA-08287, LA-08596, LA-08617, LA-08849, LA-08978, LA-09688, LA-10464, LA-10748, LA-11508, LA-12326, LA-13117
P-19-002153	CA-LAN-002153H	Resource Name - NPS 2; Other - ZUMA WATER SYSTEM	Site	Historic	AH06 (Water conveyance system); AH08 (Dams); AH11 (Walls/fences)	1993 (Chester King, Topanga Anthropological Consultants); 1999 (Chester King, Topanga Anthropological Consultants)	LA-03587, LA-08842, VN-01462
<del>P-19-002157</del>	<del>CA-LAN-002157H</del>	<del>Resource Name - San Gabriel Peak Lookout;</del> <del>USFS 05-01-51-71</del> Canyon view	Site	<del>Unknown</del> Prehistoric	<del>AH02 (Foundations/structure);</del> <del>AP02 (Lithic scatter);</del> <del>AP11 (Walls/fences)</del>	<del>1993 (David Ken, USFS)</del> 1999	FAR/SHELL LITHIC
P-19-002381	CA-LAN-002381	Resource Name - VS-778.2	Site	Prehistoric	AP02 (Lithic scatter)	1991 (Dana E. Bleitz and Brad Yocum, CSU Northridge Center for Public Archaeology); 1999 (Chester King, Topanga Anthropological Consultants)	LA-03351, LA-08918, LA-10365, LA-10413, LA-11626
P-19-002382	CA-LAN-002382	Resource Name - VS-778.4	Site	Prehistoric	AP02 (Lithic scatter); AP12 (Quarry)	1991 (Dana E. Bleitz, CSUN Center for Public Archaeology); 1999 (Chester King, Topanga Anthropological Consultants)	LA-03351, LA-08918, LA-10365, LA-10413, LA-11626
P-19-002384	CA-LAN-002384	Resource Name - DEB-51	Site	Prehistoric	AP02 (Lithic scatter)	1996 (Dana E. Bleitz and Frank B. Bleitz, Ecofact)	LA-03276, LA-11508, LA-12326

## Resource List

Lower Busch Tank 3DPWI52201

Primary No.	Trinomial	Other IDs	Type	Age	Attribute codes	Recorded by	Reports
P-19-002813	CA-LAN-002813	Resource Name - 29700 Baden Place; Other - 00-15	Site	Prehistoric	AP02 (Lithic scatter)	2000 (Chester King, Topanga Anthropological Consultants)	LA-10415, LA-11508
P-19-002814	CA-LAN-002814	Resource Name - 30228 Morning View; Other - 00-14	Site	Prehistoric	AP02 (Lithic scatter); AP15 (Habitation debris)	1999 (Chester King, Topanga Anthropological Consultants)	LA-04780, LA-08558, LA-09530, LA-11508
P-19-002816	CA-LAN-002816	Resource Name - 30385 Morning View; Other - 00-13	Site	Prehistoric	AP02 (Lithic scatter)	1998 (Chester King, Topanga Anthropological Consultants)	
P-19-002839	CA-LAN-002839H	Resource Name - AE-AC-2004H	Site	Historic	AH04 (Privies/dumps/trash scatters)	2000 (J. Paniagua, H. Brewer, Applied Earthworks)	LA-07952
P-19-003329	CA-LAN-003329	Resource Name - 2-13:1; Other - 021400A	Site	Prehistoric	AP02 (Lithic scatter)	1999 (Chester King, Topanga Anthropological Consultants)	LA-10210
P-19-100108		Resource Name - VS-778.3	Other	Prehistoric	AP02 (Lithic scatter)	1991 (Dana Bleitz and Brad Yocum, CSUN)	LA-03351, LA-08918, LA-10365, LA-10413, LA-11626
P-19-100109		Resource Name - VS-778.5	Other	Prehistoric	AP02 (Lithic scatter)	1991 (Dana E. Bleitz and Brad Yocum, CSUN)	LA-03351, LA-08566, LA-08918, LA-10365, LA-10413, LA-11626
P-19-100398		Resource Name - 00-6 6020 Bonsall	Other	Prehistoric	AP02 (Lithic scatter)	1996 (C. King, Topanga Anthropological Consultants)	LA-08842
P-19-100399		Resource Name - 00-5 30254 Morning View	Other	Prehistoric	AP02 (Lithic scatter)	1998 (C. King, Topanga Anthropological Consultants)	LA-11508
P-19-100400		Resource Name - 00-4 30601 Morning View #2	Other	Prehistoric	AP02 (Lithic scatter)	1998 (C. King, Topanga Anthropological Consultants)	LA-08566, LA-10413, LA-12686
P-19-100401		Resource Name - 00-3 30601 Morning View #1	Other	Prehistoric	AP02 (Lithic scatter)	1998 (C. King, Topanga Anthropological Consultants)	LA-10413, LA-12686
P-19-100428		Resource Name - Waldrip 1	Other	Prehistoric	AP15 (Habitation debris)	2001 (R. Wlodarski, HEART)	LA-05306, LA-11508

100040 -

Prehistoric

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**APPENDIX C**  
**GEOTECHNICAL INVESTIGATION REPORT**



GEOTECHNICAL EVALUATION  
LOWER BUSCH TANK PROJECT  
MALIBU, CALIFORNIA

PREPARED FOR:  
Cannon  
3420 Ocean Park Boulevard, Suite 3040  
Santa Monica, California 90404

PREPARED BY:  
Ninyo & Moore Geotechnical and Environmental Sciences Consultants  
475 Goddard, Suite 200  
Irvine, California 92618

April 25, 2012  
Project No. 208543001

April 25, 2012  
Project No. 208543001

Mr. J. Eric Porkert, P.E.  
Cannon  
3420 Ocean Park Boulevard, Suite 3040  
Santa Monica, California 90404

Subject: Geotechnical Evaluation  
Lower Busch Tank Project  
Malibu, California

Dear Mr. Porkert:

In accordance with your request and authorization, Ninyo & Moore has performed a geotechnical evaluation for the proposed new Lower Busch Tank Project located in Malibu, California. This report presents the results of our subsurface evaluation and our conclusions and recommendations regarding the geotechnical aspects of the design and construction of the subject reservoir project.

Ninyo & Moore appreciates the opportunity to be of service on this project.

Respectfully submitted,  
NINYO & MOORE



Michael Mowen, PE  
Project Engineer



Lawrence Jansen, PG, CEG  
Principal Geologist

MPM/LTJ/CAP/DBC/lr/sc

Distribution: (1) Addressee (via e-mail)



Daniel Chu, PhD, PE, GE  
Chief Geotechnical Engineer



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## 1. INTRODUCTION

In accordance with your request and authorization, we have performed a geotechnical evaluation for the proposed new Lower Busch Tank in Malibu, California. The purpose of our study was to evaluate the soil and geologic conditions on site and provide geotechnical recommendations for the design and construction of the planned reservoir. This report presents our findings, conclusions, and recommendations regarding the subject project.

A previous evaluation of the site was performed by the Geotechnical and Materials Engineering Division of the County of Los Angeles Department of Public Works. A summary of their findings and conclusions was presented in the referenced report (COLA DPW, 2003).

## 2. SCOPE OF SERVICES

Our scope of services included the following:

- Project coordination and planning, including scheduling of the subsurface exploration.
- Review of readily available background materials, including published geologic maps and literature, stereoscopic aerial photographs, and other materials provided by the client including the geotechnical report prepared by the County.
- Site reconnaissance to locate the borings and test pits, and coordination with Underground Service Alert for underground utility location.
- Subsurface exploration consisting of drilling, sampling, and logging of two small-diameter borings to depths of approximately 26½ feet. A representative of this firm continuously logged the borings. Bulk and relatively undisturbed samples were obtained at selected intervals.
- Excavation of test pits to locate existing leach fields.
- Laboratory testing of selected representative soil samples to evaluate in-situ moisture, expansion index, percentage of particles finer than the No. 200 sieve, R-value, and corrosivity.
- Data compilation and engineering analysis of the information obtained from our background review, subsurface evaluation, and laboratory testing.
- Preparation of this geotechnical report presenting our findings, conclusions, and recommendations for the planned construction.

### 3. SITE DESCRIPTION

The reservoir site is located at 5731 Busch Drive in Malibu, California (Figure 1). Existing improvements at the site consist of a partially buried, 300,000-gallon-concrete tank, booster pumps and associated underground pipelines, a small concrete masonry block building that houses electrical panels and a restroom, and buried leach lines for the restroom. The existing cylindrical concrete water storage tank has a diameter of approximately 52 feet and a height of approximately 21 feet, including approximately 4 feet buried below grade. Significant cracking of the shell of the existing tank was observed during our site reconnaissance.

The site is located on a relatively flat graded parcel on an elevated wave-cut terrace that slopes gently south. Erosion has dissected the terrace surface resulting in canyon areas east and west of the site. Elevations at the site range from approximately 315 to 320 feet above mean sea level. The site is paved with asphalt concrete, which is old with raveling, cracking, and rutting. Residences border the project site to the north, west, and south with multiple trees located near the property lines. Busch Drive borders the project site to the east.

### 4. PROJECT DESCRIPTION

We understand that the project will involve demolition of the existing tank and construction of a new tank in its place. Based on information provided by a request for proposal (RFP) issued by the County, the existing tank's concrete wall material is in poor condition due to extensive cracking attributed to an alkali-silica reaction between the cement paste and silica aggregates. Additionally, a previous seismic analysis found that the tank did not meet American Water Works Association (AWWA) standards and is, therefore, structurally inadequate.

The tank design has not yet been completed. Based on information provided by project engineers, we understand that the new tank will consist of a welded-steel tank or reinforced concrete tank supported on a conventional ring foundation. We also understand that the new tank will be constructed with a footprint in the same general vicinity of the existing tank. In addition to the new storage tank, we understand that the pavement surrounding the reservoir will be reconstructed.

## 5. SUBSURFACE EVALUATION AND LABORATORY TESTING

Our subsurface exploration was conducted on March 20 and March 21, 2012. The subsurface evaluation consisted of the drilling, logging, and sampling of two, 8-inch-diameter, exploratory borings to depths up to of approximately 26½ feet using a truck-mounted drill rig with continuous flight, hollow-stem augers. The approximate locations of the exploratory borings are shown on Figure 2. The purposes of the exploratory borings were to observe the subsurface conditions and to collect bulk and relatively undisturbed samples for laboratory testing. Excavated materials were visually classified in the field and samples were transported to our laboratory for testing. Logs of the exploratory borings are presented in Appendix A.

Additionally, exploratory test pits were excavated to depths of approximately 6 feet using a rubber-tire backhoe. The purpose of the exploratory test pits was to locate existing leach field lines in the southwest portion of the site as indicated on the provided site plan (ASL, 1989). Two leach lines were located in close proximity to locations indicated on the plan at a depth of approximately 5½ feet below the existing grade. Locations of the east ends of the leach fields were staked in the field at the time of the test pit excavations. The approximate locations of the leach field lines are indicated on Figure 2.

Laboratory testing was performed on representative samples to evaluate the in-situ moisture and dry density, expansion index, percentage of particles finer than the No. 200 sieve, R-value, and corrosivity. In-situ moisture and dry density results are presented on the boring logs in Appendix A. The remaining test results are presented in Appendix B.

In accordance with the request of the County, we also performed analytical testing to check for the presence of E. Coli and ammonia near the leach field. Soil samples at various depths from Boring B-2 were evaluated. Results of the analytical testing are presented in Appendix C.

## 6. GEOLOGY AND SUBSURFACE CONDITIONS

### 6.1. Regional Geologic Setting

The project site is located within the Transverse Ranges geomorphic province of southern California (Norris and Webb, 1990). The Transverse Ranges include several roughly east-west trending mountain ranges with intervening valleys. Middle to late Cenozoic nonmarine sedimentary rocks overlie a crystalline bedrock complex and have been uplifted and moderately to deeply dissected. Valleys formed by the erosion of sedimentary rocks have been infilled with variable thicknesses of locally derived alluvium. The Transverse Ranges geomorphic province is traversed by several major active faults. The active Malibu Coast fault zone, which is mapped approximately one mile from the site, consists of a series of disconnected, east-west trending fault segments that extend from the southern boundary of the western Transverse Ranges along the Santa Monica Mountains and merges with the active Santa Monica, Hollywood, Raymond Hill, Sierra Madre, and Cucamonga faults of the central Transverse Ranges.

### 6.2. Site Geology

Materials encountered during our subsurface exploration generally consisted of terrace deposits underlain by formational material. A general description of the subsurface materials is provided below. More detailed descriptions of the subsurface materials are presented in the boring logs in Appendix A.

Terrace deposits were encountered in the exploratory borings to depths ranging from approximately 14½ to 20 feet. The terrace deposits generally consisted of brown and grayish brown, damp to moist, stiff, sandy clay, and reddish brown and yellowish brown, damp to saturated, medium dense to dense, sandy silt, poorly graded sand with silt, silty sand, and clayey sand.

Weakly cemented bedrock of the Trancas Formation was encountered beneath the terrace deposits to the explored depth of approximately 26½ feet. The formational material general-

ly consisted of mottled grayish brown and reddish brown, damp to moist, fine-grained, weakly cemented sandstone.

### 6.3. Groundwater

Groundwater was encountered during our evaluation at depths of approximately 18 feet in Boring B-1 and approximately 12½ feet in Boring B-2. Groundwater encountered in the borings are suspected to be a result of perched groundwater on the underlying formational bedrock. The California Geological Survey (CGS) (formerly the California Division of Mines and Geology [CDMG]) prepared a historical high groundwater contour map for this area as presented in the Seismic Hazard Evaluation of the Point Dume Quadrangle (CDMG, 2002a). The historical high groundwater elevation is not mapped at the site.

Fluctuations in groundwater levels may be encountered as a result of variations in seasonal precipitation, irrigation, leaking pipes, groundwater pumping, variable soil conditions and other factors.

## 7. FAULTING AND SEISMICITY

The subject site is not mapped within a State of California Earthquake Fault Zone (formerly known as an Alquist-Priolo Special Studies Zone) (Hart and Bryant, 1997). However, the site is located in a seismically active area, as is the majority of southern California, and the potential for strong ground motion in the project area is considered significant during the design life of the proposed structure. Figure 3 shows the approximate site location relative to the major faults in the region. The active Malibu Coast fault is located approximately 1.1 miles north of the site.

Table 1 lists selected principal known active faults that may affect the subject site and the maximum moment magnitude ( $M_{max}$ ) as published by Cao, et al. (2003) for the CGS. The approximate fault-to-site distances were calculated using the computer program FRISKSP (Blake, 2001).

Table 1 – Principal Active Faults

Fault	Approximate Fault-to-Site Distance <sup>1</sup> miles (kilometers)	Maximum Moment Magnitude <sup>2</sup> (M <sub>max</sub> )
Malibu Coast	1.1 (1.8)	6.7
Anacapa-Dume	3.8 (6.1)	7.5
Santa Monica	6.5 (10.4)	6.6
Palos Verdes	15.0 (24.1)	7.3
Northridge (East Oak Ridge)	15.7 (25.3)	7.0
Simi-Santa Rosa	15.9 (25.6)	7.0
Oak Ridge (Onshore)	20.6 (33.1)	7.0
Santa Susana	22.9 (36.9)	6.7
Hollywood	23.1 (37.2)	6.4
Oak Ridge (Blind Thrust Offshore)	24.6 (39.6)	7.1
Holser	24.7 (39.8)	6.5
Notes: <sup>1</sup> Blake, 2001 <sup>2</sup> Cao et al., 2003		

The principal seismic hazards evaluated at the subject site are surface fault rupture, ground motion, and seismically induced liquefaction. A brief description of these hazards and the potential for their occurrences at the site are discussed below.

### 7.1. Ground Rupture

Based on our review of the referenced literature and our site reconnaissance, no active faults are known to cross the project site. Therefore, the probability of damage from surface fault rupture is considered to be low. However, cracking of the ground surface as a result of nearby seismic events is possible.

### 7.2. Ground Motion

The 2010 California Building Code (CBC) recommends that the design of structures be based on the horizontal peak ground acceleration (PGA) having a 2 percent probability of exceedance in 50 years, which is defined as the Maximum Considered Earthquake (MCE).



The statistical return period for  $PGA_{MCE}$  is approximately 2,475 years. The  $PGA_{MCE}$  for the site was calculated as 0.90g using the United States Geological Survey (USGS, 2011) ground motion calculator (web-based). The design PGA was estimated to be 0.60g using the USGS ground motion calculator. These estimates of ground motion do not include near-source factors that may be applicable to the design of structures on site.

### 7.3. Liquefaction

Liquefaction is the phenomenon in which loosely deposited granular soils with silt and clay contents of less than 35 percent and non-plastic silts located below the water table undergo rapid loss of shear strength when subjected to strong earthquake-induced ground shaking. Ground shaking of sufficient duration results in the loss of grain-to-grain contact due to a rapid rise in pore water pressure, causing the soil to behave as a fluid for a short period of time. Liquefaction is known generally to occur in saturated or near-saturated cohesionless soils at depths shallower than 50 feet below the ground surface. Factors known to influence liquefaction potential include composition and thickness of soil layers, grain size, relative density, groundwater level, degree of saturation, and both intensity and duration of ground shaking.

The site is not located in an area mapped as potentially susceptible to liquefaction (CDMG, 2002b). However, the previous geotechnical evaluation performed by the County indicates that due to the possibility of rising groundwater within the underlying low density, sandy soil layers, there exists a high potential for liquefaction (COLA DPW, 2003). However, no liquefaction analysis was presented in the County report.

We performed liquefaction analysis using the boring and laboratory data, the peak ground acceleration estimated for the design seismic event, and the computer program LiquefyPro (CivilTech Software, 2008). The groundwater level used for the analysis was conservatively estimated at approximately 5 feet below the existing ground surface. We have analyzed the liquefaction potential for Boring B-1 and Boring B-2. Due to the relatively dense nature of the terrace deposits and shallow depth to Trancas Formation, our analysis indicated that the



potential of soil liquefaction on the site is low. Results of our analysis are presented in Appendix D.

#### 7.4. Dynamic Settlement

Dynamic settlement occurs due to the dissipation of excess pore water pressure that develops during the earthquake event. The settlement of liquefied layers triggers settlement in the overlying non-liquefied layers that eventually manifests into ground subsidence. In order to estimate the amount of post-earthquake settlement, the method proposed by Tokimatsu and Seed (1987) is generally used in which the seismically induced cyclic stress ratios and corrected blow counts (N-values) are correlated to the volumetric strain of the soil. The amount of soil settlement during a strong seismic event depends on the thickness of the liquefiable layers and the density and/or consistency of the soils. Based on our analyses described above, approximately ½ inch of post-earthquake dynamic settlement is estimated to occur at the location of Boring B-2.

#### 7.5. Lateral Spreading

Lateral spreading of the ground surface during an earthquake usually takes place along weak shear zones that have formed within a liquefiable soil layer. Lateral spread has generally been observed to take place in the direction of a free-face (i.e., retaining wall, slope, channel), but has also been observed to a lesser extent on ground surfaces with gentle slopes. An empirical model developed by Youd, et al. (2002) is typically used to predict the amount of horizontal ground displacement within a site. For sites located in proximity to a free-face, the amount of lateral ground displacement is strongly correlated with the distance of the site from the free-face. Other factors such as earthquake magnitude, distance from the earthquake epicenter, thickness of the liquefiable layers, and the fines content and particle sizes of the liquefiable layers also affect the amount of lateral ground displacement. Based on the relative density of the potentially liquefiable soil layers, the project site is not considered susceptible to seismically induced lateral spread.

## 8. CONCLUSIONS

Based on the results of our geotechnical evaluation, it is our opinion the proposed reservoir construction is feasible from a geotechnical perspective. There are no known geotechnical conditions that would preclude the proposed construction provided the recommendations of this report and appropriate construction practices are followed. Construction considerations for the proposed project include the following:

- Excavations in the on-site near-surface soil are anticipated to encounter fine-grained clayey and silty soil underlain by granular soils consisting of sand with some gravel. The on-site sandy soils should be suitable for re-use as backfill once moisture conditioned to near optimum moisture content. Cobble-size material (diameter of 6 inches or more) may be encountered, which should be removed before use as fill.
- Our laboratory expansion index test result indicated that the on-site near-surface sandy clays are highly expansive. This clay, if encountered below the existing tank, should be removed off-site.
- The new tank may be located over old utility trenches or other disturbed areas. The new tank should be supported on an approximately 3-foot-thick zone of recompacted fill.
- The granular soils encountered at the site have little cohesion and may be subject to caving. These soils should be considered Type C soils in accordance with Occupational Safety and Health Administration (OSHA) soil classifications. Trench excavations that are parallel to existing pipelines may encounter unstable pipe zone and/or trench backfill zone materials. Appropriate shoring systems for these types of soils should be considered during planning.
- In general, excavation of the on-site soil should be feasible with heavy earthmoving equipment in good working order.
- Groundwater was encountered in our exploratory borings at the time of drilling at depths of approximately 12½ and 18 feet. However, fluctuations will occur as a result of seasonal precipitation, irrigation, and other factors. As a result, groundwater may be encountered within open excavations. The contractor should be prepared to take appropriate measures to address the presence of groundwater in excavations.
- Based on our review of published geologic maps and aerial photographs, there are no known active faults, landslides, or other geologic hazards that cross the project site. A design PGA of 0.60g is calculated for the site.

## Los Angeles County Statement 111

In accordance with Section 111 of the Los Angeles County Building Code, we are providing our professional opinion regarding the geologic hazards of landsliding, settlement and slippage and their impact on the proposed development. It is our professional opinion that the site for the proposed structures will not be subject to hazards from future landsliding, settlement or slippage, provided the recommendations of this report are incorporated into the design plans and are implemented during construction. Further, it is our opinion that the proposed construction and associated grading will not impact the geologic stability of properties outside the site, provided the recommendations of this report are incorporated into the design plans and are implemented during construction.

## 9. RECOMMENDATIONS

The recommendations presented in the following sections provide general geotechnical criteria regarding the design and construction of the proposed site improvements. The recommendations are based on the results of our subsurface evaluation and laboratory testing, our review of the referenced geologic materials, and our geotechnical analysis. The proposed work should be performed in conformance with the recommendations presented in this report, project specifications, and appropriate agency standards.

### 9.1. Earthwork

Based on our understanding of the project, the earthwork at the site is expected to consist of the excavation of buried structures associated with the existing tank, excavations for new tank foundations, trenching and backfilling for new pipelines, subgrade preparation for the new tank, and subgrade preparation for pavement improvements.

#### 9.1.1. Pre-Construction Conference

We recommend that a pre-construction conference be held. The owner and/or their representative, the governing agencies' representatives, the civil engineer, the project

geotechnical consultant, and the contractor should be in attendance to discuss the work plan, project schedule, and earthwork requirements.

#### 9.1.2. Clearing and Site Preparation

Abandoned buried structures associated with the existing tank should be removed and the site should be cleared of abandoned utilities (if present). The site should also be stripped of vegetation, organics, and any loose, wet, or otherwise unstable soils. Materials generated from the clearing operations should be removed from the project site and disposed of at a legal dump site. Obstructions that extend below finished grade should be removed and replaced with compacted fill.

#### 9.1.3. Subgrade Preparation for New Storage Tank

In order to provide suitable support for the proposed storage tank, we recommend that the subgrade soils beneath the new tank foundations be removed and recompacted. The removal and recompaction work should consist of: 1) removing existing on-site soil to a depth of approximately 3 feet below the bearing level of the new foundations, or to the bearing level of the existing foundations, whichever is deeper; 2) scarifying, moisture conditioning, and compacting the upper 6 inches of exposed subgrade soils to 90 percent relative compaction per ASTM D 1557; and 3) replacing with granular fill compacted to 95 percent relative compaction per ASTM D 1557. The appropriate depth of removal should be evaluated in the field during construction by the project geotechnical consultant. The lateral limits of removal should extend beyond the footprint of the wall sufficient to provide a 1:1 (horizontal to vertical) prism of compacted fill beneath the foundations. The highly expansive clay, if encountered below the existing tank and/or within the footprint of the new tank, should be removed and disposed of at a legal dumpsite.

#### 9.1.4. Fill Material

In general, the on-site sandy soils should be suitable for re-use as fill. Fill should be free of trash, debris, roots, vegetation, or other deleterious materials. Fill should generally be

free of rocks or lumps of material in excess of 4 inches in diameter. Oversize cobbles and boulders are not considered suitable to use as structural fill and should be screened out of material for use as fill. Wall backfill should consist of granular, free draining soil that conforms to Greenbook specifications for structure backfill.

If fill is imported to the site, such material should consist of clean, non-expansive, granular material. "Non-expansive" can be classified as having a "very low" expansion potential in accordance with the 2010 CBC (an Expansion Index not greater than 20 in accordance with American Society for Testing and Materials [ASTM] D 4829). The project geotechnical consultant should evaluate the materials prior to import.

#### 9.1.5. Fill Placement and Compaction

Fill placed for support of the new reservoir should be compacted in horizontal lifts to a relative compaction of 95 percent or more as evaluated by the latest edition of ASTM D 1557. Tank backfill and trench backfill should also be compacted in horizontal lifts to a relative compaction of 90 percent or more as evaluated by ASTM D 1557. Fill soils should be moisture conditioned to above the optimum moisture content. The optimum lift thickness of fill will depend on the type of compaction equipment used but generally should not exceed 8 inches in loose thickness. Special care should be taken to avoid pipe damage when compacting trench backfill above pipes. Placement and compaction of the fill soils should be in general accordance with local grading ordinances and good construction practice.

#### 9.1.6. Excavations and Shoring

Based on the subsurface exploration data, we anticipate that excavations should be feasible with heavy earthmoving equipment in good working order. Beneath the near-surface clayey material, the soil is comprised predominantly of silty sand and sandy silt. Steep excavations may be subject to caving. Temporary slopes up to 10 feet in height above groundwater should be stable at inclinations up to approximately 1:1 (horizontal to vertical). Some surficial sloughing may occur and temporary slopes should be evalu-

ated in the field at the time of construction. Temporary excavations should conform to OSHA guidelines.

Excavations that cross or are located parallel to existing pipeline trenches may encounter loose and unstable pipe zone or trench backfill materials that may be subject to caving. The contractor should anticipate potentially unstable conditions and should take appropriate measures to protect existing pipelines and other utilities in place.

We anticipate that the excavations for pipeline trenches will have vertical side walls with shoring. Shoring installed in advance of trenching or simultaneous with the excavation may be appropriate if caving is severe or damage to existing improvements is at risk.

We recommend that temporary braced shoring be designed utilizing the criteria shown on Figure 4. The recommended design lateral earth pressures do not include the loads imposed on the shoring system from raising the ground surface elevation behind the wall, soil stockpiles, construction materials, construction equipment, and other loads acting above a 1:1 (horizontal to vertical) plane extending up and back from the base of the wall. For walls subjected to the above-mentioned surcharge loads, the contractor should include the effects of these loads on the lateral pressures against the wall.

The contractor should retain a qualified and experienced engineer to design the shoring system. The shoring parameters presented in this report are minimum requirements, and the contractor should evaluate the adequacy of these parameters and make the appropriate modifications for their design.

#### 9.1.7. Excavation Bottom Stability

In general, we anticipate that the bottom of the excavations for the tank foundation and pipeline trenches will be relatively stable and should provide suitable support. Excavations that expose soft/loose soils or encounter seepage or perched groundwater may be unstable. In general, unstable bottom conditions may be mitigated by overexcavation



and replacement with compacted crushed aggregate or compacted fill beneath the bottom of the excavation to thicknesses of approximately 1 to 2 feet. If open-graded gravel is used for bottom stabilization, we recommend that the crushed rock be wrapped in filter fabric. Recommendations for stabilizing excavation bottoms should be based on evaluation in the field by the geotechnical consultant at the time of construction.

#### 9.1.8. Construction Dewatering

Groundwater was encountered in our exploratory borings at depths of approximately 12½ and 18 feet below the ground surface at the time of drilling. However, fluctuations will occur as a result of variations in seasonal precipitation, irrigation, leaking pipes, and variable soil conditions. The contractor should be prepared to take appropriate measures in the event that groundwater is encountered during excavation operations. If groundwater is encountered, disposal of groundwater should be performed in accordance with guidelines of the Regional Water Quality Control Board.

#### 9.1.9. Modulus of Soil Reaction

The modulus of soil reaction is used to characterize the stiffness of soil backfill placed at the sides of buried pipelines for the purpose of evaluating deflection caused by the weight of the backfill above the pipe. For pipelines constructed in granular fill and native materials, we recommend that a modulus of soil reaction of 1,200 pounds per square inch be used for design, provided that granular bedding material is placed adjacent to the pipe, as recommended in this report.

#### 9.1.10. Pipe Installation

We recommend that new pipelines be installed in general accordance with the latest edition of the “Greenbook” Standard Specifications for Public Works Construction and the appropriate city/agency standards. The pipeline should be supported on approximately 4 inches of granular bedding material such as crushed aggregate base or sand, and the bedding material should be placed and compacted around the pipe and 12 inches or more above the top of the pipe. Special care should be taken not to allow voids beneath

the pipe. We do not recommend the use of open-graded gravel for pipe zone material due to the potential for migration of fine-grained materials into the gravel zone. However, if gravel is used for pipe zone backfill, we recommend that the gravel be surrounded with a suitable geotextile filter fabric. Granular bedding/pipe zone material should have a sand equivalent of 30 or more. The suitability of soil to be used as bedding/pipe zone material should be evaluated by the geotechnical consultant based on laboratory testing during construction.

9.1.11. Lateral Pressures for Thrust Blocks

Thrust restraint for buried pipelines may be achieved by transferring the thrust force to the soil outside the pipe through a thrust block. Thrust blocks may be designed using the lateral passive earth pressures presented on Figure 5. Thrust blocks should be backfilled with granular backfill material, compacted as outlined in Section 9.1.5.

9.2. Seismic Design Considerations

Design of the proposed improvements should comply with design for structures located in Seismic Zone 4 and should be designed in accordance with the requirements of governing jurisdictions and applicable building codes. Table 2 presents the seismic design parameters for the site in accordance with CBC (2010) guidelines and mapped spectral acceleration parameters (USGS, 2011).

Table 2 – Seismic Design Parameters

Parameters	Values
Site Class	D
Site Coefficient, $F_a$	1.0
Site Coefficient, $F_v$	1.5
Mapped Short Period Spectral Acceleration, $S_S$	2.274g
Mapped One-Second Period Spectral Acceleration, $S_1$	0.933g
Short Period Spectral Acceleration Adjusted For Site Class, $S_{MS}$	2.274g
One-Second Period Spectral Acceleration Adjusted For Site Class, $S_{M1}$	1.400g
Design Short Period Spectral Acceleration, $S_{DS}$	1.516g
Design One-Second Period Spectral Acceleration, $S_{D1}$	0.933g



### 9.3. Foundations

Based on our project understanding, we anticipate the new storage tank will be supported on a perimeter ring foundation. Recommendations for footing foundations are provided below.

Proposed footings should extend 24 inches or more below the adjacent finished grade and bear on compacted engineered fill. Continuous footings should have a width of approximately 24 inches. Footings should be reinforced in accordance with the recommendations of the project structural engineer.

Footings may be designed using an allowable bearing capacity of 4,000 pounds per square foot (psf). Total and differential settlements for footings designed in accordance with the above recommendations are estimated to be on the order less than 1 inch and ½ inch over a horizontal span of 40 feet, respectively.

Footings bearing in compacted fill may be designed using a coefficient of friction of 0.35, where the total frictional resistance equals the coefficient of friction times the dead load. Foundations may be designed using a passive resistance value of 350 psf per foot of depth, with a maximum value of 3,500 psf. The allowable lateral resistance can be taken as the sum of the frictional resistance and passive resistance provided the passive resistance does not exceed one-half of the total allowable resistance. The bearing capacity and passive resistance (including the maximum value) may be increased by one-third when considering loads of short duration such as wind or seismic forces.

Footings located adjacent to utility trenches should have their bearing surfaces situated below an imaginary 1:1 plane projected upward from the bottom edge of the adjacent utility trench.

### 9.4. Lateral Earth Pressures

Walls for the below-grade portions of the proposed tank and other below-grade structures may be designed using the lateral earth pressures presented on Figure 6.

The exterior of subsurface walls should be carefully waterproofed. The waterproofing systems, including horizontal and vertical construction joints, should be installed in accordance with the recommendations of the project civil engineer. For wall penetrations at pipe locations, installation of “watertight” seals should be utilized.

#### 9.5. Corrosion

The corrosion potential of the site soils was evaluated based on laboratory testing of a representative sample obtained from our exploratory borings. Laboratory testing was performed to evaluate pH, electrical resistivity, chloride and sulfate content. The laboratory results are presented in Appendix B.

The pH of the tested sample was approximately 8.1, the electrical resistivity was approximately 650 ohm-centimeters, the chloride content was approximately 200 parts per million (ppm), and the sulfate content was approximately 0.015 percent (i.e., 150 ppm). Caltrans (Caltrans, 2003) corrosion criteria define a non-corrosive site as one having earth materials with a pH of 5.5 or more, electrical resistivity of 1,000 ohm-centimeters or more, less than 500 ppm chlorides, and less than 0.20 percent sulfates (i.e., 2,000 ppm). Based on these criteria, results of the electrical resistivity testing indicate that the project site can be classified as corrosive.

We recommend that a corrosion engineer be consulted to further evaluate the corrosion potential of the site and to provide recommendations for structures that may be affected.

#### 9.6. Concrete Placement

In order to reduce the potential for shrinkage cracks in the concrete during curing, we recommend that the concrete be placed with a slump of no more than 4 inches based on ASTM C 143. The slump should be checked periodically at the site by the representative of a qualified materials testing laboratory prior to concrete placement. We also recommend that crack control joints be provided in hardscape (if applicable) in accordance with the recommendations of the project structural engineer to reduce the potential for distress due to minor soil

movement and concrete shrinkage. Structural concrete should be placed in accordance with the guidelines of the American Concrete Institute (ACI, 2005), CBC (CBC, 2010) and relevant project specifications.

Concrete in contact with soil or water containing high concentration of soluble sulfates can be subject to chemical and/or physical deterioration. Based on the CBC criteria, the potential for sulfate attack is negligible for water-soluble sulfate contents in soil ranging from 0.00 to 0.10 percent by weight. As indicated above, the soil sample tested for this evaluation indicates a water-soluble sulfate content of approximately 0.015 percent. Accordingly, the on-site soils are considered to have a negligible potential for sulfate attack. However, due to the potential variability of the soil conditions at the site, we recommend that Type V cement be considered for the project.

9.7. Pavement Section Recommendations

The pavement section recommendations presented herein are based on our subsurface exploration, laboratory testing, and pavement analysis. We have assumed a traffic index of 5, which represents a traffic loading condition typically associated with infrequent heavy truck traffic. Ninyo & Moore should be contacted for further recommendations if a design traffic index other than that selected for this analysis is used.

For pavement design, we used the design methodology presented in the California Department of Transportation (Caltrans) Highway Design Manual (Caltrans, 2006) and the Caltrans computer program “CalFP Ver 1.1.” In our design we used an R-value of 5, the assumed TI value of 5, and a 20-year design life. Our pavement sections are provided in Table 3.

Table 3 – Pavement Design Alternatives

Traffic Index (TI)	R-Value	Flexible Pavement	
		AC/CAB (inches)	Full Depth AC (inches)
5.0	5	4.0/8.0	7.0
Notes: AC – Asphalt Concrete CAB – Crushed Aggregate Base			

Prior to the placement of crushed aggregate base (CAB) materials, we recommend that the top 12 inches of subgrade soils be scarified and recompacted to a relative compaction of 90 percent as evaluated by ASTM D 1557. If full-depth asphalt concrete pavement is used, we recommend that the subgrade soils be recompacted to a relative compaction of 95 percent. Base materials should be placed and compacted to a relative compaction of 95 percent as evaluated by ASTM D 1557. Base materials should generally be placed in lifts not exceeding 8 inches in uncompacted thickness. Asphalt concrete (AC) should be placed and compacted to a relative compaction of 95 percent as evaluated by California Test (CT) method 304.

Updated pavement sections should be based on actual anticipated traffic loading conditions and evaluation of the subgrade materials at the time of construction. We recommend that the paving operations be observed and tested by the project geotechnical consultant. We further recommend that mix designs be made for the asphalt concrete by an engineering company specialized in this type of work.

#### 9.8. Drainage

Adequate surface drainage is imperative for satisfactory site performance. Positive drainage should be provided and maintained to direct surface water away from the proposed tank. Positive drainage is defined as a slope of 2 percent or more for a distance of 5 feet or more away from foundations and tops of slopes. Runoff should then be directed by the use of swales or pipes into a collective drainage system. We recommend that structures have roof drains and downspouts installed to collect runoff. Surface water should not be allowed to flow over slope faces or to pond adjacent to footings. Area drains for landscaped and paved areas are recommended.

### 10. CONSTRUCTION OBSERVATION

The geotechnical consultant should observe and test fill placement and compaction. Project plans should also be reviewed by the geotechnical consultant prior to the start of construction.

The recommendations provided in this report are based on the assumption that Ninyo & Moore will provide geotechnical observation and testing services during construction. In the event that the services of Ninyo & Moore are not utilized during construction, we request that the selected consultant provide the owner with a letter (with a copy to Ninyo & Moore) indicating that they fully understand Ninyo & Moore's recommendations and that they are in full agreement with the design parameters and recommendations contained in this report.

## 11. LIMITATIONS

The field evaluation, laboratory testing, and geotechnical analyses presented in this report have been conducted in accordance with current engineering practice and the standard of care exercised by reputable geotechnical consultants performing similar tasks in this area. No warranty, expressed or implied, is made regarding the conclusions, recommendations, and professional opinions expressed in this report. Variations may exist and conditions not observed or described in this report may be encountered during construction.

This document is intended to be used only in its entirety. No portion of the document, by itself, is designed to completely represent any aspect of the project described herein. Ninyo & Moore should be contacted if the reader requires additional information or has questions regarding the content, interpretations presented, or completeness of this document.

The conclusions and recommendations presented in this report are based on analysis of observed conditions in two exploratory borings. If conditions are found to vary from those described in this report, the geotechnical consultant should be notified and additional recommendations will be provided upon request. It should be understood that the conditions of a site can change with time as a result of natural processes or the activities of man at the subject site or nearby sites. In addition, changes to the applicable laws, regulations, codes, and standards of practice may occur due to government action or the broadening of knowledge. The findings of this report may, therefore, be invalidated over time, in part or in whole, by changes over which Ninyo & Moore has no control.

This report is intended exclusively for use by the client. Any use or reuse of the findings, conclusions, and/or recommendations of this report by parties other than the client is undertaken at said parties' sole risk.

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AERIAL PHOTOGRAPHS				
Source	Date	Flight	Numbers	Scale
USDA	11-3-52	AKJ-1K	50 & 51	1:20,000



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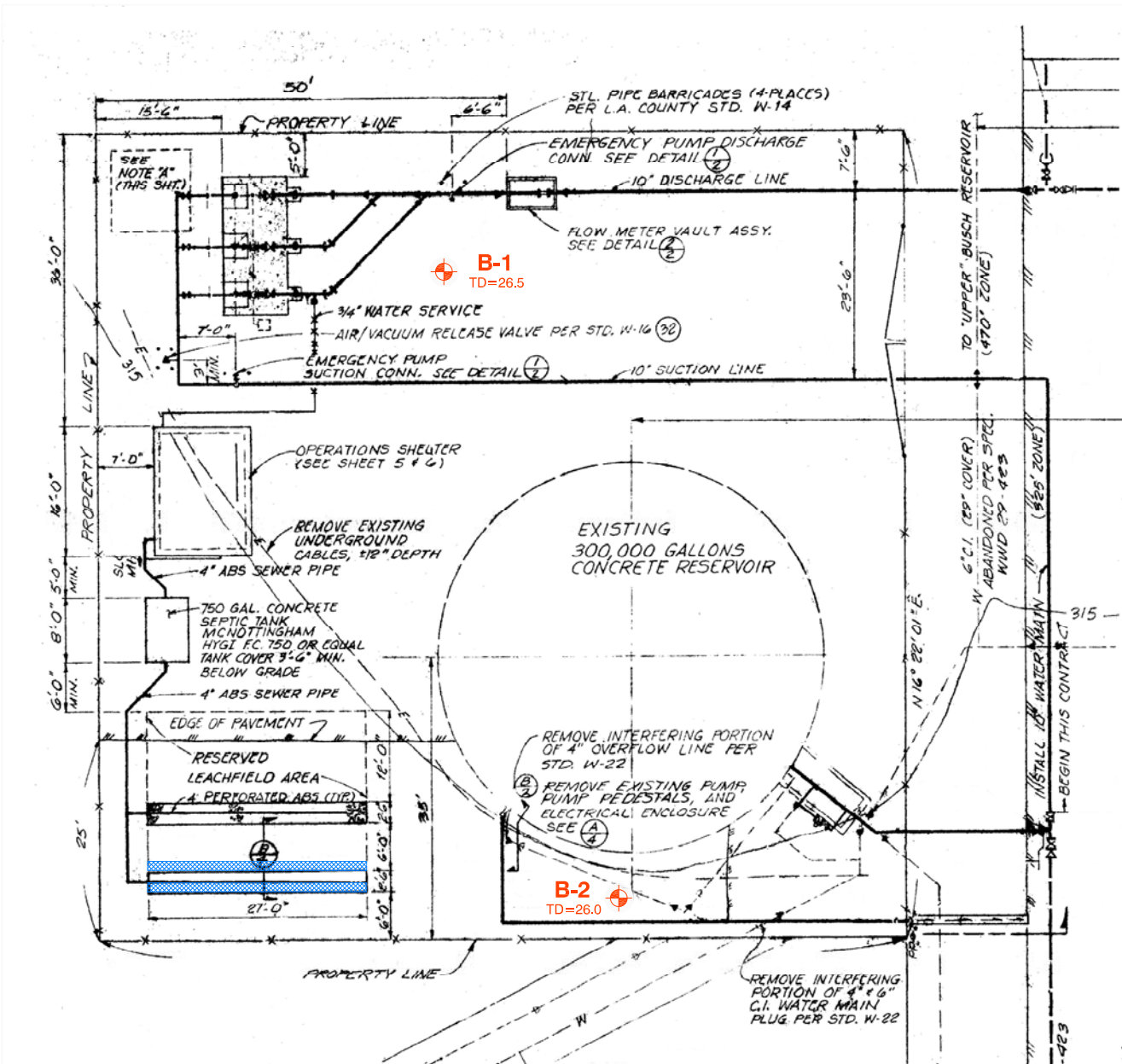
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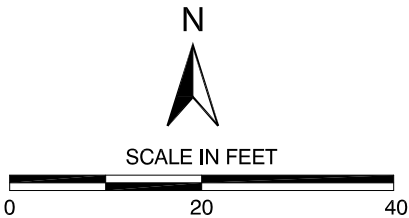
NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.  
Map © Rand McNally, R.L.07-S-129

		<b>SITE LOCATION</b>  LOWER BUSCH TANK MALIBU, CALIFORNIA	FIGURE  <b>1</b>	
			<table border="1"> <tr> <td style="width: 50%;">PROJECT NO.</td> <td style="width: 50%;">DATE</td> </tr> <tr> <td>208543001</td> <td>4/12</td> </tr> </table>	PROJECT NO.
PROJECT NO.	DATE			
208543001	4/12			

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REFERENCE: ASL CONSULTING ENGINEERS, 1989, LOWER BUSCH DRIVE BOOSTER STATION SITE PLAN AND DETAILS, SHEET 2 OF 8, DATED MARCH 31.



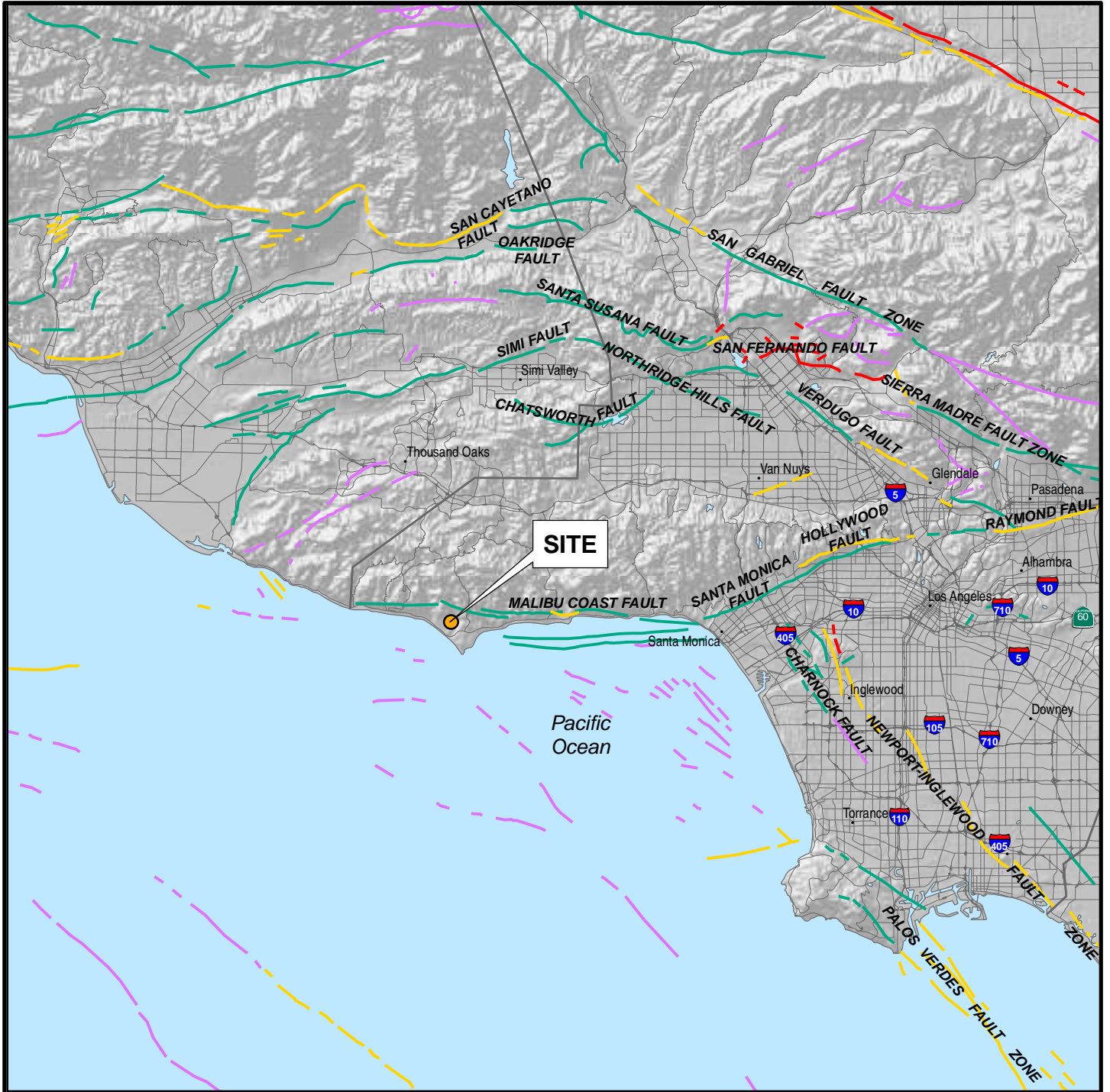
NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

LEGEND	
	LOCATIONS OF LEACH LINES
B-2 TD=26.0	BORING; TD=TOTAL DEPTH IN FEET






<b>Ninyo &amp; Moore</b>		<b>BORING AND LEACH LINE LOCATIONS</b>	FIGURE <b>2</b>
PROJECT NO. 208543001	DATE 4/12		

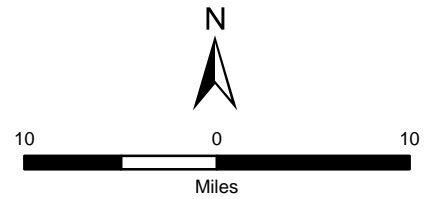


208543001\_Fault Loc.gis.....GK



GIS DATA SOURCE: CALIFORNIA GEOLOGICAL SURVEY (CGS); ENVIRONMENTAL SYSTEMS RESEARCH INSTITUTE (ESRI)  
 REFERENCE: JENNINGS, 2010, FAULT ACTIVITY MAP OF CALIFORNIA AND ADJACENT AREAS

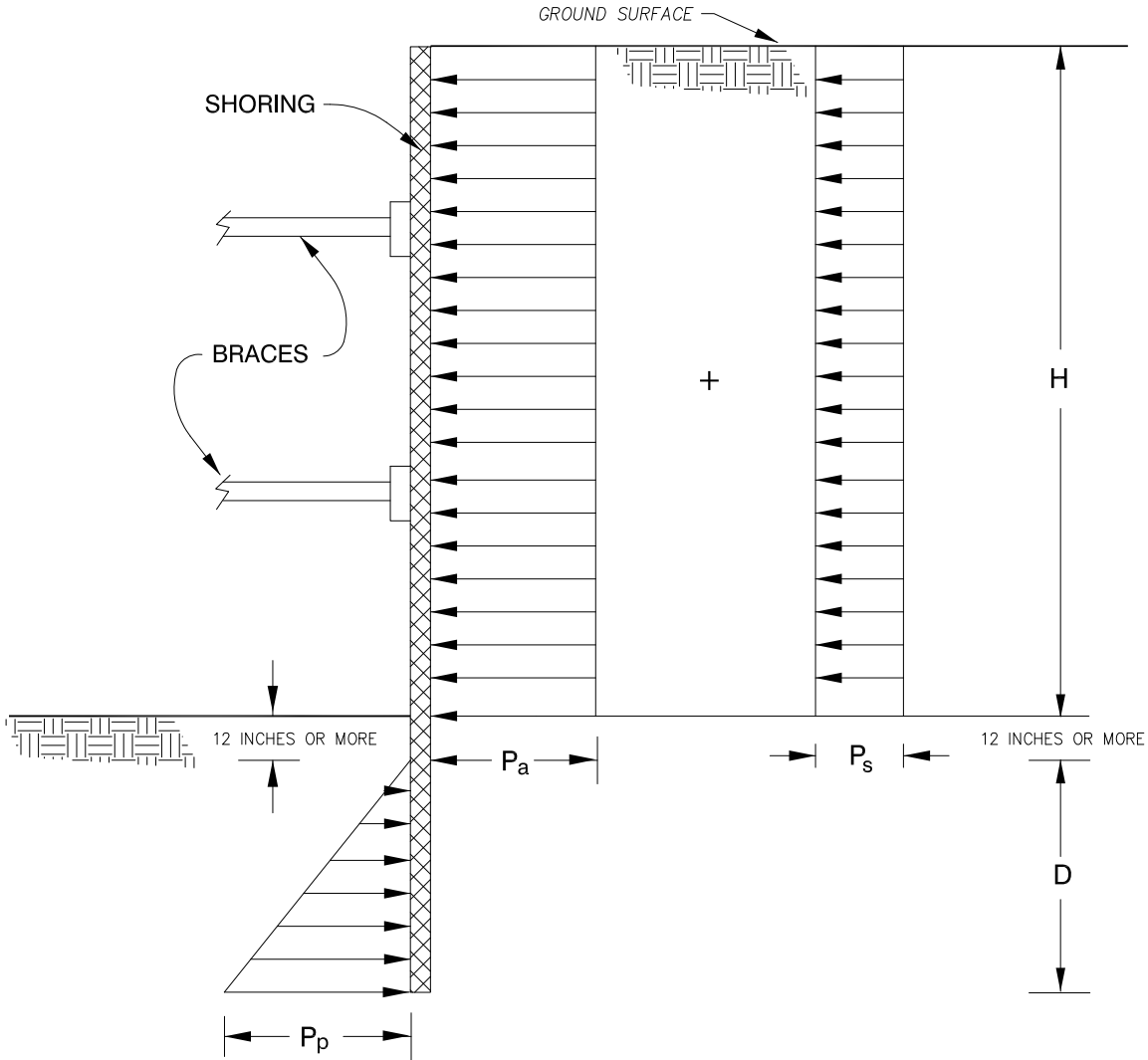
LEGEND	
<b>FAULT ACTIVITY:</b>	
 HISTORICALLY ACTIVE	 LATE QUATERNARY
 HOLOCENE ACTIVE	 QUATERNARY
 COUNTY BOUNDARIES	



NOTE: DIMENSIONS, DIRECTIONS, AND LOCATIONS ARE APPROXIMATE

<b>Ninyo &amp; Moore</b>		<b>FAULT LOCATIONS</b>	FIGURE
PROJECT NO.	DATE	LOWER BUSCH TANK MALIBU, CALIFORNIA	<b>3</b>
208543001	4/12		

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NOTES:

1. APPARENT LATERAL EARTH PRESSURE,  $P_a$   
 $P_a = 24H$  psf
2. CONSTRUCTION TRAFFIC INDUCED SURCHARGE PRESSURE,  $P_s$   
 $P_s = 120$  psf
3. PASSIVE LATERAL EARTH PRESSURE,  $P_p$   
 $P_p = 350D$  psf
4. ASSUMES GROUNDWATER IS NOT PRESENT
5. SURCHARGES FROM EXCAVATED SOIL OR CONSTRUCTION MATERIALS ARE NOT INCLUDED
6. H AND D ARE IN FEET

NOT TO SCALE

**Ninyo & Moore**

**LATERAL EARTH PRESSURES FOR BRACED EXCAVATION (GRANULAR SOIL)**

FIGURE

PROJECT NO.

DATE

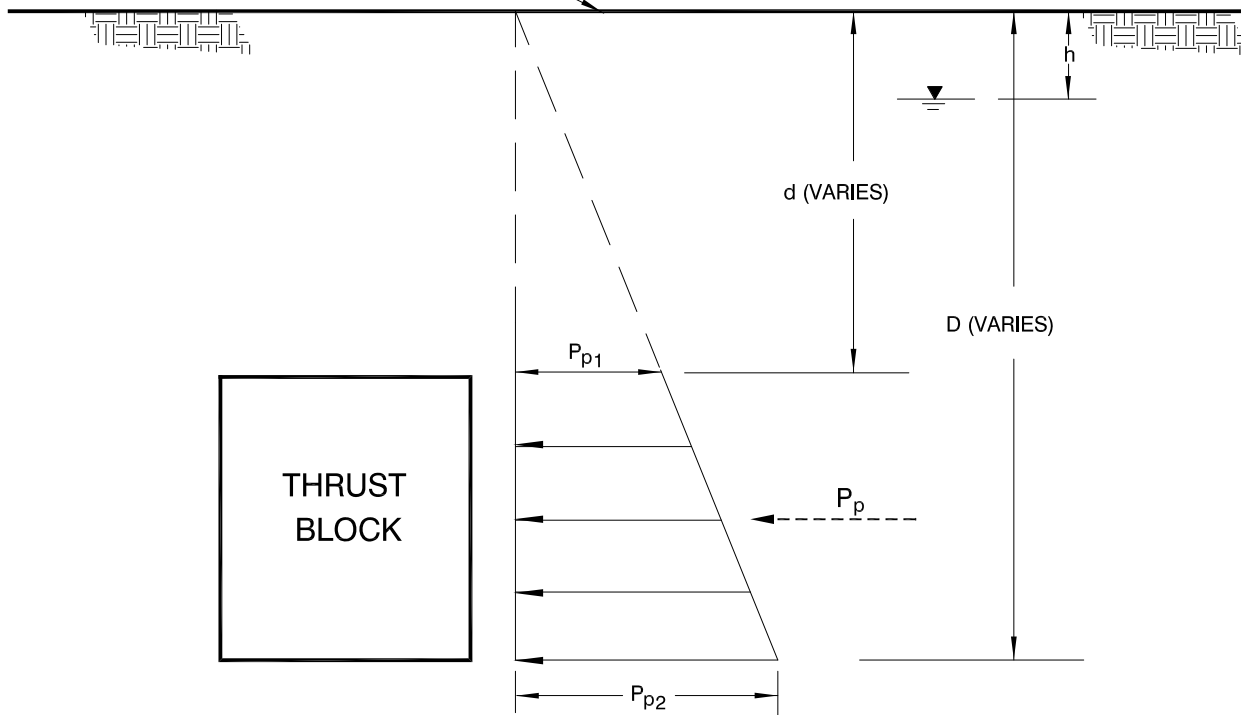
LOWER BUSCH TANK  
MALIBU, CALIFORNIA

208543001

4/12

**4**


GROUND SURFACE



NOTES:

1. GROUNDWATER BELOW BLOCK  

$$P_p = 175 (D^2 - d^2) \text{ lb/ft}$$
2. GROUNDWATER ABOVE BLOCK  

$$P_p = 1.50 (D - d) [124.8h + 0.58 (D + d)] \text{ lb/ft}$$
3. ASSUMES BACKFILL IS GRANULAR MATERIAL
4. ASSUMES THRUST BLOCK IS ADJACENT TO COMPETENT MATERIAL
5. D, d AND h ARE IN FEET
6.  GROUNDWATER TABLE

NOT TO SCALE

**Ninyo & Moore**

**THRUST BLOCK LATERAL EARTH PRESSURE DIAGRAM**

FIGURE

PROJECT NO.

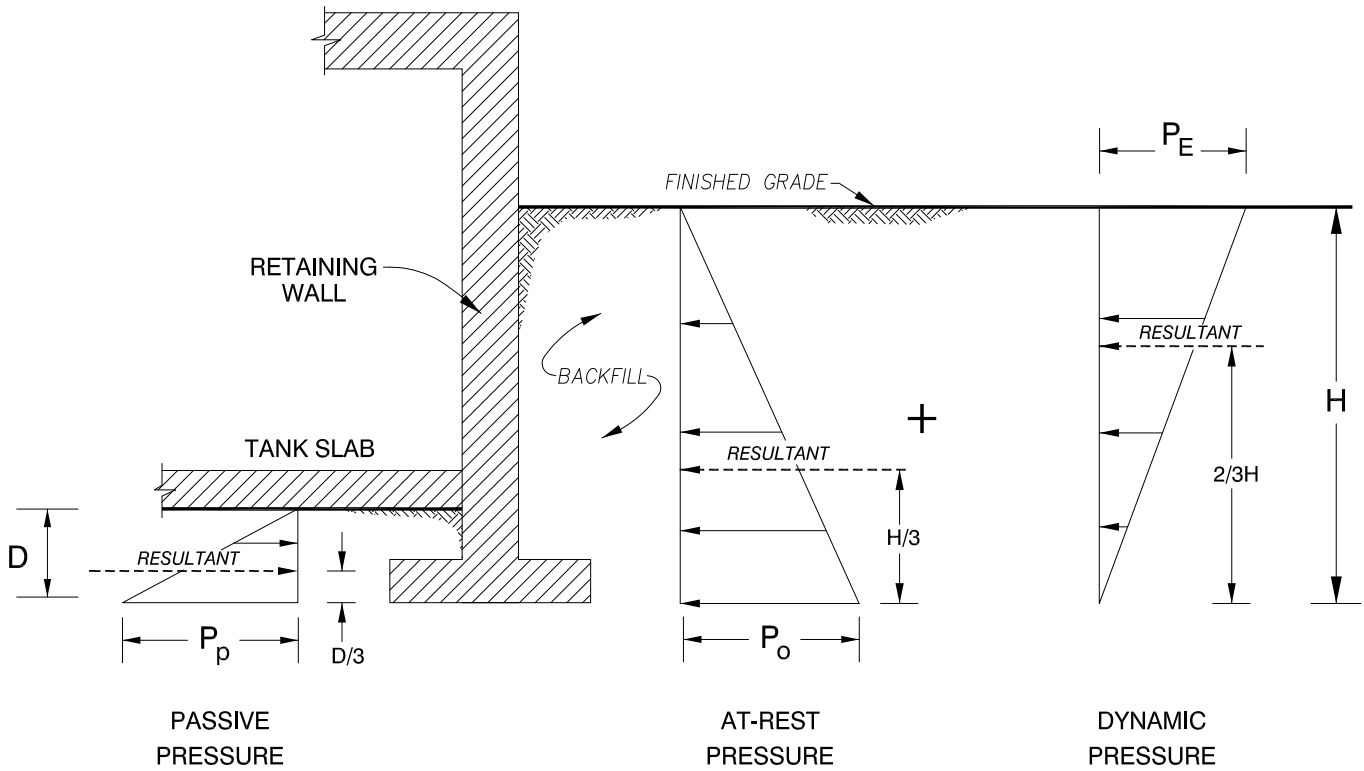
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LOWER BUSCH TANK  
MALIBU, CALIFORNIA

**5**



**NOTES:**

1. ASSUMES NO HYDROSTATIC PRESSURE BUILD-UP BEHIND THE RETAINING WALL
2. STRUCTURAL GRANULAR BACKFILL MATERIALS AS SPECIFIED IN GREENBOOK SHOULD BE USED FOR RETAINING WALL BACKFILL
3. DRAINS AS RECOMMENDED IN THE RETAINING WALL DRAINAGE DETAIL SHOULD BE INSTALLED BEHIND THE RETAINING WALL
4. DYNAMIC LATERAL EARTH PRESSURE IS BASED ON A PEAK GROUND ACCELERATION OF 0.60g
5. SURCHARGE PRESSURES CAUSED BY VEHICLES OR NEARBY STRUCTURES ARE NOT INCLUDED
6. H AND D ARE IN FEET

**RECOMMENDED GEOTECHNICAL DESIGN PARAMETERS**

Lateral Earth Pressure	Equivalent Fluid Pressure (lb/ft <sup>2</sup> /ft) <sup>(1)</sup>	
	Level Backfill with Granular Soils <sup>(2)</sup>	2H:1V Sloping Backfill with Granular Soils <sup>(2)</sup>
P <sub>O</sub>	56 H	82 H
P <sub>E</sub>	26 H	34 H
P <sub>p</sub>	Level Ground	2H:1V Descending Ground
	350 D	150 D

NOT TO SCALE

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<b>Ninyo &amp; Moore</b>		<b>LATERAL EARTH PRESSURES FOR RESTRAINED RETAINING WALLS</b>	FIGURE
PROJECT NO.	DATE	LOWER BUSCH TANK MALIBU, CALIFORNIA	<b>6</b>
208543001	4/12		

## APPENDIX A

### BORING LOGS

#### Field Procedure for the Collection of Disturbed Samples

Disturbed soil samples were obtained in the field using the following methods.

##### Bulk Samples

Bulk samples of representative earth materials were obtained from the exploratory excavations. The samples were bagged and transported to the laboratory for testing.

##### The Standard Penetration Test (SPT) Spoon

Disturbed drive samples of earth materials were obtained by means of a Standard Penetration Test spoon sampler. The sampler is composed of a split barrel with an external diameter of 2 inches and an unlined internal diameter of 1-3/8 inches. The spoon was driven into the ground 12 to 18 inches with a 140-pound hammer free-falling from a height of 30 inches in general accordance with ASTM D 1586-99. The blow counts were recorded for every 6 inches of penetration; the blow counts reported on the logs are those for the last 12 inches of penetration. Soil samples were observed and removed from the spoon, bagged, sealed and transported to the laboratory for testing.















#### Field Procedure for the Collection of Relatively Undisturbed Samples

Relatively undisturbed soil samples were obtained in the field using the following method.

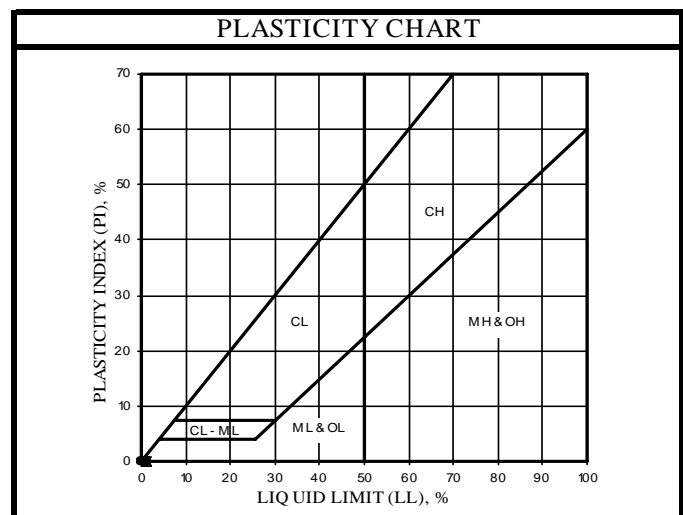
##### The Modified Split-Barrel Drive Sampler

The sampler, with an external diameter of 3.0 inches, was lined with 1-inch-long, thin brass rings with inside diameters of approximately 2.4 inches. The sample barrel was driven into the ground with the weight of a hammer or the kelly bar of the drill rig in general accordance with ASTM D 3550-84. The driving weight was permitted to fall freely. The approximate length of the fall, the weight of the hammer or bar, and the number of blows per foot of driving are presented on the boring logs as an index to the relative resistance of the materials sampled. The samples were removed from the sample barrel in the brass rings, sealed, and transported to the laboratory for testing.

## U.S.C.S. METHOD OF SOIL CLASSIFICATION

MAJOR DIVISIONS		SYMBOL	TYPICAL NAMES
<b>COARSE-GRAINED SOILS</b> (More than 1/2 of soil > No. 200 Sieve Size)	<b>GRAVELS</b> (More than 1/2 of coarse fraction > No. 4 sieve size)	 GW	Well graded gravels or gravel-sand mixtures, little or no fines
		 GP	Poorly graded gravels or gravel-sand mixtures, little or no fines
		 GM	Silty gravels, gravel-sand-silt mixtures
		 GC	Clayey gravels, gravel-sand-clay mixtures
	<b>SANDS</b> (More than 1/2 of coarse fraction < No. 4 sieve size)	 SW	Well graded sands or gravelly sands, little or no fines
		 SP	Poorly graded sands or gravelly sands, little or no fines
		 SM	Silty sands, sand-silt mixtures
		 SC	Clayey sands, sand-clay mixtures
<b>FINE-GRAINED SOILS</b> (More than 1/2 of soil < No. 200 sieve size)	<b>SILTS &amp; CLAYS</b> Liquid Limit <50	 ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity
		 CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
		 OL	Organic silts and organic silty clays of low plasticity
	<b>SILTS &amp; CLAYS</b> Liquid Limit >50	 MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts
		 CH	Inorganic clays of high plasticity, fat clays
		 OH	Organic clays of medium to high plasticity, organic silty clays, organic silts
<b>HIGHLY ORGANIC SOILS</b>		Pt	Peat and other highly organic soils

GRAIN SIZE CHART		
CLASSIFICATION	RANGE OF GRAIN	
	U.S. Standard Sieve Size	Grain Size in Millimeters
BOULDERS	Above 12"	Above 305
COBBLES	12" to 3"	306 to 76.2
GRAVEL	3" to No. 4	76.2 to 4.76
Coarse	3" to 3/4"	76.2 to 19.1
Fine	3/4" to No. 4	19.1 to 4.76
SAND	No. 4 to No. 200	4.76 to 0.075
Coarse	No. 4 to No. 10	4.76 to 2.00
Medium	No. 10 to No. 40	2.00 to 0.420
Fine	No. 40 to No. 200	0.420 to 0.075
SILT & CLAY	Below No. 200	Below 0.075





# BORING LOG EXPLANATION SHEET

DEPTH (feet)	SAMPLES		BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	
	Bulk	Driven						
0								<p>Bulk sample.</p> <p>Modified split-barrel drive sampler.</p> <p>No recovery with modified split-barrel drive sampler.</p> <p>Sample retained by others.</p> <p>Standard Penetration Test (SPT).</p> <p>No recovery with a SPT.</p> <p>Shelby tube sample. Distance pushed in inches/length of sample recovered in inches.</p> <p>No recovery with Shelby tube sampler.</p> <p>Continuous Push Sample.</p> <p>Seepage.</p> <p>Groundwater encountered during drilling.</p> <p>Groundwater measured after drilling.</p>
5								<p>XX/XX</p>
10								
15							SM	<p><u>MAJOR MATERIAL TYPE (SOIL):</u> Solid line denotes unit change.</p>
15							CL	<p>Dashed line denotes material change.</p> <p>Attitudes: Strike/Dip b: Bedding c: Contact j: Joint f: Fracture F: Fault cs: Clay Seam s: Shear bss: Basal Slide Surface sf: Shear Fracture sz: Shear Zone sbs: Shear Bedding Surface</p>
20								<p>The total depth line is a solid line that is drawn at the bottom of the boring.</p>



## BORING LOG

Explanation of Boring Log Symbols

PROJECT NO.

DATE  
Rev. 11/11

FIGURE

DEPTH (feet)	SAMPLES		BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED <u>3/20/12</u> BORING NO. <u>B-1</u>	
	Bulk	Driven						GROUND ELEVATION <u>318' ± (MSL)</u>	SHEET <u>1</u> OF <u>2</u>
								METHOD OF DRILLING <u>8" Hollow-Stem Auger (Martini Drilling)</u>	
								DRIVE WEIGHT <u>140 lbs. (Auto. Trip Hammer)</u> DROP <u>30"</u>	
								SAMPLED BY <u>MPM</u> LOGGED BY <u>MPM</u> REVIEWED BY <u>CAP</u>	
								DESCRIPTION/INTERPRETATION	
0							SM	ASPHALT CONCRETE: Approximately 4 inches thick.	
							CH	BASE: Dark gray, dry to damp, medium dense, silty SAND; trace gravel; approximately 4½ inches thick.	
								TERRACE DEPOSITS: Dark grayish brown, moist, stiff, sandy CLAY.	
							SC	Reddish brown, moist, medium dense, clayey SAND.	
5			27	16.8	109.7				
							ML	Reddish brown, moist, medium dense, sandy SILT with clay.	
			16	22.7					
10			37	5.1			SP-SM	Yellowish brown, damp, medium dense, poorly graded SAND with silt.	
								Trace gravel; dense.	
			23						
15			58	27.8				Grayish brown.	
								@ 18': Difficult drilling; groundwater encountered; saturated.	
20									



**BORING LOG**

LOWER BUSCH TANK  
MALIBU, CALIFORNIA

PROJECT NO.  
208543001

DATE  
4/12

FIGURE  
A-1

DEPTH (feet)	SAMPLES		BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED <u>3/20/12</u> BORING NO. <u>B-1</u>	
	Bulk	Driven						GROUND ELEVATION <u>318' ± (MSL)</u>	SHEET <u>2</u> OF <u>2</u>
20			41	18.3				METHOD OF DRILLING <u>8" Hollow-Stem Auger (Martini Drilling)</u>	
25			42					DRIVE WEIGHT <u>140 lbs. (Auto. Trip Hammer)</u> DROP <u>30"</u>	
30								SAMPLED BY <u>MPM</u> LOGGED BY <u>MPM</u> REVIEWED BY <u>CAP</u>	
35								DESCRIPTION/INTERPRETATION	
40								<p>TRANCAS FORMATION: Mottled grayish brown, saturated weakly cemented, slightly clayey fine-grained SANDSTONE.</p> <p>Total Depth = 26.5 feet. Groundwater encountered at approximately 18 feet during drilling. Boring backfilled with on-site soils and patched with cold patch on 3/20/12.</p> <p><u>Note:</u> Groundwater may rise to a level higher than that measured in borehole due to seasonal variations in precipitation and several other factors as discussed in the report.</p>	




**BORING LOG**

LOWER BUSCH TANK  
MALIBU, CALIFORNIA

PROJECT NO.  
208543001

DATE  
4/12

FIGURE  
A-2

DEPTH (feet)	SAMPLES		BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DESCRIPTION/INTERPRETATION	
	Bulk	Driven						DATE DRILLED	BORING NO.
								3/20/12	B-2
								316' ± (MSL)	SHEET 1 OF 2
								8" Hollow-Stem Auger (Martini Drilling)	
								140 lbs. (Auto. Trip Hammer)	DROP 30"
								MPM	LOGGED BY MPM REVIEWED BY CAP
0							SM CH	<b>ASPHALT CONCRETE:</b> Approximately 3 inches thick. <b>BASE:</b> Gray, damp, medium dense, silty SAND; trace gravel; approximately 3 inches thick. <b>TERRACE DEPOSITS:</b> Brown, damp to moist, stiff, sandy CLAY.	
5			12	18.8			SC	Reddish brown, moist, medium dense, clayey SAND.	
			26	11.2	108.4		SM	Reddish brown, damp, medium dense, silty SAND; trace clay.	
10			19				SP-SM	Yellowish brown, damp, medium dense, poorly graded SAND with silt.	
			28	23.5	95.2			 @ 12.5': Groundwater encountered; saturated. Grayish brown.	
15			88	11.2				<b>TRANCAS FORMATION:</b> Mottled reddish brown, saturated, weakly cemented, silty fine-grained SANDSTONE.	
20			64						



**BORING LOG**

LOWER BUSCH TANK  
MALIBU, CALIFORNIA

PROJECT NO.  
208543001

DATE  
4/12

FIGURE  
A-3

DEPTH (feet)	SAMPLES		BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED <u>3/20/12</u> BORING NO. <u>B-2</u>	
	Bulk	Driven						GROUND ELEVATION <u>316' ± (MSL)</u>	SHEET <u>2</u> OF <u>2</u>
20			24					METHOD OF DRILLING <u>8" Hollow-Stem Auger (Martini Drilling)</u>	
25			76/11"					DRIVE WEIGHT <u>140 lbs. (Auto. Trip Hammer)</u> DROP <u>30"</u>	
30								SAMPLED BY <u>MPM</u> LOGGED BY <u>MPM</u> REVIEWED BY <u>CAP</u>	
35								DESCRIPTION/INTERPRETATION	
40								<p>TRANCAS FORMATION: (Continued)            Reddish brown, saturated weakly cemented, fine-grained SANDSTONE.</p> <p>Total Depth = 26 feet.            Groundwater encountered at approximately 12.5 feet during drilling.            Boring backfilled with bentonite mix to approximately 10 feet and then backfilled with on-site soils on 3/21/12.</p> <p><u>Note:</u>            Groundwater may rise to a level higher than that measured in borehole due to seasonal variations in precipitation and several other factors as discussed in the report.</p>	



**BORING LOG**

LOWER BUSCH TANK  
 MALIBU, CALIFORNIA

PROJECT NO.  
 208543001

DATE  
 4/12

FIGURE  
 A-4

## APPENDIX B

### LABORATORY TESTING

#### Classification

Soils were visually and texturally classified in accordance with the Unified Soil Classification System (USCS) in general accordance with ASTM D 2488-93. Soil classifications are indicated on the logs of the exploratory excavations in Appendix A.

#### Moisture Content

The moisture content of samples obtained from the exploratory excavations was evaluated in accordance with ASTM D 2216-92. The test results are presented on the logs of the exploratory excavations in Appendix A.

#### 200 Wash

An evaluation of the percentage of particles finer than the No. 200 sieve in selected soil samples was performed in general accordance with ASTM D 1140-00. The results of the tests are presented on Figure B-1.

#### Atterberg Limits

Tests were performed on a selected representative fine-grained soil sample to evaluate the liquid limit, plastic limit, and plasticity index in general accordance with ASTM D 4318-05. These test results were utilized to evaluate the soil classification in accordance with the Unified Soil Classification System. The test results and classifications are shown on Figure B-2.

#### Direct Shear Test

A direct shear test was performed on relatively undisturbed sample in general accordance with ASTM D 3080-04 to evaluate the shear strength characteristics of selected materials. The samples were inundated during shearing to represent adverse field conditions. The results are shown on Figure B-3.

#### Expansion Index Tests

The expansion index of selected materials was evaluated in general accordance with ASTM D 4829. Specimens were molded under a specified compactive energy at approximately 50 percent saturation (plus or minus 1 percent). The prepared 1-inch thick by 4-inch diameter specimens were loaded with a surcharge of 144 pounds per square foot and were inundated with water. Readings of volumetric swell were made for a period of 24 hours. The results of these tests are presented on Figure B-4.

### R-Value

The resistance value, or R-value, for site soils was evaluated in general accordance with California Test (CT) 301. Samples were prepared and evaluated for exudation pressure and expansion pressure. The equilibrium R-value is reported as the lesser or more conservative of the two calculated results. The test results are shown on Figure B-5.

### Soil Corrosivity Tests

Soil pH, and minimum resistivity tests were performed on representative samples in general accordance with CT 643. The chloride content of selected samples was evaluated in general accordance with CT 422. The sulfate content of selected samples was evaluated in general accordance with CT 417. The test results are presented on Figure B-6.

SAMPLE LOCATION	SAMPLE DEPTH (FT)	DESCRIPTION	PERCENT PASSING NO. 4	PERCENT PASSING NO. 200	USCS (TOTAL SAMPLE)
B-1	7.5-9.0	SANDY SILT	99	51	ML
B-1	12.5-14.0	POORLY GRADED SAND WITH SILT	96	9	SP-SM
B-2	7.5-9.0	SILTY SAND	100	27	SM
B-2	10.0-11.5	POORLY GRADED SAND WITH SILT	99	9	SP-SM

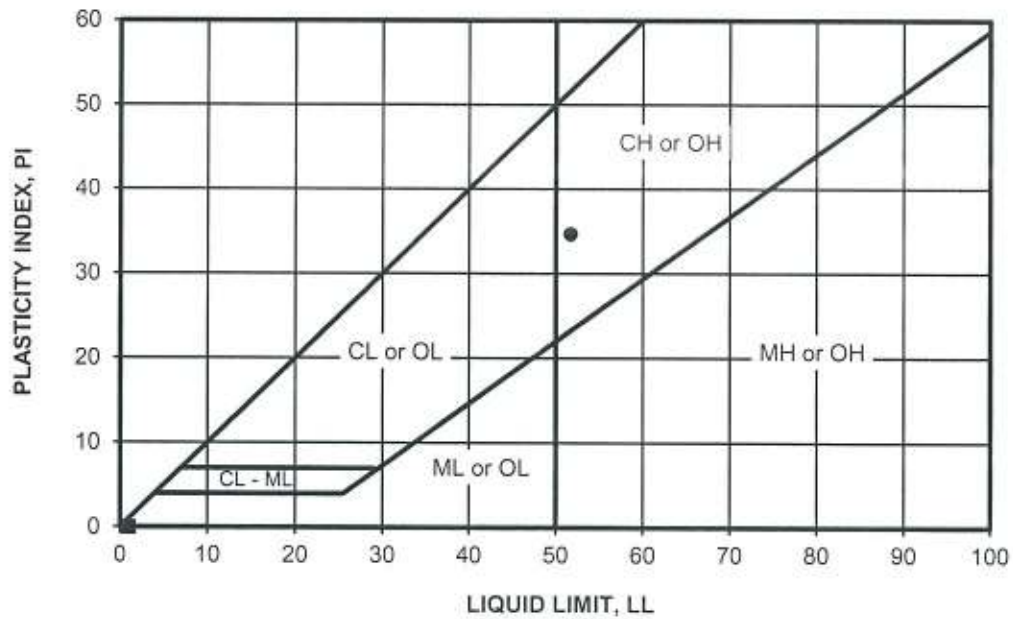
PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 1140

<b>Ninyo &amp; Moore</b>		<b>NO. 200 SIEVE ANALYSIS</b>	FIGURE
PROJECT NO.	DATE	LOWER BUSCH TANK MALIBU, CALIFORNIA	<b>B-1</b>
208543001	4/12		



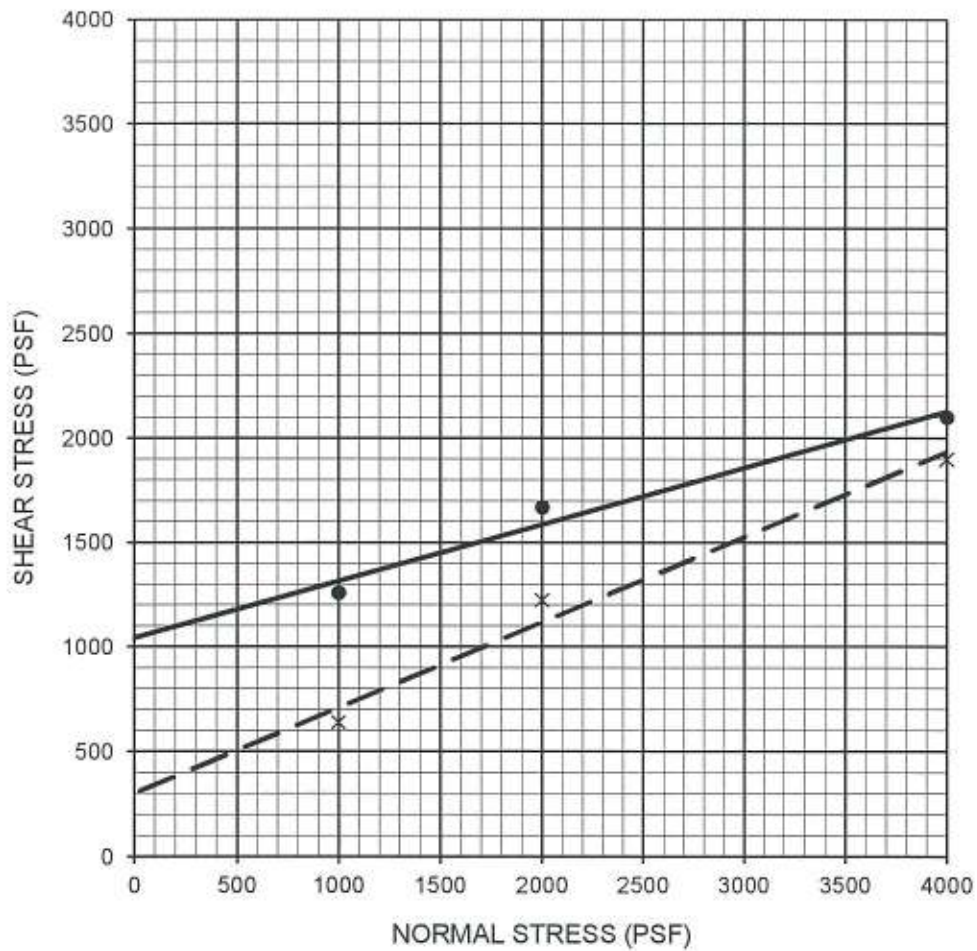
SYMBOL	LOCATION	DEPTH (FT)	LIQUID LIMIT, LL	PLASTIC LIMIT, PL	PLASTICITY INDEX, PI	USCS CLASSIFICATION (Fraction Finer Than No. 40 Sieve)	USCS (Entire Sample)
•	B-2	5.0-6.5	52	17	35	CH	SC

NP - INDICATES NON-PLASTIC



PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 4318

<b>Ninyo &amp; Moore</b>		<b>ATTERBERG LIMITS TEST RESULTS</b>	FIGURE <b>B-2</b>
PROJECT NO. 208543001	DATE 4/12		



Description	Symbol	Sample Location	Depth (ft)	Shear Strength	Cohesion, c (psf)	Friction Angle, $\phi$ (degrees)	Soil Type
CLAYEY SAND	—●—	B-1	5.0-6.5	Peak	1044	15	SC
CLAYEY SAND	- - X - -	B-1	5.0-6.5	Ultimate	300	22	SC

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 3080

<b>Ninyo &amp; Moore</b>		<b>DIRECT SHEAR TEST RESULTS</b>	LOWER BUSCH TANK MALIBU, CALIFORNIA	FIGURE
PROJECT NO.	DATE			<b>B-3</b>
208543001	4/12			

SAMPLE LOCATION	SAMPLE DEPTH (FT)	INITIAL MOISTURE (%)	COMPACTED DRY DENSITY (PCF)	FINAL MOISTURE (%)	VOLUMETRIC SWELL (IN)	EXPANSION INDEX	POTENTIAL EXPANSION
B-1	1.0-4.0	13.5	97.3	33.8	0.102	102	High

PERFORMED IN GENERAL ACCORDANCE WITH

UBC STANDARD 18-2

ASTM D 4829

**Ninyo & Moore**

**EXPANSION INDEX TEST RESULTS**

FIGURE

PROJECT NO.

DATE

LOWER BUSCH TANK  
MALIBU, CALIFORNIA

**B-4**

208543001

4/12

SAMPLE LOCATION	SAMPLE DEPTH (FT)	SOIL TYPE	R-VALUE
B-2	1.0-5.0	CH	5

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 2844-01/CT 301

<b><i>Ninyo &amp; Moore</i></b>		<b>R-VALUE TEST RESULTS</b>	FIGURE <b>B-5</b>
PROJECT NO.	DATE		
208543001	4/12	LOWER BUSCH TANK MALIBU, CALIFORNIA	

SAMPLE LOCATION	SAMPLE DEPTH (FT)	pH <sup>1</sup>	RESISTIVITY <sup>1</sup> (Ohm-cm)	SULFATE CONTENT <sup>2</sup>		CHLORIDE CONTENT <sup>3</sup> (ppm)
				(ppm)	(%)	
B-1	1.0-4.0	8.1	650	150	0.015	200

<sup>1</sup> PERFORMED IN GENERAL ACCORDANCE WITH CALIFORNIA TEST METHOD 643

<sup>2</sup> PERFORMED IN GENERAL ACCORDANCE WITH CALIFORNIA TEST METHOD 417

<sup>3</sup> PERFORMED IN GENERAL ACCORDANCE WITH CALIFORNIA TEST METHOD 422

<b>Ninyo &amp; Moore</b>		<b>CORROSIVITY TEST RESULTS</b>	FIGURE <b>B-6</b>
PROJECT NO.	DATE	LOWER BUSCH TANK MALIBU, CALIFORNIA	
208543001	4/12		

## Appendix C Lab Results





**E.S.BABCOCK**&Sons,Inc.  
 Environmental Laboratories *est. 1906*

Client Name:Ninyo & Moore  
 Contact:Michael Mowen  
 Address:475 Goddard, #200  
 Irvine, CA 92618-4622

Analytical Report: Page 1 of 3  
 Project Name: Ninyo & Moore- Soil Contamination  
 Project Number: Lower Busch Tank - Malibu

**Work Order Number: B2C2410**

Report Date:30-Mar-2012

Received on Ice (Y/N): Yes Temp: 7°C

Attached is the analytical report for the sample(s) received for your project. Below is a list of the individual sample descriptions with the corresponding laboratory number(s). Also, enclosed is a copy of the Chain of Custody document (if received with your sample(s)). Please note any unused portion of the sample(s) may be responsibly discarded after 30 days from the above report date, unless you have requested otherwise.

Thank you for the opportunity to serve your analytical needs. If you have any questions or concerns regarding this report please contact our client service department.

**Sample Identification**

<u>Lab Sample #</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>By</u>	<u>Date Submitted</u>	<u>By</u>
B2C2410-01	B-2 @ 5' ---ROUTINE---	Solid	03/20/12 13:00	Mike Moore	03/22/12 16:30	Mike Moore
B2C2410-02	B-2 @ 10' ---ROUTINE---	Solid	03/20/12 13:00	Mike Moore	03/22/12 16:30	Mike Moore
B2C2410-03	B-2 @ 15' ---ROUTINE---	Solid	03/20/12 13:00	Mike Moore	03/22/12 16:30	Mike Moore





**E.S.BABCOCK**&Sons,Inc.  
 Environmental Laboratories *est. 1906*

Client Name:Ninyo & Moore  
 Contact:Michael Mowen  
 Address:475 Goddard, #200  
 Irvine, CA 92618-4622

Analytical Report: Page 2 of 3  
 Project Name: Ninyo & Moore- Soil Contamination  
 Project Number: Lower Busch Tank - Malibu

**Work Order Number: B2C2410**

Report Date:30-Mar-2012

Received on Ice (Y/N): Yes Temp: 7°C

	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
<b>B2C2410-01</b> <i>Sampled: 03/20/12 13:00</i>							
B-2 @ 5'							
Ammonia-Nitrogen	ND	1.0	mg/Kg*	SM4500NH3H	03/29/12 12:51	sll	N_WEX
E. Coli	ND	2.0	MPN/g	SM 9221E	03/23/12 15:25	tng	
Total Coliform	ND	2.0	MPN/g	SM 9221B	03/23/12 15:25	tng	
<b>B2C2410-02</b> <i>Sampled: 03/20/12 13:00</i>							
B-2 @ 10'							
Ammonia-Nitrogen	ND	1.0	mg/Kg*	SM4500NH3H	03/29/12 12:53	sll	N_WEX
E. Coli	ND	2.0	MPN/g	SM 9221E	03/23/12 15:25	tng	
Total Coliform	300	2.0	MPN/g	SM 9221B	03/23/12 15:25	tng	
<b>B2C2410-03</b> <i>Sampled: 03/20/12 13:00</i>							
B-2 @ 15'							
Ammonia-Nitrogen	2.8	1.0	mg/Kg*	SM4500NH3H	03/29/12 12:55	sll	N_WEX
E. Coli	ND	2.0	MPN/g	SM 9221E	03/23/12 15:30	tng	
Total Coliform	ND	2.0	MPN/g	SM 9221B	03/23/12 15:30	tng	

\* NELAP does not offer accreditation for this analyte/method/matrix combination



E.S.BABCOCK&Sons,Inc.
Environmental Laboratories est. 1906

Client Name:Ninyo & Moore
Contact:Michael Mowen
Address:475 Goddard, #200
Irvine, CA 92618-4622

Analytical Report: Page 3 of 3
Project Name: Ninyo & Moore- Soil Contamination
Project Number: Lower Busch Tank - Malibu

Work Order Number: B2C2410

Report Date:30-Mar-2012

Received on Ice (Y/N): Yes Temp: 7°C

Notes and Definitions

N\_WEX Analyte determined on a 1:10 water extract from the sample.

- ND: Analyte NOT DETECTED at or above the Method Detection Limit (if MDL is reported), otherwise at or above the Reportable Detection Limit (RDL)
NR: Not Reported
RDL: Reportable Detection Limit
MDL: Method Detection Limit
\*/' : NELAP does not offer accreditation for this analyte/method/matrix combination

Approval

Enclosed are the analytical results for the submitted sample(s). Babcock Laboratories certify the data presented as part of this report meet the minimum quality standards in the referenced analytical methods. Any exceptions have been noted. Babcock Laboratories and its officers and employees assume no responsibility and make no warranty, express or implied, for uses or interpretations made by any recipients, intended or unintended, of this report.

cc:

e-Tab\_Summary.rpt



**E.S.BABCOCK & Sons, Inc.**  
Environmental Laboratories *est. 1906*

Client Name: Ninyo & Moore  
Contact: Michael Mowen  
Address: 475 Goddard, #200  
Irvine, CA 92618-4622

Analytical Report: Page 1 of 1  
Project Name: Ninyo & Moore- Soil Contamination  
Project Number: Lower Busch Tank - Malibu

**Work Order Number: B2C2410**

Report Date: 30-Mar-2012

Received on Ice (Y/N): Yes Temp: 7°C

**Chain of Custody & Sample Information Record**

6100 Quail Valley Court Riverside, CA 92507  
(951) 653-3351 • FAX (951) 653-1662  
www.babcocklabs.com

Client: Ninyo & Moore Contact: Mike Mowen Fax No. (949) 753-7071

Phone No. (949) 753-7070 email: mmowen@ninyoandmoore.com

Project Name: Lower Busch Tank Turn Around Time: 72 Hour Rush \*48 Hour Rush \*24 Hour Rush

Project Location: Malibu By: MM \*Additional Charges Apply

\*Lab TAT Approval: \_\_\_\_\_

Sample ID	Date	Time	Sampler Information		Sample Type	Analysis Requested	Matrix	Notes
			Name	Employer				
B-2 @ 5'	3/20	1300	Mike Mowen	Ninyo & Moore	Soil			
B-2 @ 10'	↓	↓						
B-2 @ 15'	↓	↓						

Additional Reporting Requests:  Yes  No  
Include CC Data Package:  Yes  No  
FAX Results:  Yes  No  
Email Results:  Yes  No  
Site EDT:  Yes  No  
(Include Source Number in Notes)

Relinquished By (sign): MM Print Name / Company: Mike Mowen / NIM Date / Time: 3/20/12 / 1630

Received By (sign): AM Print Name / Company: A. Mowen / ESB Date / Time: 3/22/12 / 1630

Lab No. BAC2410 Logged in By/Date: AM MAR 22 2012

Page 1 of 1

Sample Integrity Upon Receipt/Acceptance Criteria:  
 Sample(s) Submitted on Ice?  Yes  No  
 Sample(s) Sealed/Label?  Yes  No  
 Sample(s) Initialed?  Yes  No  
 Sample(s) Analyzed?  Yes  No  
 Sample meets laboratory acceptance criteria?  Yes  No  
 Permission to continue:  Yes  No  
 Deviation/Notes: \_\_\_\_\_

## Appendix D

### Liquefaction Analysis

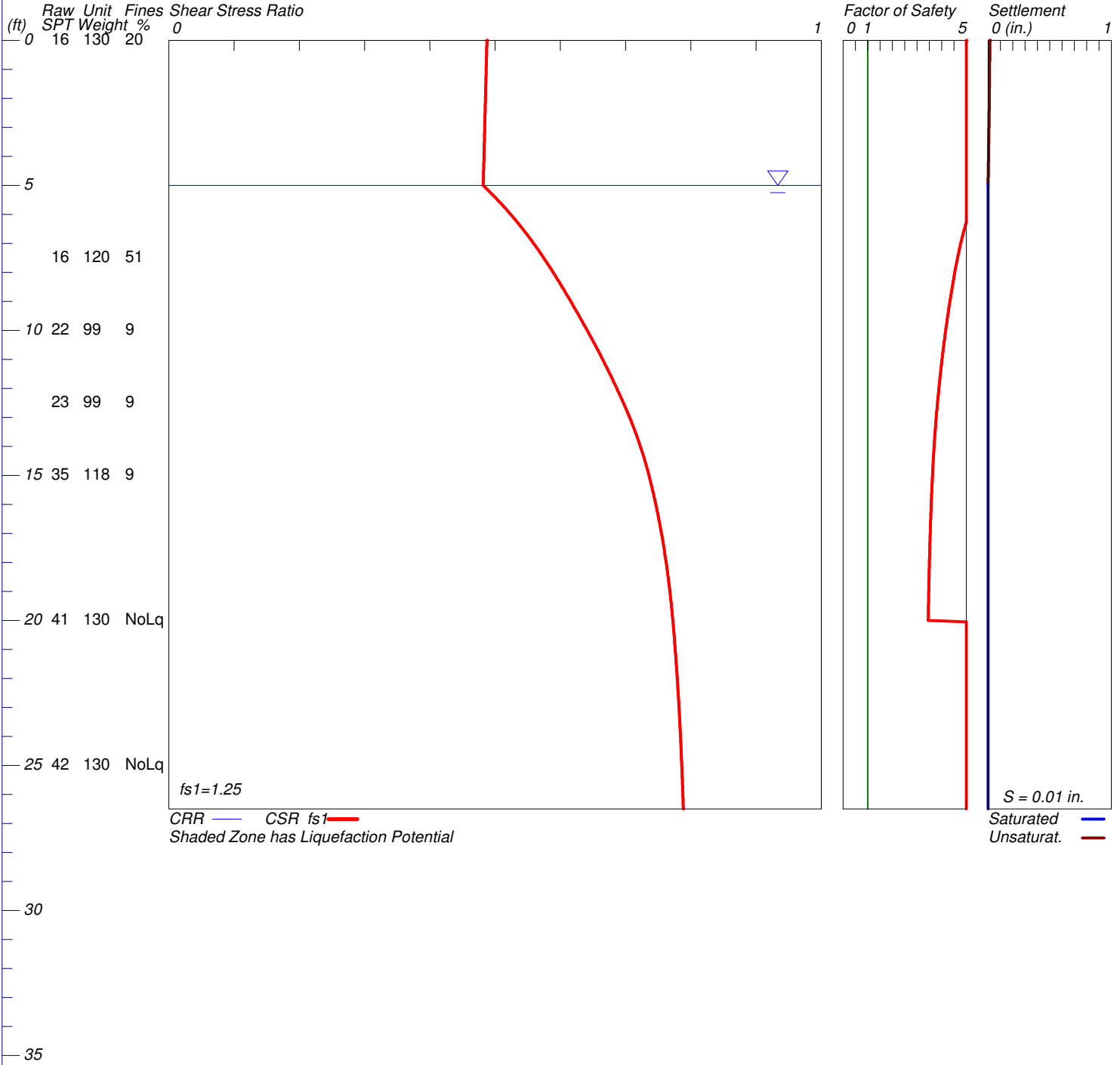


# LIQUEFACTION ANALYSIS

## Lower Busch Tank

Hole No.=B-1 Water Depth=5 ft

Magnitude=6.7  
Acceleration=0.60g



LiquefyPro CivilTech Software USA www.civilttech.com

B1 Liquefaction.cal  
 \*\*\*\*\*  
 LIQUEFACTION ANALYSIS CALCULATION DETAILS  
 Copyright by CivilTech Software  
 www.civiltechsoftware.com  
 \*\*\*\*\*

Font: Courier New, Regular, Size 8 is recommended for this report.  
 Licensed to , 4/24/2012 3:55:23 PM

Input File Name: I:\File Share\ST.temp\208543001 Lower Busch Tank\Liquefaction Analysis\B1 Liquefaction.liq  
 Title: Lower Busch Tank  
 Subtitle: 208543001

Input Data:

Surface Elev.=  
 Hole No.=B-1  
 Depth of Hole=26.50 ft  
 Water Table during Earthquake= 5.00 ft  
 Water Table during In-Situ Testing= 18.00 ft  
 Max. Acceleration=0.6 g  
 Earthquake Magnitude=6.70

1. SPT or BPT Calculation.
  2. Settlement Analysis Method: Ishihara / Yoshimine
  3. Fines Correction for Liquefaction: Idriss/Seed
  4. Fine Correction for Settlement: During Liquefaction\*
  5. Settlement Calculation in: All zones\*
  6. Hammer Energy Ratio, Ce = 1.3
  7. Borehole Diameter, Cb= 1
  8. Sampling Method, Cs= 1
  9. User request factor of safety (apply to CSR) , User= 1.25
  - Plot one CSR curve (fs1=User)
  10. Use Curve Smoothing: Yes\*
- \* Recommended Options

In-Situ Test Data:

Depth ft	SPT	Gamma pcf	Fines %
0.00	16.00	130.00	20.00
7.50	16.00	120.00	51.00
10.00	22.00	99.00	9.00
12.50	23.00	99.00	9.00
15.00	35.00	118.00	9.00
20.00	41.00	130.00	NoLiq
25.00	42.00	130.00	NoLiq

Output Results:

Calculation segment, dz=0.050 ft  
 User defined Print Interval, dp=1.00 ft

CSR Calculation:

Depth ft	gamma pcf	sigma atm	gamma' pcf	sigma' atm	rd	CSR	x fs1	=CSRfs
0.00	130.00	0.000	130.00	0.000	1.00	0.39	1.25	0.49
1.00	128.67	0.065	128.67	0.065	1.00	0.39	1.25	0.49
2.00	127.33	0.129	127.33	0.129	1.00	0.39	1.25	0.49
3.00	126.00	0.192	126.00	0.192	0.99	0.39	1.25	0.48
4.00	124.67	0.255	124.67	0.255	0.99	0.39	1.25	0.48
5.00	123.33	0.317	60.93	0.317	0.99	0.39	1.25	0.48
6.00	122.00	0.378	59.60	0.347	0.99	0.42	1.25	0.52
7.00	120.67	0.439	58.27	0.376	0.98	0.45	1.25	0.56
8.00	115.80	0.498	53.40	0.405	0.98	0.47	1.25	0.59
9.00	107.40	0.554	45.00	0.430	0.98	0.49	1.25	0.62
10.00	99.00	0.606	36.60	0.450	0.98	0.51	1.25	0.64
11.00	99.00	0.656	36.60	0.468	0.97	0.53	1.25	0.66
12.00	99.00	0.705	36.60	0.487	0.97	0.55	1.25	0.69
13.00	102.80	0.755	40.40	0.505	0.97	0.56	1.25	0.71
14.00	110.40	0.808	48.00	0.527	0.97	0.58	1.25	0.72
15.00	118.00	0.865	55.60	0.553	0.97	0.59	1.25	0.74
16.00	120.40	0.925	58.00	0.582	0.96	0.60	1.25	0.75
17.00	122.80	0.986	60.40	0.611	0.96	0.60	1.25	0.76
18.00	125.20	1.047	62.80	0.642	0.96	0.61	1.25	0.76
19.00	127.60	1.111	65.20	0.674	0.96	0.61	1.25	0.77
20.00	130.00	1.175	67.60	0.707	0.95	0.62	1.25	0.77
21.00	130.00	1.240	67.60	0.741	0.95	0.62	1.25	0.78
22.00	130.00	1.305	67.60	0.775	0.95	0.62	1.25	0.78
23.00	130.00	1.370	67.60	0.808	0.95	0.63	1.25	0.78
24.00	130.00	1.435	67.60	0.842	0.94	0.63	1.25	0.78
25.00	130.00	1.500	67.60	0.876	0.94	0.63	1.25	0.79
26.00	130.00	1.565	67.60	0.910	0.94	0.63	1.25	0.79

CSR is based on water table at 5.00 during earthquake

CRR Calculation

Depth ft	SPT	from Cebs	SPT or Cr	BPT data: sigma' atm	Cn	(N1)60	Fines %	d(N1)60	(N1)60f	CRR7.5
0.00	16.00	1.30	0.75	0.000	1.70	26.52	20.00	5.72	32.24	2.00
1.00	16.00	1.30	0.75	0.065	1.70	26.52	24.13	7.07	33.59	2.00
2.00	16.00	1.30	0.75	0.129	1.70	26.52	28.27	8.30	34.82	2.00
3.00	16.00	1.30	0.75	0.192	1.70	26.52	32.40	9.48	36.00	2.00
4.00	16.00	1.30	0.75	0.255	1.70	26.52	36.53	10.30	36.82	2.00
5.00	16.00	1.30	0.75	0.317	1.70	26.52	40.67	10.30	36.82	2.00
6.00	16.00	1.30	0.75	0.378	1.63	25.37	44.80	10.07	35.44	2.00
7.00	16.00	1.30	0.75	0.439	1.51	23.55	48.93	9.71	33.26	2.00
8.00	17.20	1.30	0.75	0.498	1.42	23.75	42.60	9.75	33.50	2.00
9.00	19.60	1.30	0.85	0.554	1.34	29.09	25.80	7.89	36.98	2.00
10.00	22.00	1.30	0.85	0.606	1.28	31.23	9.00	1.09	32.32	2.00
11.00	22.40	1.30	0.85	0.656	1.24	30.57	9.00	1.08	31.65	2.00
12.00	22.80	1.30	0.85	0.705	1.19	30.01	9.00	1.07	31.07	2.00
13.00	25.40	1.30	0.85	0.755	1.15	32.30	9.00	1.11	33.41	2.00
14.00	30.20	1.30	0.85	0.808	1.11	37.12	9.00	1.19	38.31	2.00
15.00	35.00	1.30	0.95	0.865	1.08	46.47	9.00	1.35	47.82	2.00

B1 Liquefaction.cal										
16.00	36.20	1.30	0.95	0.925	1.04	46.49	9.00	1.35	47.84	2.00
17.00	37.40	1.30	0.95	0.986	1.01	46.53	9.00	1.35	47.88	2.00
18.00	38.60	1.30	0.95	1.047	0.98	46.58	9.00	1.35	47.93	2.00
19.00	39.80	1.30	0.95	1.079	0.96	47.31	9.00	1.36	48.67	2.00
20.00	41.00	1.30	0.95	1.113	0.95	48.00	9.00	1.37	49.38	2.00
21.00	41.20	1.30	0.95	1.146	0.93	47.52	NoLiq	14.50	62.03	2.00
22.00	41.40	1.30	0.95	1.180	0.92	47.06	NoLiq	14.41	61.48	2.00
23.00	41.60	1.30	0.95	1.214	0.91	46.63	NoLiq	14.33	60.95	2.00
24.00	41.80	1.30	0.95	1.248	0.90	46.21	NoLiq	14.24	60.46	2.00
25.00	42.00	1.30	0.95	1.282	0.88	45.82	NoLiq	14.16	59.98	2.00
26.00	42.00	1.30	0.95	1.315	0.87	45.23	NoLiq	14.05	59.27	2.00

CRR is based on water table at 18.00 during In-Situ Testing

Factor of Safety, - Earthquake Magnitude= 6.70:									
Depth ft	sigC' atm	CRR7.5	x Ksig	=CRRv	x MSF	=CRRm	CSRfs	F.S.=CRRm/CSRfs	
0.00	0.00	2.00	1.00	2.00	1.33	2.67	0.49	5.00	
1.00	0.04	2.00	1.00	2.00	1.33	2.67	0.49	5.00	
2.00	0.08	2.00	1.00	2.00	1.33	2.67	0.49	5.00	
3.00	0.12	2.00	1.00	2.00	1.33	2.67	0.48	5.00	
4.00	0.17	2.00	1.00	2.00	1.33	2.67	0.48	5.00	
5.00	0.21	2.00	1.00	2.00	1.33	2.67	0.48	5.00	
6.00	0.25	2.00	1.00	2.00	1.33	2.67	0.52	5.00	
7.00	0.29	2.00	1.00	2.00	1.33	2.67	0.56	4.77	
8.00	0.32	2.00	1.00	2.00	1.33	2.67	0.59	4.53	
9.00	0.36	2.00	1.00	2.00	1.33	2.67	0.62	4.33	
10.00	0.39	2.00	1.00	2.00	1.33	2.67	0.64	4.16	
11.00	0.43	2.00	1.00	2.00	1.33	2.67	0.66	4.01	
12.00	0.46	2.00	1.00	2.00	1.33	2.67	0.69	3.89	
13.00	0.49	2.00	1.00	2.00	1.33	2.67	0.71	3.78	
14.00	0.53	2.00	1.00	2.00	1.33	2.67	0.72	3.69	
15.00	0.56	2.00	1.00	2.00	1.33	2.67	0.74	3.63	
16.00	0.60	2.00	1.00	2.00	1.33	2.67	0.75	3.58	
17.00	0.64	2.00	1.00	2.00	1.33	2.67	0.76	3.53	
18.00	0.68	2.00	1.00	2.00	1.33	2.67	0.76	3.50	
19.00	0.70	2.00	1.00	2.00	1.33	2.67	0.77	3.48	
20.00	0.72	2.00	1.00	2.00	1.33	2.67	0.77	3.45	
21.00	0.75	2.00	1.00	2.00	1.33	2.00	0.78	5.00	^
22.00	0.77	2.00	1.00	2.00	1.33	2.00	0.78	5.00	^
23.00	0.79	2.00	1.00	2.00	1.33	2.00	0.78	5.00	^
24.00	0.81	2.00	1.00	2.00	1.33	2.00	0.78	5.00	^
25.00	0.83	2.00	1.00	2.00	1.33	2.00	0.79	5.00	^
26.00	0.86	2.00	1.00	2.00	1.33	2.00	0.79	5.00	^

\* F.S.<1: Liquefaction Potential Zone. (If above water table: F.S.=5)  
 ^ No-liquefiable Soils or above water Table.  
 (F.S. is limited to 5, CRR is limited to 2, CSR is limited to 2)

CPT convert to SPT for Settlement Analysis:							
Fines Correction for Settlement Analysis:							
Depth ft	Ic	qc/N60	qc1 atm	(N1)60	Fines %	d(N1)60	(N1)60s
0.00	-	-	-	32.24	20.00	0.00	32.24
1.00	-	-	-	33.59	24.13	0.00	33.59
2.00	-	-	-	34.82	28.27	0.00	34.82
3.00	-	-	-	36.00	32.40	0.00	36.00
4.00	-	-	-	36.82	36.53	0.00	36.82
5.00	-	-	-	36.82	40.67	0.00	36.82
6.00	-	-	-	35.44	44.80	0.00	35.44
7.00	-	-	-	33.26	48.93	0.00	33.26
8.00	-	-	-	33.50	42.60	0.00	33.50
9.00	-	-	-	36.98	25.80	0.00	36.98
10.00	-	-	-	32.32	9.00	0.00	32.32
11.00	-	-	-	31.65	9.00	0.00	31.65
12.00	-	-	-	31.07	9.00	0.00	31.07
13.00	-	-	-	33.41	9.00	0.00	33.41
14.00	-	-	-	38.31	9.00	0.00	38.31
15.00	-	-	-	47.82	9.00	0.00	47.82
16.00	-	-	-	47.84	9.00	0.00	47.84
17.00	-	-	-	47.88	9.00	0.00	47.88
18.00	-	-	-	47.93	9.00	0.00	47.93
19.00	-	-	-	48.67	9.00	0.00	48.67
20.00	-	-	-	49.38	9.00	0.00	49.38
21.00	-	-	-	62.03	NoLiq	0.00	62.03
22.00	-	-	-	61.48	NoLiq	0.00	61.48
23.00	-	-	-	60.95	NoLiq	0.00	60.95
24.00	-	-	-	60.46	NoLiq	0.00	60.46
25.00	-	-	-	59.98	NoLiq	0.00	59.98
26.00	-	-	-	59.27	NoLiq	0.00	59.27

(N1)60s has been fines corrected in liquefaction analysis, therefore d(N1)60=0.  
 Fines=NoLiq means the soils are not liquefiable.

Settlement of Saturated Sands:											
Settlement Analysis Method: Ishihara / Yoshimine											
Depth ft	CSRsf	/ MSF*	=CSRm	F.S.	Fines %	(N1)60s	Dr %	ec %	dsz in.	dsp in.	S in.
26.45	0.79	1.00	0.79	5.00	NoLiq	58.96	100.00	0.000	0.0E0	0.000	0.000
26.00	0.79	1.00	0.79	5.00	NoLiq	59.27	100.00	0.000	0.0E0	0.000	0.000
25.00	0.79	1.00	0.79	5.00	NoLiq	59.98	100.00	0.000	0.0E0	0.000	0.000
24.00	0.78	1.00	0.78	5.00	NoLiq	60.46	100.00	0.000	0.0E0	0.000	0.000
23.00	0.78	1.00	0.78	5.00	NoLiq	60.95	100.00	0.000	0.0E0	0.000	0.000
22.00	0.78	1.00	0.78	5.00	NoLiq	61.48	100.00	0.000	0.0E0	0.000	0.000
21.00	0.78	1.00	0.78	5.00	NoLiq	62.03	100.00	0.000	0.0E0	0.000	0.000
20.00	0.77	1.00	0.77	3.45	9.00	49.38	100.00	0.000	0.0E0	0.000	0.000
19.00	0.77	1.00	0.77	3.48	9.00	48.67	100.00	0.000	0.0E0	0.000	0.000
18.00	0.76	1.00	0.76	3.50	9.00	47.93	100.00	0.000	0.0E0	0.000	0.000
17.00	0.76	1.00	0.76	3.53	9.00	47.88	100.00	0.000	0.0E0	0.000	0.000
16.00	0.75	1.00	0.75	3.58	9.00	47.84	100.00	0.000	0.0E0	0.000	0.000
15.00	0.74	1.00	0.74	3.63	9.00	47.82	100.00	0.000	0.0E0	0.000	0.000



B1 Liquefaction.cal

14.00	0.72	1.00	0.72	3.69	9.00	38.31	100.00	0.000	0.0E0	0.000	0.000	0.000
13.00	0.71	1.00	0.71	3.78	9.00	33.41	98.33	0.000	0.0E0	0.000	0.000	0.000
12.00	0.69	1.00	0.69	3.89	9.00	31.07	92.53	0.000	0.0E0	0.000	0.000	0.000
11.00	0.66	1.00	0.66	4.01	9.00	31.65	93.91	0.000	0.0E0	0.000	0.000	0.000
10.00	0.64	1.00	0.64	4.16	9.00	32.32	95.54	0.000	0.0E0	0.000	0.000	0.000
9.00	0.62	1.00	0.62	4.33	25.80	36.98	100.00	0.000	0.0E0	0.000	0.000	0.000
8.00	0.59	1.00	0.59	4.53	42.60	33.50	98.58	0.000	0.0E0	0.000	0.000	0.000
7.00	0.56	1.00	0.56	4.77	48.93	33.26	97.94	0.000	0.0E0	0.000	0.000	0.000
6.00	0.52	1.00	0.52	5.00	44.80	35.44	100.00	0.000	0.0E0	0.000	0.000	0.000
5.00	0.48	1.00	0.48	5.00	40.67	36.82	100.00	0.000	0.0E0	0.000	0.000	0.000

No Settlement of Saturated Sands

Settlement of Saturated Sands=0.000 in.  
 qc1 and (N1)60 is after fines correction in liquefaction analysis  
 dsz is per each segment, dz=0.05 ft  
 dsp is per each print interval, dp=1.00 ft  
 S is cumulated settlement at this depth

Settlement of Unsaturated Sands:

Depth ft	sigma' atm	sigC' atm	(N1)60s	CSRsf	Gmax atm	g*Ge/Gm	g_eff	ec7.5 %	Cec	ec %	dsz in.	dsp in.	S in.
4.95	0.31	0.20	36.82	0.48	671.02	2.3E-4	0.0496	0.0194	0.84	0.0162	1.95E-4	0.000	0.000
4.00	0.25	0.17	36.82	0.48	604.71	2.0E-4	0.0398	0.0155	0.84	0.0130	1.56E-4	0.003	0.003
3.00	0.19	0.12	36.00	0.48	521.10	1.8E-4	0.0417	0.0172	0.84	0.0144	1.73E-4	0.004	0.007
2.00	0.13	0.08	34.82	0.49	421.91	1.5E-4	0.0287	0.0126	0.84	0.0106	1.27E-4	0.003	0.010
1.00	0.06	0.04	33.59	0.49	295.56	1.1E-4	0.0220	0.0104	0.84	0.0087	1.04E-4	0.002	0.012
0.00	0.00	0.00	32.24	0.49	3.62	1.3E-6	0.0010	0.0005	0.84	0.0004	5.18E-6	0.001	0.013

Settlement of Unsaturated Sands=0.013 in.  
 dsz is per each segment, dz=0.05 ft  
 dsp is per each print interval, dp=1.00 ft  
 S is cumulated settlement at this depth

Total Settlement of Saturated and Unsaturated Sands=0.013 in.  
 Differential Settlement=0.007 to 0.009 in.

Units: Depth = ft, Stress or Pressure = atm (tsf), Unit weight = pcf, Settlement = in.

1 atm (atmosphere) = 1 tsf (ton/ft2)

SPT Field data from Standard Penetration Test (SPT)  
 BPT Field data from Becker Penetration Test (BPT)  
 qc Field data from Cone Penetration Test (CPT) [atm (tsf)]  
 fs Friction from CPT testing [atm (tsf)]  
 gamma Total unit weight of soil  
 gamma' Effective unit weight of soil  
 Fines Fines content [%]  
 D50 Mean grain size  
 Dr Relative Density  
 sigma Total vertical stress [atm (tsf)]  
 sigma' Effective vertical stress [atm (tsf)]  
 sigC' Effective confining pressure [atm (tsf)]  
 rd Stress reduction coefficient  
 CRRV CRR after overburden stress correction, CRRV=CRR7.5 \* Ksig  
 CRR7.5 Cyclic resistance ratio (M=7.5)  
 Ksig Overburden stress correction factor for CRR7.5  
 CRRM After magnitude scaling correction CRRM=CRRV \* MSF  
 MSF Magnitude scaling factor from M=7.5 to user input M  
 CSR Cyclic stress ratio induced by earthquake  
 CSRfs CSRfs=CSR\*fs1 (Default fs1=1)  
 fs1 First CSR curve in graphic defined in #9 of Advanced page  
 fs2 2nd CSR curve in graphic defined in #9 of Advanced page  
 F.S. Calculated factor of safety against liquefaction F.S.=CRRM/CSRsf  
 Cebs Energy Ratio, Borehole Dia., and Sampling Method Corrections  
 Cr Rod Length Corrections  
 Cn Overburden Pressure Correction  
 (N1)60 SPT after corrections, (N1)60=SPT \* Cr \* Cn \* Cebs  
 d(N1)60 Fines correction of SPT  
 (N1)60f (N1)60 after fines corrections, (N1)60f=(N1)60 + d(N1)60  
 Cq Overburden stress correction factor  
 qc1 CPT after Overburden stress correction  
 dqc1 Fines correction of CPT  
 qc1f CPT after Fines and Overburden correction, qc1f=qc1 + dqc1  
 qc1n CPT after normalization in Robertson's method  
 Kc Fine correction factor in Robertson's Method  
 qc1f CPT after Fines correction in Robertson's Method  
 Ic Soil type index in Suzuki's and Robertson's Methods  
 (N1)60s (N1)60 after settlement fines corrections  
 CSRm After magnitude scaling correction for Settlement calculation CSRm=CSRsf / MSF\*  
 CSRfs Cyclic stress ratio induced by earthquake with user input fs  
 MSF\* Scaling factor from CSR, MSF\*=1, based on Item 2 of Page C.  
 ec Volumetric strain for saturated sands  
 dz Calculation segment, dz=0.050 ft  
 dsz Settlement in each segment, dz  
 dp User defined print interval  
 dsp Settlement in each print interval, dp  
 Gmax Shear Modulus at low strain  
 g\_eff gamma\_eff, Effective shear strain  
 g\*Ge/Gm gamma\_eff \* G\_eff/G\_max, Strain-modulus ratio  
 ec7.5 Volumetric Strain for magnitude=7.5  
 Cec Magnitude correction factor for any magnitude  
 ec Volumetric strain for unsaturated sands, ec=Cec \* ec7.5  
 NoLiq No-Liquefy Soils

References:

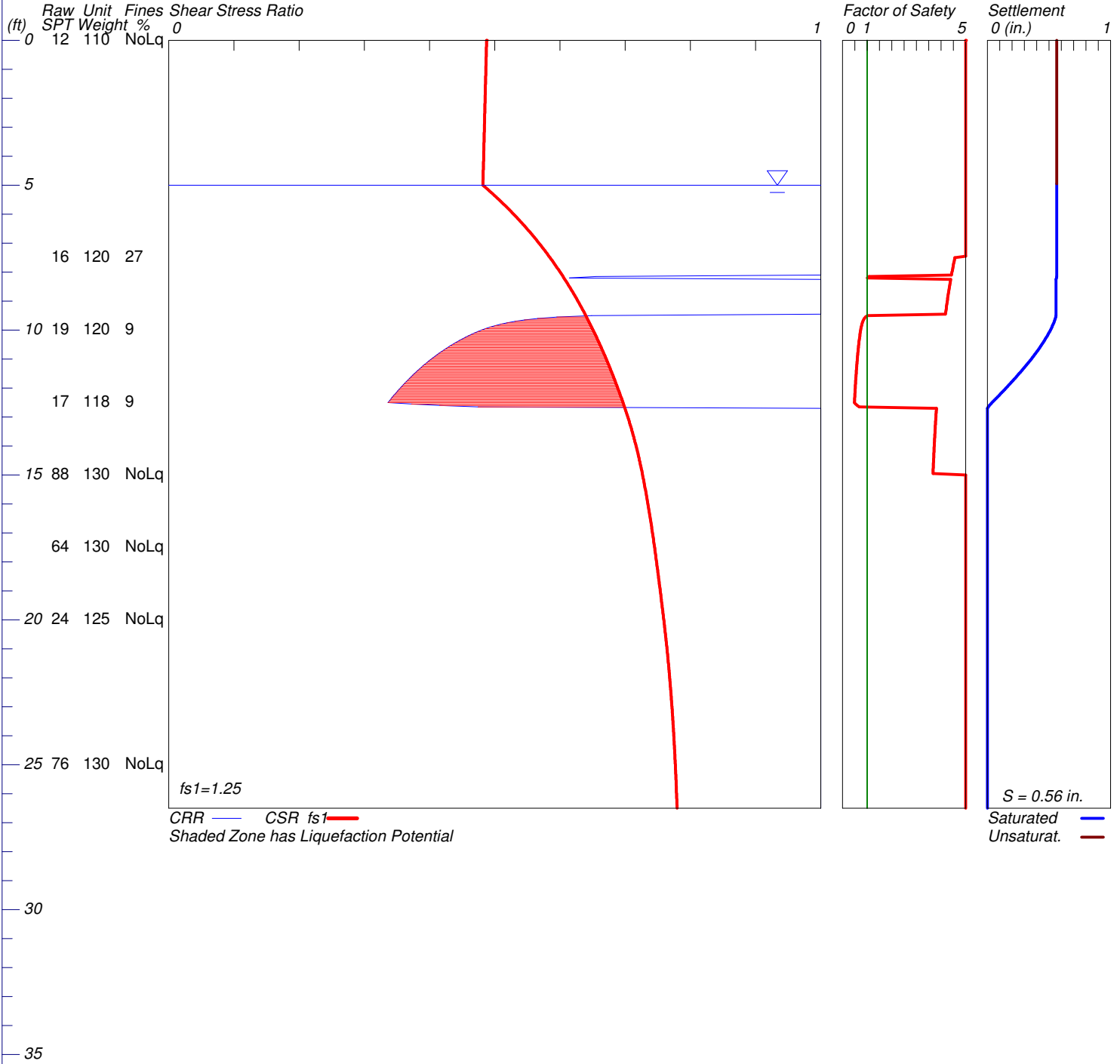
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# LIQUEFACTION ANALYSIS

## Lower Busch Tank

Hole No.=B-2 Water Depth=5 ft

Magnitude=6.7  
Acceleration=0.60g



LiquefyPro CivilTech Software USA www.civilttech.com

B2 Liquefaction.cal  
 \*\*\*\*\*  
 LIQUEFACTION ANALYSIS CALCULATION DETAILS  
 Copyright by CivilTech Software  
 www.civiltechsoftware.com  
 \*\*\*\*\*

Font: Courier New, Regular, Size 8 is recommended for this report.  
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Input File Name: I:\File Share\ST.temp\208543001 Lower Busch Tank\Liquefaction Analysis\B2 Liquefaction.liq  
 Title: Lower Busch Tank  
 Subtitle: 208543001

Input Data:

Surface Elev.=  
 Hole No.=B-2  
 Depth of Hole=26.50 ft  
 Water Table during Earthquake= 5.00 ft  
 Water Table during In-Situ Testing= 12.50 ft  
 Max. Acceleration=0.6 g  
 Earthquake Magnitude=6.70

1. SPT or BPT Calculation.
  2. Settlement Analysis Method: Ishihara / Yoshimine
  3. Fines Correction for Liquefaction: Idriss/Seed
  4. Fine Correction for Settlement: During Liquefaction\*
  5. Settlement Calculation in: All zones\*
  6. Hammer Energy Ratio, Ce = 1.3
  7. Borehole Diameter, Cb= 1
  8. Sampling Method, Cs= 1
  9. User request factor of safety (apply to CSR) , User= 1.25
  - Plot one CSR curve (fs1=User)
  10. Use Curve Smoothing: Yes\*
- \* Recommended Options

In-Situ Test Data:

Depth ft	SPT	Gamma pcf	Fines %
0.00	12.00	110.00	NoLiq
7.50	16.00	120.00	27.00
10.00	19.00	120.00	9.00
12.50	17.00	118.00	9.00
15.00	88.00	130.00	NoLiq
17.50	64.00	130.00	NoLiq
20.00	24.00	125.00	NoLiq
25.00	76.00	130.00	NoLiq

Output Results:

Calculation segment, dz=0.050 ft  
 User defined Print Interval, dp=1.00 ft

CSR Calculation:

Depth ft	gamma pcf	sigma atm	gamma' pcf	sigma' atm	rd	CSR	x fs1	=CSRfs
0.00	110.00	0.000	110.00	0.000	1.00	0.39	1.25	0.49
1.00	111.33	0.055	111.33	0.055	1.00	0.39	1.25	0.49
2.00	112.67	0.111	112.67	0.111	1.00	0.39	1.25	0.49
3.00	114.00	0.168	114.00	0.168	0.99	0.39	1.25	0.48
4.00	115.33	0.225	115.33	0.225	0.99	0.39	1.25	0.48
5.00	116.67	0.283	54.27	0.283	0.99	0.39	1.25	0.48
6.00	118.00	0.342	55.60	0.311	0.99	0.42	1.25	0.53
7.00	119.33	0.401	56.93	0.339	0.98	0.45	1.25	0.57
8.00	120.00	0.461	57.60	0.368	0.98	0.48	1.25	0.60
9.00	120.00	0.521	57.60	0.396	0.98	0.50	1.25	0.63
10.00	120.00	0.581	57.60	0.425	0.98	0.52	1.25	0.65
11.00	119.20	0.641	56.80	0.454	0.97	0.54	1.25	0.67
12.00	118.40	0.700	56.00	0.482	0.97	0.55	1.25	0.69
13.00	120.40	0.760	58.00	0.510	0.97	0.56	1.25	0.70
14.00	125.20	0.821	62.80	0.540	0.97	0.57	1.25	0.72
15.00	130.00	0.885	67.60	0.573	0.97	0.58	1.25	0.73
16.00	130.00	0.950	67.60	0.607	0.96	0.59	1.25	0.73
17.00	130.00	1.015	67.60	0.640	0.96	0.59	1.25	0.74
18.00	129.00	1.080	66.60	0.674	0.96	0.60	1.25	0.75
19.00	127.00	1.144	64.60	0.707	0.96	0.60	1.25	0.75
20.00	125.00	1.207	62.60	0.739	0.95	0.61	1.25	0.76
21.00	126.00	1.269	63.60	0.770	0.95	0.61	1.25	0.76
22.00	127.00	1.333	64.60	0.802	0.95	0.61	1.25	0.77
23.00	128.00	1.396	65.60	0.835	0.95	0.62	1.25	0.77
24.00	129.00	1.461	66.60	0.868	0.94	0.62	1.25	0.77
25.00	130.00	1.525	67.60	0.901	0.94	0.62	1.25	0.78
26.00	130.00	1.590	67.60	0.935	0.94	0.62	1.25	0.78

CSR is based on water table at 5.00 during earthquake

CRR Calculation

Depth ft	SPT	from Cebs	SPT or Cr	BPT data: sigma' atm	Cn	(N1)60	Fines %	d(N1)60	(N1)60F	CRR7.5
0.00	12.00	1.30	0.75	0.000	1.70	19.89	NoLiq	8.98	28.87	0.37
1.00	12.53	1.30	0.75	0.055	1.70	20.77	NoLiq	9.15	29.93	0.44
2.00	13.07	1.30	0.75	0.111	1.70	21.66	NoLiq	9.33	30.99	2.00
3.00	13.60	1.30	0.75	0.168	1.70	22.54	NoLiq	9.51	32.05	2.00
4.00	14.13	1.30	0.75	0.225	1.70	23.43	NoLiq	9.69	33.11	2.00
5.00	14.67	1.30	0.75	0.283	1.70	24.31	NoLiq	9.86	34.17	2.00
6.00	15.20	1.30	0.75	0.342	1.70	25.19	NoLiq	10.04	35.23	2.00
7.00	15.73	1.30	0.75	0.401	1.58	24.22	NoLiq	9.84	34.06	2.00
8.00	16.60	1.30	0.75	0.461	1.47	23.83	23.40	6.57	30.40	2.00
9.00	17.80	1.30	0.85	0.521	1.39	27.25	16.20	4.32	31.57	2.00
10.00	19.00	1.30	0.85	0.581	1.31	27.54	9.00	1.02	28.57	0.36
11.00	18.20	1.30	0.85	0.641	1.25	25.12	9.00	0.98	26.10	0.30
12.00	17.40	1.30	0.85	0.700	1.19	22.97	9.00	0.95	23.92	0.27
13.00	31.20	1.30	0.85	0.744	1.16	39.97	9.00	1.24	41.20	2.00
14.00	59.60	1.30	0.85	0.774	1.14	74.85	9.00	1.83	76.68	2.00

B2 Liquefaction.cal										
15.00	88.00	1.30	0.95	0.807	1.11	121.00	NoLiq	29.20	150.20	2.00
16.00	78.40	1.30	0.95	0.841	1.09	105.61	NoLiq	26.12	131.73	2.00
17.00	68.80	1.30	0.95	0.874	1.07	90.87	NoLiq	23.17	114.04	2.00
18.00	56.00	1.30	0.95	0.908	1.05	72.58	NoLiq	19.52	92.09	2.00
19.00	40.00	1.30	0.95	0.941	1.03	50.93	NoLiq	15.19	66.11	2.00
20.00	24.00	1.30	0.95	0.973	1.01	30.05	NoLiq	11.01	41.06	2.00
21.00	34.40	1.30	0.95	1.004	1.00	42.39	NoLiq	13.48	55.87	2.00
22.00	44.80	1.30	0.95	1.036	0.98	54.35	NoLiq	15.87	70.22	2.00
23.00	55.20	1.30	0.95	1.069	0.97	65.94	NoLiq	18.19	84.13	2.00
24.00	65.60	1.30	0.95	1.102	0.95	77.18	NoLiq	20.44	97.62	2.00
25.00	76.00	1.30	0.95	1.135	0.94	88.09	NoLiq	22.62	110.70	2.00
26.00	76.00	1.30	0.95	1.169	0.92	86.80	NoLiq	22.36	109.16	2.00

CRR is based on water table at 12.50 during In-Situ Testing

Factor of Safety, - Earthquake Magnitude= 6.70:										
Depth	sig <sup>c</sup>	CRR <sup>7.5</sup>	x Ksig	=CRRv	x MSF	=CRRm	CSRfs	F.S.=CRRm/CSRfs		
Ft	atm									
0.00	0.00	0.37	1.00	0.37	1.33	2.00	0.49	5.00	^	
1.00	0.04	0.44	1.00	0.44	1.33	2.00	0.49	5.00	^	
2.00	0.07	2.00	1.00	2.00	1.33	2.00	0.49	5.00	^	
3.00	0.11	2.00	1.00	2.00	1.33	2.00	0.48	5.00	^	
4.00	0.15	2.00	1.00	2.00	1.33	2.00	0.48	5.00	^	
5.00	0.18	2.00	1.00	2.00	1.33	2.00	0.48	5.00	^	
6.00	0.22	2.00	1.00	2.00	1.33	2.00	0.53	5.00	^	
7.00	0.26	2.00	1.00	2.00	1.33	2.00	0.57	5.00	^	
8.00	0.30	2.00	1.00	2.00	1.33	2.67	0.60	4.45		
9.00	0.34	2.00	1.00	2.00	1.33	2.67	0.63	4.25		
10.00	0.38	0.36	1.00	0.36	1.33	0.48	0.65	0.74	*	
11.00	0.42	0.30	1.00	0.30	1.33	0.40	0.67	0.60	*	
12.00	0.46	0.27	1.00	0.27	1.33	0.36	0.69	0.52	*	
13.00	0.48	2.00	1.00	2.00	1.33	2.67	0.70	3.79		
14.00	0.50	2.00	1.00	2.00	1.33	2.67	0.72	3.72		
15.00	0.52	2.00	1.00	2.00	1.33	2.00	0.73	5.00	^	
16.00	0.55	2.00	1.00	2.00	1.33	2.00	0.73	5.00	^	
17.00	0.57	2.00	1.00	2.00	1.33	2.00	0.74	5.00	^	
18.00	0.59	2.00	1.00	2.00	1.33	2.00	0.75	5.00	^	
19.00	0.61	2.00	1.00	2.00	1.33	2.00	0.75	5.00	^	
20.00	0.63	2.00	1.00	2.00	1.33	2.00	0.76	5.00	^	
21.00	0.65	2.00	1.00	2.00	1.33	2.00	0.76	5.00	^	
22.00	0.67	2.00	1.00	2.00	1.33	2.00	0.77	5.00	^	
23.00	0.69	2.00	1.00	2.00	1.33	2.00	0.77	5.00	^	
24.00	0.72	2.00	1.00	2.00	1.33	2.00	0.77	5.00	^	
25.00	0.74	2.00	1.00	2.00	1.33	2.00	0.78	5.00	^	
26.00	0.76	2.00	1.00	2.00	1.33	2.00	0.78	5.00	^	

\* F.S.<1: Liquefaction Potential Zone. (If above water table: F.S.=5)  
 ^ No-liquefiable Soils or above water Table.  
 (F.S. is limited to 5, CRR is limited to 2, CSR is limited to 2)

CPT convert to SPT for Settlement Analysis:

Fines Correction for Settlement Analysis:										
Depth	Ic	qc/N60	qc1	(N1)60	Fines	d(N1)60	(N1)60s			
Ft			atm		%					
0.00	-	-	-	28.87	NoLiq	0.00	28.87			
1.00	-	-	-	29.93	NoLiq	0.00	29.93			
2.00	-	-	-	30.99	NoLiq	0.00	30.99			
3.00	-	-	-	32.05	NoLiq	0.00	32.05			
4.00	-	-	-	33.11	NoLiq	0.00	33.11			
5.00	-	-	-	34.17	NoLiq	0.00	34.17			
6.00	-	-	-	35.23	NoLiq	0.00	35.23			
7.00	-	-	-	34.06	NoLiq	0.00	34.06			
8.00	-	-	-	30.40	23.40	0.00	30.40			
9.00	-	-	-	31.57	16.20	0.00	31.57			
10.00	-	-	-	28.57	9.00	0.00	28.57			
11.00	-	-	-	26.10	9.00	0.00	26.10			
12.00	-	-	-	23.92	9.00	0.00	23.92			
13.00	-	-	-	41.20	9.00	0.00	41.20			
14.00	-	-	-	76.68	9.00	0.00	76.68			
15.00	-	-	-	100.00	NoLiq	0.00	100.00			
16.00	-	-	-	100.00	NoLiq	0.00	100.00			
17.00	-	-	-	100.00	NoLiq	0.00	100.00			
18.00	-	-	-	92.09	NoLiq	0.00	92.09			
19.00	-	-	-	66.11	NoLiq	0.00	66.11			
20.00	-	-	-	41.06	NoLiq	0.00	41.06			
21.00	-	-	-	55.87	NoLiq	0.00	55.87			
22.00	-	-	-	70.22	NoLiq	0.00	70.22			
23.00	-	-	-	84.13	NoLiq	0.00	84.13			
24.00	-	-	-	97.62	NoLiq	0.00	97.62			
25.00	-	-	-	100.00	NoLiq	0.00	100.00			
26.00	-	-	-	100.00	NoLiq	0.00	100.00			

(N1)60s has been fines corrected in liquefaction analysis, therefore d(N1)60=0.  
 Fines=NoLiq means the soils are not liquefiable.

Settlement of Saturated Sands:

Settlement Analysis Method: Ishihara / Yoshimine											
Depth	CSRsf	/ MSF*	=CSRm	F.S.	Fines	(N1)60s	Dr	ec	dsz	dsp	S
Ft					%		%	%	in.	in.	in.
26.45	0.78	1.00	0.78	5.00	NoLiq	100.00	100.00	0.000	0.0E0	0.000	0.000
26.00	0.78	1.00	0.78	5.00	NoLiq	100.00	100.00	0.000	0.0E0	0.000	0.000
25.00	0.78	1.00	0.78	5.00	NoLiq	100.00	100.00	0.000	0.0E0	0.000	0.000
24.00	0.77	1.00	0.77	5.00	NoLiq	97.62	100.00	0.000	0.0E0	0.000	0.000
23.00	0.77	1.00	0.77	5.00	NoLiq	84.13	100.00	0.000	0.0E0	0.000	0.000
22.00	0.77	1.00	0.77	5.00	NoLiq	70.22	100.00	0.000	0.0E0	0.000	0.000
21.00	0.76	1.00	0.76	5.00	NoLiq	55.87	100.00	0.000	0.0E0	0.000	0.000
20.00	0.76	1.00	0.76	5.00	NoLiq	41.06	100.00	0.000	0.0E0	0.000	0.000
19.00	0.75	1.00	0.75	5.00	NoLiq	66.11	100.00	0.000	0.0E0	0.000	0.000
18.00	0.75	1.00	0.75	5.00	NoLiq	92.09	100.00	0.000	0.0E0	0.000	0.000
17.00	0.74	1.00	0.74	5.00	NoLiq	100.00	100.00	0.000	0.0E0	0.000	0.000
16.00	0.73	1.00	0.73	5.00	NoLiq	100.00	100.00	0.000	0.0E0	0.000	0.000

B2 Liquefaction.cal												
15.00	0.73	1.00	0.73	5.00	NoLiq	100.00	100.00	0.000	0.0E0	0.000	0.000	0.000
14.00	0.72	1.00	0.72	3.72	9.00	76.68	100.00	0.000	0.0E0	0.000	0.000	0.000
13.00	0.70	1.00	0.70	3.79	9.00	41.20	100.00	0.000	0.0E0	0.000	0.000	0.000
12.00	0.69	1.00	0.69	0.52	9.00	23.92	77.68	1.841	1.1E-2	0.151	0.151	0.151
11.00	0.67	1.00	0.67	0.60	9.00	26.10	81.86	1.563	9.4E-3	0.205	0.356	0.356
10.00	0.65	1.00	0.65	0.74	9.00	28.57	86.91	1.023	6.1E-3	0.155	0.511	0.511
9.00	0.63	1.00	0.63	4.25	16.20	31.57	93.71	0.000	0.0E0	0.046	0.558	0.558
8.00	0.60	1.00	0.60	4.45	23.40	30.40	90.97	0.000	0.0E0	0.005	0.562	0.562
7.00	0.57	1.00	0.57	5.00	NoLiq	34.06	100.00	0.000	0.0E0	0.000	0.562	0.562
6.00	0.53	1.00	0.53	5.00	NoLiq	35.23	100.00	0.000	0.0E0	0.000	0.562	0.562
5.00	0.48	1.00	0.48	5.00	NoLiq	34.17	100.00	0.000	0.0E0	0.000	0.562	0.562

Settlement of Saturated Sands=0.562 in.  
 qc1 and (N1)60 is after fines correction in liquefaction analysis  
 dsz is per each segment, dz=0.05 ft  
 dsp is per each print interval, dp=1.00 ft  
 S is cumulated settlement at this depth

Settlement of Unsaturated Sands:													
Depth ft	sigma' atm	sigC' atm	(N1)60s	CSRsf	Gmax atm	g*Ge/Gm	g_eff	ec7.5 %	Cec	ec %	dsz in.	dsp in.	S in.
4.95	0.28	0.18	34.12	0.48	618.45	2.2E-4	0.0457	0.0209	0.84	0.0175	0.00E0	0.000	0.000
4.00	0.23	0.15	33.11	0.48	548.89	2.0E-4	0.0746	0.0361	0.84	0.0303	0.00E0	0.000	0.000
3.00	0.17	0.11	32.05	0.48	468.83	1.7E-4	0.0391	0.0200	0.84	0.0168	0.00E0	0.000	0.000
2.00	0.11	0.07	30.99	0.49	377.41	1.4E-4	0.0272	0.0147	0.84	0.0123	0.00E0	0.000	0.000
1.00	0.06	0.04	29.93	0.49	263.01	1.0E-4	0.0207	0.0118	0.84	0.0099	0.00E0	0.000	0.000
0.00	0.00	0.00	28.87	0.49	3.49	1.4E-6	0.0010	0.0006	0.84	0.0005	0.00E0	0.000	0.000

Settlement of Unsaturated Sands

Settlement of Unsaturated Sands=0.000 in.  
 dsz is per each segment, dz=0.05 ft  
 dsp is per each print interval, dp=1.00 ft  
 S is cumulated settlement at this depth

Total Settlement of Saturated and Unsaturated Sands=0.562 in.  
 Differential Settlement=0.281 to 0.371 in.

Units: Depth = ft, Stress or Pressure = atm (tsf), Unit weight = pcf, Settlement = in.

1 atm (atmosphere)	= 1 tsf (ton/ft2)
SPT	Field data from Standard Penetration Test (SPT)
BPT	Field data from Becker Penetration Test (BPT)
qc	Field data from Cone Penetration Test (CPT) [atm (tsf)]
fs	Friction from CPT testing [atm (tsf)]
gamma	Total unit weight of soil
gamma'	Effective unit weight of soil
Fines	Fines content [%]
D50	Mean grain size
Dr	Relative Density
sigma	Total vertical stress [atm (tsf)]
sigma'	Effective vertical stress [atm (tsf)]
sigC'	Effective confining pressure [atm (tsf)]
rd	Stress reduction coefficient
CRRV	CRR after overburden stress correction, CRRV=CRR7.5 * Ksig
CRR7.5	Cyclic resistance ratio (M=7.5)
Ksig	Overburden stress correction factor for CRR7.5
CRRm	After magnitude scaling correction CRRm=CRRV * MSF
MSF	Magnitude scaling factor from M=7.5 to user input M
CSR	Cyclic stress ratio induced by earthquake
CSRfs	CSRfs=CSR*fs1 (Default fs1=1)
fs1	First CSR curve in graphic defined in #9 of Advanced page
fs2	2nd CSR curve in graphic defined in #9 of Advanced page
F.S.	Calculated factor of safety against liquefaction F.S.=CRRm/CSRsf
Cebs	Energy Ratio, Borehole Dia., and Sampling Method Corrections
Cr	Rod Length Corrections
Cn	Overburden Pressure Correction
(N1)60	SPT after corrections, (N1)60=SPT * Cr * Cn * Cebs
d(N1)60	Fines correction of SPT
(N1)60f	(N1)60 after fines corrections, (N1)60f=(N1)60 + d(N1)60
Cq	Overburden stress correction factor
qc1	CPT after Overburden stress correction
dqc1	Fines correction of CPT
qc1f	CPT after Fines and Overburden correction, qc1f=qc1 + dqc1
qc1n	CPT after normalization in Robertson's method
Kc	Fine correction factor in Robertson's Method
qc1f	CPT after Fines correction in Robertson's Method
Ic	Soil type index in Suzuki's and Robertson's Methods
(N1)60s	(N1)60 after settlement fines corrections
CSRm	After magnitude scaling correction for Settlement calculation CSRm=CSRsf / MSF*
CSRfs	Cyclic stress ratio induced by earthquake with user inputted fs
MSF*	Scaling factor from CSR, MSF*=1, based on Item 2 of Page C.
ec	Volumetric strain for saturated sands
dz	Calculation segment, dz=0.050 ft
dsz	Settlement in each segment, dz
dp	User defined print interval
dsp	Settlement in each print interval, dp
Gmax	Shear Modulus at low strain
g_eff	gamma_eff, Effective shear strain
g*Ge/Gm	gamma_eff * G_eff/G_max, Strain-modulus ratio
ec7.5	Volumetric Strain for magnitude=7.5
Cec	Magnitude correction factor for any magnitude
ec	Volumetric strain for unsaturated sands, ec=Cec * ec7.5
NoLiq	No-Liquefy Soils

References:

1. NCEER workshop on Evaluation of Liquefaction Resistance of Soils. Youd, T.L., and Idriss, I.M., eds., Technical Report NCEER 97-0022.
2. SP117. Southern California Earthquake Center. Recommended Procedures for Implementation of DMG Special Publication 117, Guidelines for Analyzing and Mitigating Liquefaction in California. University of Southern California. March 1999.
3. RECENT ADVANCES IN SOIL LIQUEFACTION ENGINEERING AND SEISMIC SITE RESPONSE EVALUATION, Paper No. SPL-2, PROCEEDINGS: Fourth International Conference on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics, San Diego, CA, March 2001.
3. RECENT ADVANCES IN SOIL LIQUEFACTION ENGINEERING: A UNIFIED AND CONSISTENT FRAMEWORK, Earthquake Engineering Research Center, Report No. EERC 2003-06 by R.B Seed and etc. April 2003.



**APPENDIX D**

**PALEONTOLOGICAL RECORDS SEARCH**

Natural History Museum  
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Los Angeles, CA 90007

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Vertebrate Paleontology Section  
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12 August 2019

Psomas  
3 Hutton Centre Drive, Suite 200  
Santa Ana, CA 92707-8794

Attn: Melissa Macias, Paleontologist

re: Paleontological Resources for the proposed Lower Busch Tank Addendum Project, Psomas Project # 3DPW152201, in the City of Malibu, Los Angeles County, project area

Dear Melissa:

I have conducted a thorough search of our Vertebrate Paleontology records for the proposed Lower Busch Tank Addendum Project, Psomas Project # 3DPW152201, in the City of Malibu, Los Angeles County, project area as outlined on the portion of the Point Dume USGS topographic quadrangle map that you sent to me via e-mail on 29 July 2019. We do not have any vertebrate fossil localities that lie directly within the proposed project area boundaries, but we do have localities nearby from sedimentary deposits similar to those that occur in the proposed project area, either at the surface or at depth.

Surface deposits throughout the proposed project area consist of Quaternary Alluvium, nominally geologically mapped as being marine. These Quaternary deposits typically do not contain significant vertebrate fossils in the uppermost layers, but older sedimentary deposits at relatively shallow depth may well contain significant fossil vertebrate remains. Our closest vertebrate fossil locality from these older Quaternary deposits is LACM 1754, just east of due south of the proposed project area in Malibu Riviera south of the Pacific Coast Highway (Highway 1) above Westward Beach Road. Locality LACM 1754 produced an extensive fossil fauna of late Pleistocene vertebrates (see appendix). Of particular note, two fossil specimens from locality LACM 1754 have been published in the scientific literature: J.H. Hutchison (1987). Moles of the *Scapanus latimanus* group (Talpidae, Insectivora) from the Pliocene and



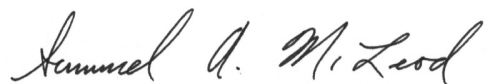
Pleistocene of California. LACM Contributions in Science, 386:1-15) published on the mole, *Scapanus latimanus*, and G.T. Jefferson (1989. Late Cenozoic Tapirs (Mammalia: Perissodactyla) of Western North America. LACM Contributions in Science, 406:1-21) published on the tapir, *Tapirus californicus*.

Immediately to the east and west of the proposed project area there are exposures of the marine early to middle Miocene Trancas Formation. We have no vertebrate fossil localities designated as coming from the Trancas Formation, but some authors have considered it equivalent to some portion of the Topanga Formation. Many of our earlier recorded Topanga Formation localities in the vicinity of the proposed project area do not distinguish between the Lower, Middle, and Upper units of the Topanga Formation. Northeast of the proposed project area we have a series of fossil vertebrate localities clearly being from the marine portion of the Topanga Formation: LACM 5087, 5651, 6257, 6381, and 7367-7368. These localities all occur along Old Topanga Road on the south side of the Calabasas Highlands, except for LACM 7368 that occurs near the top of the ridge on the south side of the Calabasas Highlands. These localities produced fossil specimens of eagle ray, *Myliobatis*, bonito shark, *Isurus*, snaggletooth shark *Hemipristis*, basking shark, *Cetorhinus*, giant sea bass, *Stereolepis*, grouper, *Lompoquia*, herring, *Ganolytes cameo*, sea cows, Dugongidae, and a primitive baleen whale, *Nannocetus*.

Shallow excavations in the Quaternary terrace deposits exposed throughout the proposed project area are unlikely to uncover significant vertebrate fossils. Deeper excavations in those deposits that extend down into older sedimentary deposits, however, may well encounter significant vertebrate fossil remains. Any substantial excavations in the proposed project area, therefore, should be monitored closely to quickly and professionally recover any fossil remains discovered while not 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 vertebrate paleontology records of the Natural History Museum of Los Angeles County. It is not intended to be a thorough paleontological survey of the proposed project area covering other institutional records, a literature survey, or any potential on-site survey.

Sincerely,



Samuel A. McLeod, Ph.D.  
Vertebrate Paleontology

enclosures: appendix, invoice

Late Pleistocene fauna from locality LACM 1754

Aves			Mammalia		
Accipitriformes		- hawks & falcons	Artiodactyla		
Anseriformes			Cervidae		- deer
Anatidae		- ducks & geese	Insectivora		
<i>Anas</i>	<i>americana</i>		Talpidae		- moles
<i>Aythya</i>	<i>affinis</i>		<i>Scapanus</i>	<i>latimanus</i>	
<i>Aythya</i>	<i>marila</i>		Lagomorpha		- rabbits
<i>Bucephala</i>	<i>albeola</i>		Perissodactyla		
<i>Chendytes</i>	<i>lawi</i>		Equidae		- horses
<i>Melanitta</i>	<i>perspicillata</i>		<i>Equus</i>		
<i>Oxyura</i>	<i>jamaicensis</i>		Tapiridae		- tapirs
Ardeiformes			<i>Tapirus</i>	<i>californicus</i>	
Ardeidae		- egrets & herons	Rodentia		
<i>Ardea</i>	<i>herodias</i>		Cricetidae		- deer mice
Charadriiformes			Geomysidae		- pocket gophers
Alcidae		- murrets & murrelets			
<i>Synthliboramphus</i>	<i>antiquus</i>				
<i>Uria</i>	<i>aalge</i>				
Laridae		- gulls			
<i>Larus</i>	<i>canus</i>				
<i>Larus</i>	<i>occidentalis</i>				
Galliformes					
Meleagridae		- turkeys			
<i>Parapavo</i>	<i>californicus</i>				
Phasianidae		- quail			
<i>Lophortyx</i>	<i>californica</i>				
Gaviiformes					
Gaviidae		- loons			
<i>Gavia</i>	<i>stellata</i>				
Gruiformes					
Rallidae		- rails			
<i>Fulica</i>	<i>americana</i>				
Passeriformes					
Corvidae		- crows			
<i>Corvus</i>	<i>corax</i>				
Pelecaniformes					
Phalacrocoracidae		- cormorants			
<i>Phalacrocorax</i>	<i>penicillatus</i>				
Sulidae		- boobies			
Podicipediformes					
Podicipedidae		- grebes			
<i>Podiceps</i>	<i>caspicus</i>				
Procellariidae		- fulmars & shearwaters			
<i>Fulmarus</i>	<i>glacialis</i>				
<i>Puffinus</i>	<i>griseus</i>				
<i>Puffinus</i>	<i>puffinus</i>				
Strigiformes		- owls			

**APPENDIX E**  
**RADIUS REPORT (HAZARDOUS MATERIALS)**

**Lower Busch Tank**

5731 South Busch Drive  
Malibu, CA 90265

Inquiry Number: 5718396.2s  
July 16, 2019

# The EDR Radius Map™ Report



6 Armstrong Road, 4th floor  
Shelton, CT 06484  
Toll Free: 800.352.0050  
[www.edrnet.com](http://www.edrnet.com)

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Government Records Searched/Data Currency Tracking .....	GR-1

## GEOCHECK ADDENDUM

GeoCheck - Not Requested

***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

5731 SOUTH BUSCH DRIVE  
MALIBU, CA 90265

#### COORDINATES

Latitude (North): 34.0301170 - 34° 1' 48.42"  
Longitude (West): 118.8190830 - 118° 49' 8.69"  
Universal Transverse Mercator: Zone 11  
UTM X (Meters): 332056.5  
UTM Y (Meters): 3766793.0  
Elevation: 315 ft. above sea level

### USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map: 5630763 POINT DUME, CA  
Version Date: 2012

### AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from: 20140513  
Source: USDA

MAPPED SITES SUMMARY

Target Property Address:  
5731 SOUTH BUSCH DRIVE  
MALIBU, CA 90265

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
<a href="#">1</a>	KATHERINE MARINARO	5911 BUSCH DR	RCRA NonGen / NLR	Lower	1098, 0.208, SSW
<a href="#">2</a>	MALIBU HIGH SCHOOL	30215 MORNING VIEW D	ENVIROSTOR, LUST, SCH, SWEEPS UST, DEED, HIST...	Lower	3298, 0.625, SW

# 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-SQG..... RCRA - Small 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



## EXECUTIVE SUMMARY

US INST CONTROL..... Sites with Institutional Controls

### **Federal ERNS list**

ERNS..... Emergency Response Notification System

### **State- and tribal - equivalent NPL**

RESPONSE..... State Response Sites

### **State and tribal landfill and/or solid waste disposal site lists**

SWF/LF..... Solid Waste Information System

### **State and tribal leaking storage tank lists**

LUST..... Geotracker's Leaking Underground Fuel Tank Report

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

UST..... Active UST Facilities

AST..... Aboveground Petroleum Storage Tank Facilities

INDIAN UST..... Underground Storage Tanks on Indian Land

### **State and tribal voluntary cleanup sites**

INDIAN VCP..... Voluntary Cleanup Priority Listing

VCP..... Voluntary Cleanup Program Properties

### **State and tribal Brownfields sites**

BROWNFIELDS..... Considered Brownfields Sites Listing

### **ADDITIONAL ENVIRONMENTAL RECORDS**

#### **Local Brownfield lists**

US BROWNFIELDS..... A Listing of Brownfields Sites

#### **Local Lists of Landfill / Solid Waste Disposal Sites**

WMUDS/SWAT..... Waste Management Unit Database

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**

AOCONCERN..... Key Areas of Concerns in Los Angeles County

## EXECUTIVE SUMMARY

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
CERS HAZ WASTE.....	CERS HAZ WASTE
US CDL.....	National Clandestine Laboratory Register
PFAS.....	PFAS Contamination Site Location Listing

### **Local Lists of Registered Storage Tanks**

SWEEPS UST.....	SWEEPS UST Listing
HIST UST.....	Hazardous Substance Storage Container Database
CA FID UST.....	Facility Inventory Database
CERS TANKS.....	California Environmental Reporting System (CERS) Tanks

### **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
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

## EXECUTIVE SUMMARY

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
FINDS.....	Facility Index System/Facility Registry System
DOCKET HWC.....	Hazardous Waste Compliance Docket Listing
ECHO.....	Enforcement & Compliance History Information
UXO.....	Unexploded Ordnance Sites
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
EML.....	Emissions Inventory Data
ENF.....	Enforcement Action Listing
Financial Assurance.....	Financial Assurance Information Listing
HAZNET.....	Facility and Manifest Data
ICE.....	ICE
HIST CORTESE.....	Hazardous Waste & Substance Site List
LOS ANGELES CO. HMS.....	HMS: Street Number List
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
LA Co. Site Mitigation.....	Site Mitigation List
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)
LOS ANGELES CO LF METHANE.....	Methane Producing Landfills

### **EDR HIGH RISK HISTORICAL RECORDS**

#### ***EDR Exclusive Records***

EDR MGP..... EDR Proprietary Manufactured Gas Plants

## EXECUTIVE SUMMARY

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

#### ***State- and tribal - equivalent CERCLIS***

ENVIROSTOR: The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifies 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.

A review of the ENVIROSTOR list, as provided by EDR, and dated 04/29/2019 has revealed that there is 1 ENVIROSTOR site within approximately 1 mile of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b><i>MALIBU HIGH SCHOOL</i></b> Facility Id: 19820092 Status: Certified O&M - Land Use Restrictions Only	<b><i>30215 MORNING VIEW D</i></b>	<b><i>SW 1/2 - 1 (0.625 mi.)</i></b>	<b><i>2</i></b>	<b><i>10</i></b>

# EXECUTIVE SUMMARY

## ADDITIONAL ENVIRONMENTAL RECORDS

### ***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.

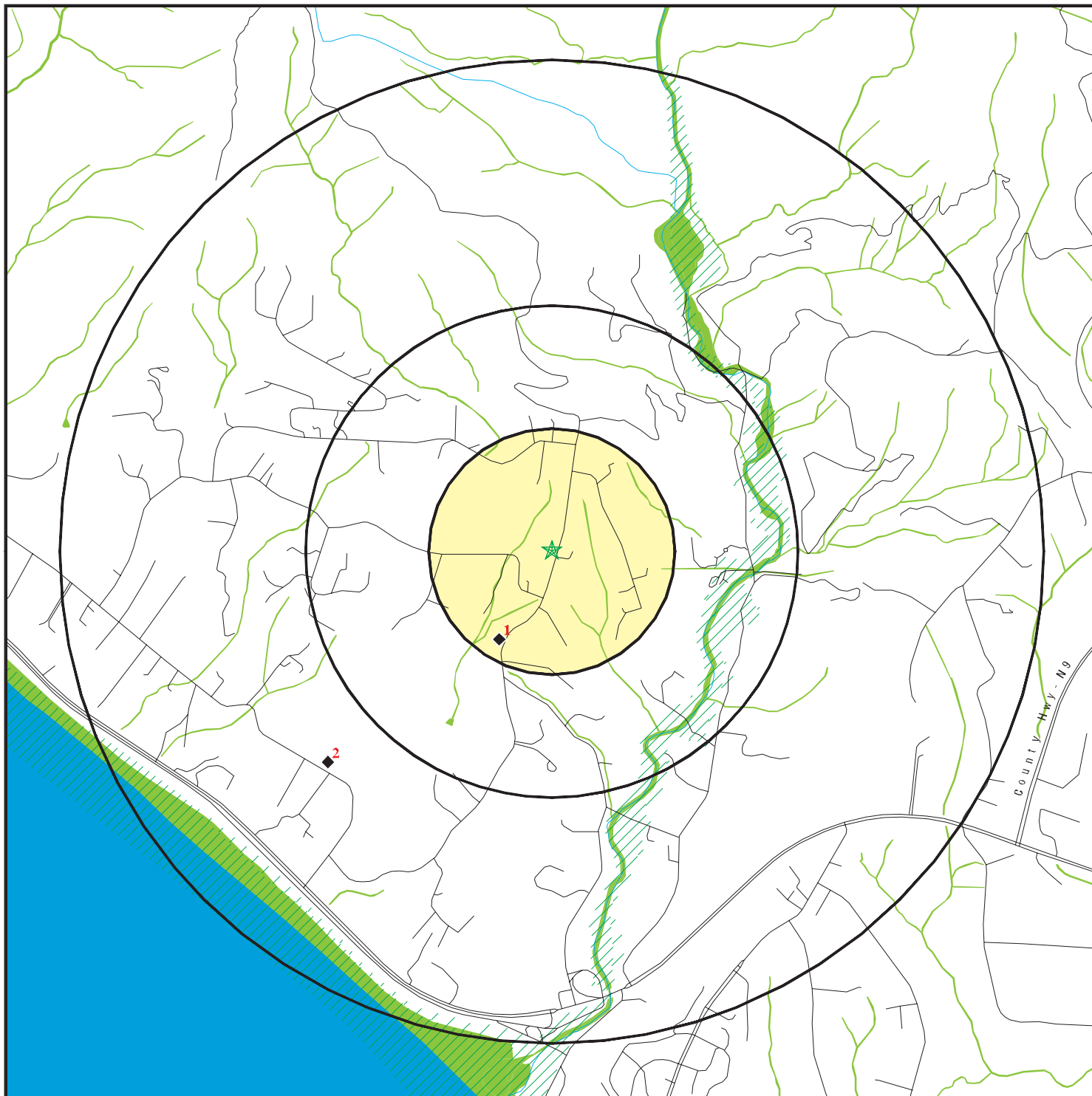
A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 03/25/2019 has revealed that there is 1 RCRA NonGen / NLR site within approximately 0.25 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
KATHERINE MARINARO EPA ID:: CAC002999435	5911 BUSCH DR	SSW 1/8 - 1/4 (0.208 mi.)	1	9

## EXECUTIVE SUMMARY

There were no unmapped sites in this report.

# OVERVIEW MAP - 5718396.2S



- ★ 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
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- State Wetlands
- Areas of Concern

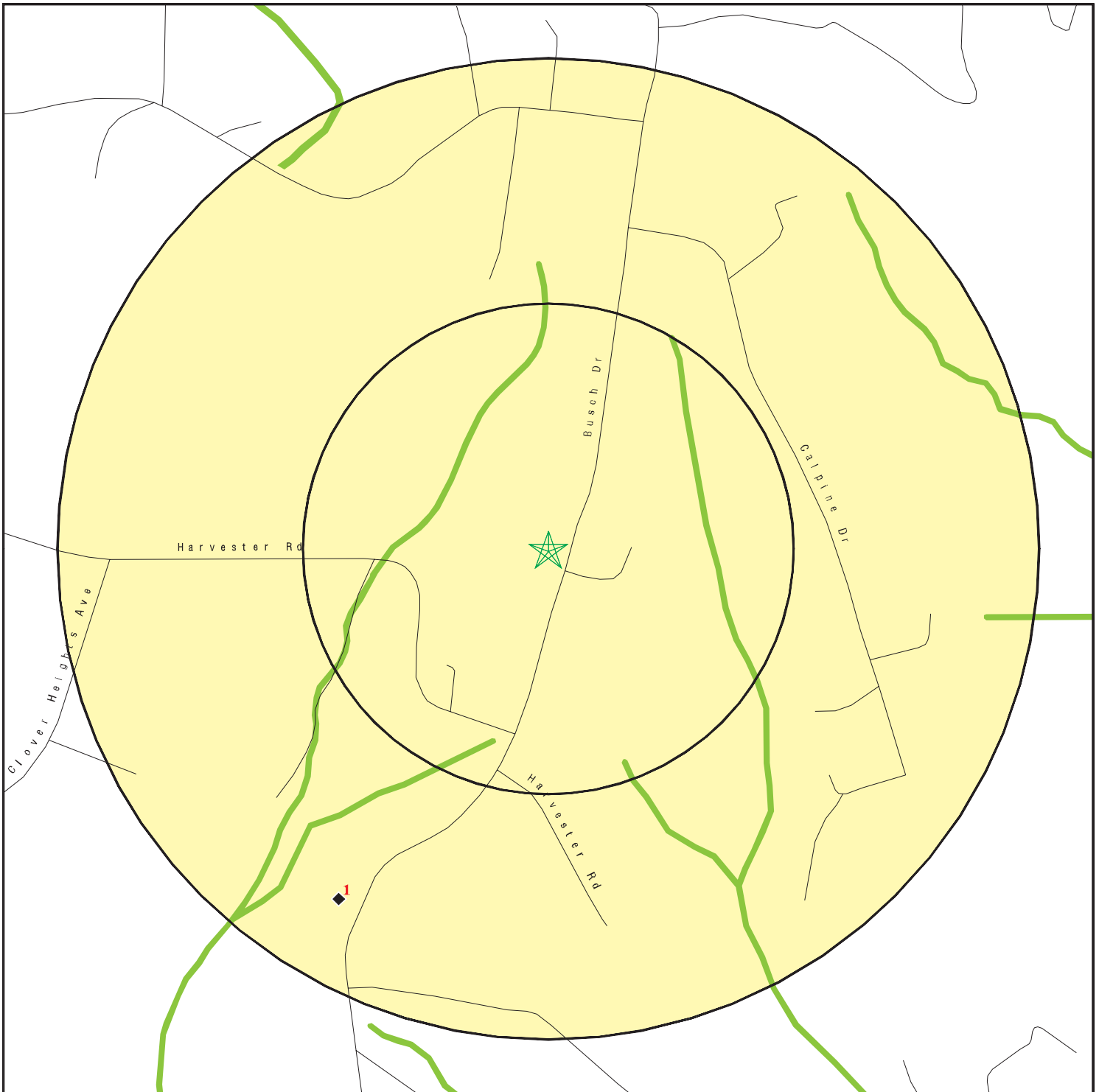


This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Lower Busch Tank  
 ADDRESS: 5731 South Busch Drive  
 Malibu CA 90265  
 LAT/LONG: 34.030117 / 118.819083

CLIENT: Psomas  
 CONTACT: Michael Milroy  
 INQUIRY #: 5718396.2s  
 DATE: July 16, 2019 5:45 pm

# DETAIL MAP - 5718396.2S



- ★ 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

- 0 1/16 1/8 1/4 Miles
- Indian Reservations BIA
- 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: Lower Busch Tank  
 ADDRESS: 5731 South Busch Drive  
 Malibu CA 90265  
 LAT/LONG: 34.030117 / 118.819083

CLIENT: Psomas  
 CONTACT: Michael Milroy  
 INQUIRY #: 5718396.2s  
 DATE: July 16, 2019 5:49 pm



## 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
<b>STANDARD ENVIRONMENTAL RECORDS</b>								
<b><i>Federal NPL site list</i></b>								
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
<b><i>Federal Delisted NPL site list</i></b>								
Delisted NPL	1.000		0	0	0	0	NR	0
<b><i>Federal CERCLIS list</i></b>								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
<b><i>Federal CERCLIS NFRAP site list</i></b>								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
<b><i>Federal RCRA CORRACTS facilities list</i></b>								
CORRACTS	1.000		0	0	0	0	NR	0
<b><i>Federal RCRA non-CORRACTS TSD facilities list</i></b>								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
<b><i>Federal RCRA generators list</i></b>								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-CESQG	0.250		0	0	NR	NR	NR	0
<b><i>Federal institutional controls / engineering controls registries</i></b>								
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
<b><i>Federal ERNS list</i></b>								
ERNS	TP		NR	NR	NR	NR	NR	0
<b><i>State- and tribal - equivalent NPL RESPONSE</i></b>								
RESPONSE	1.000		0	0	0	0	NR	0
<b><i>State- and tribal - equivalent CERCLIS ENVIROSTOR</i></b>								
ENVIROSTOR	1.000		0	0	0	1	NR	1
<b><i>State and tribal landfill and/or solid waste disposal site lists</i></b>								
SWF/LF	0.500		0	0	0	NR	NR	0
<b><i>State and tribal leaking storage tank lists</i></b>								
LUST	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
INDIAN LUST	0.500		0	0	0	NR	NR	0
CPS-SLIC	0.500		0	0	0	NR	NR	0
<b><i>State and tribal registered storage tank lists</i></b>								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		0	0	NR	NR	NR	0
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
<b><i>State and tribal voluntary cleanup sites</i></b>								
INDIAN VCP	0.500		0	0	0	NR	NR	0
VCP	0.500		0	0	0	NR	NR	0
<b><i>State and tribal Brownfields sites</i></b>								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
<b><u>ADDITIONAL ENVIRONMENTAL RECORDS</u></b>								
<b><i>Local Brownfield lists</i></b>								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
<b><i>Local Lists of Landfill / Solid Waste Disposal Sites</i></b>								
WMUDS/SWAT	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	0	0	NR	NR	0
HAULERS	TP		NR	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
<b><i>Local Lists of Hazardous waste / Contaminated Sites</i></b>								
AOCONCERN	1.000		0	0	0	0	NR	0
US HIST CDL	TP		NR	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	TP		NR	NR	NR	NR	NR	0
Toxic Pits	1.000		0	0	0	0	NR	0
CERS HAZ WASTE	0.250		0	0	NR	NR	NR	0
US CDL	TP		NR	NR	NR	NR	NR	0
PFAS	0.500		0	0	0	NR	NR	0
<b><i>Local Lists of Registered Storage Tanks</i></b>								
SWEEPS UST	0.250		0	0	NR	NR	NR	0
HIST UST	0.250		0	0	NR	NR	NR	0
CA FID UST	0.250		0	0	NR	NR	NR	0
CERS TANKS	0.250		0	0	NR	NR	NR	0
<b><i>Local Land Records</i></b>								
LIENS	TP		NR	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	TP		NR	NR	NR	NR	NR	0
DEED	0.500		0	0	0	NR	NR	0
<b>Records of Emergency Release Reports</b>								
HMIRS	TP		NR	NR	NR	NR	NR	0
CHMIRS	TP		NR	NR	NR	NR	NR	0
LDS	TP		NR	NR	NR	NR	NR	0
MCS	TP		NR	NR	NR	NR	NR	0
SPILLS 90	TP		NR	NR	NR	NR	NR	0
<b>Other Ascertainable Records</b>								
RCRA NonGen / NLR	0.250		0	1	NR	NR	NR	1
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	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
DOT OPS	TP		NR	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	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	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	TP		NR	NR	NR	NR	NR	0
DOCKET HWC	TP		NR	NR	NR	NR	NR	0
ECHO	TP		NR	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	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
CUPA Listings	0.250		0	0	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
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
EMI	TP		NR	NR	NR	NR	NR	0
ENF	TP		NR	NR	NR	NR	NR	0
Financial Assurance	TP		NR	NR	NR	NR	NR	0
HAZNET	TP		NR	NR	NR	NR	NR	0
ICE	TP		NR	NR	NR	NR	NR	0
HIST CORTESE	0.500		0	0	0	NR	NR	0
LOS ANGELES CO. HMS	TP		NR	NR	NR	NR	NR	0
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	TP		NR	NR	NR	NR	NR	0
PEST LIC	TP		NR	NR	NR	NR	NR	0
PROC	0.500		0	0	0	NR	NR	0
Notify 65	1.000		0	0	0	0	NR	0
LA Co. Site Mitigation	TP		NR	NR	NR	NR	NR	0
UIC	TP		NR	NR	NR	NR	NR	0
UIC GEO	TP		NR	NR	NR	NR	NR	0
WASTEWATER PITS	0.500		0	0	0	NR	NR	0
WDS	TP		NR	NR	NR	NR	NR	0
WIP	0.250		0	0	NR	NR	NR	0
MILITARY PRIV SITES	TP		NR	NR	NR	NR	NR	0
PROJECT	TP		NR	NR	NR	NR	NR	0
WDR	TP		NR	NR	NR	NR	NR	0
CIWQS	TP		NR	NR	NR	NR	NR	0
CERS	TP		NR	NR	NR	NR	NR	0
NON-CASE INFO	TP		NR	NR	NR	NR	NR	0
OTHER OIL GAS	TP		NR	NR	NR	NR	NR	0
PROD WATER PONDS	TP		NR	NR	NR	NR	NR	0
SAMPLING POINT	TP		NR	NR	NR	NR	NR	0
WELL STIM PROJ	TP		NR	NR	NR	NR	NR	0
LOS ANGELES CO LF METHANE	TP		0	0	0	NR	NR	0
<b><u>EDR HIGH RISK HISTORICAL RECORDS</u></b>								
<b><i>EDR Exclusive Records</i></b>								
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
<b><u>EDR RECOVERED GOVERNMENT ARCHIVES</u></b>								
<b><i>Exclusive Recovered Govt. Archives</i></b>								
RGA LF	TP		NR	NR	NR	NR	NR	0
RGA LUST	TP		NR	NR	NR	NR	NR	0
- Totals --			0	1	0	1	0	2

## MAP FINDINGS SUMMARY

<u>Database</u>	<u>Search Distance (Miles)</u>	<u>Target Property</u>	<u>&lt; 1/8</u>	<u>1/8 - 1/4</u>	<u>1/4 - 1/2</u>	<u>1/2 - 1</u>	<u>&gt; 1</u>	<u>Total Plotted</u>
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NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

1  
SSW  
1/8-1/4  
0.208 mi.  
1098 ft.

**KATHERINE MARINARO**  
**5911 BUSCH DR**  
**MALIBU, CA 90265**

**RCRA NonGen / NLR**    **1024779479**  
**CAC002999435**

**Relative:**  
**Lower**  
**Actual:**  
**242 ft.**

RCRA NonGen / NLR:  
Date form received by agency: 02/04/2019  
Facility name: KATHERINE MARINARO  
Facility address: 5911 BUSCH DR  
MALIBU, CA 90265  
EPA ID: CAC002999435  
Contact: KATHERINE MARINARO  
Contact address: 5911 BUSCH DR  
MALIBU, CA 90265  
Contact country: Not reported  
Contact telephone: 310-924-0904  
Contact email: CAROLYN.KBEINC@GMAIL.COM  
EPA Region: 09  
Classification: Non-Generator  
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:  
Owner/operator name: KATHERINE MARINARO  
Owner/operator address: 5911 BUSCH DR  
MALIBU, CA 90265  
Owner/operator country: Not reported  
Owner/operator telephone: 310-924-0904  
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: KATHERINE MARINARO  
Owner/operator address: 5911 BUSCH DR  
MALIBU, CA 90265  
Owner/operator country: Not reported  
Owner/operator telephone: 310-924-0904  
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

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**KATHERINE MARINARO (Continued)**

**1024779479**

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

**2**  
**SW**  
**1/2-1**  
**0.625 mi.**  
**3298 ft.**  
  
**Relative:**  
**Lower**  
  
**Actual:**  
**96 ft.**

**MALIBU HIGH SCHOOL**  
**30215 MORNING VIEW DR**  
**MALIBU, CA 90265**

**ENVIROSTOR**  
**LUST**  
**SCH**  
**SWEEPS UST**  
**DEED**  
**HIST CORTESE**  
**CERS**

**S101297478**  
**N/A**

**ENVIROSTOR:**

Name: MALIBU HIGH SCHOOL PROJECT  
 Address: 30215 MORNING VIEW DRIVE  
 City,State,Zip: MALIBU, CA 90265  
 Facility ID: 19820092  
 Status: Certified O&M - Land Use Restrictions Only  
 Status Date: 05/09/2016  
 Site Code: 304164  
 Site Type: School Cleanup  
 Site Type Detailed: School  
 Acres: 79.99  
 NPL: NO  
 Regulatory Agencies: SMBRP  
 Lead Agency: SMBRP  
 Program Manager: Johnson Abraham  
 Supervisor: Shahir Haddad  
 Division Branch: Southern California Schools & Brownfields Outreach  
 Assembly: 50  
 Senate: 27  
 Special Program: Voluntary Cleanup Program  
 Restricted Use: YES  
 Site Mgmt Req: NONE SPECIFIED  
 Funding: School District  
 Latitude: 34.02339  
 Longitude: -118.8249  
 APN: NONE SPECIFIED  
 Past Use: \* EDUCATIONAL SERVICES  
 Potential COC: Benzene Chlordane DDE DDT Lead Polychlorinated biphenyls (PCBs PCBs (unspeciated mixture, high risk, e.g. Aroclor 1254 No Contaminants found  
 Confirmed COC: Benzene Chlordane DDE DDT Lead PCBs (unspeciated mixture, high risk, e.g. Aroclor 1254 30018-NO  
 Potential Description: NMA, SOIL, SV  
 Alias Name: CABARILLO ES  
 Alias Type: Alternate Name  
 Alias Name: JUAN CABARILLO ES  
 Alias Type: Alternate Name  
 Alias Name: MALIBU HIGH SCHOOL PROJECT  
 Alias Type: Alternate Name  
 Alias Name: SANTA MONICA-MALIBU UNIFIED SCHOOL DIST.  
 Alias Type: Alternate Name

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**MALIBU HIGH SCHOOL (Continued)**

**S101297478**

Alias Name: SANTA MONICA-MALIBU USD-MALIBU HIGH/CDE  
Alias Type: Alternate Name  
Alias Name: 301648  
Alias Type: Project Code (Site Code)  
Alias Name: 304164  
Alias Type: Project Code (Site Code)  
Alias Name: 19820092  
Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Inspections/Visit (Non LUR)  
Completed Date: 05/01/2000  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: School Cleanup Agreement  
Completed Date: 11/21/2014  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Voluntary Cleanup Agreement  
Completed Date: 11/06/2014  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Voluntary Cleanup Agreement  
Completed Date: 03/12/2014  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Amendment - Order/Agreement  
Completed Date: 08/22/2014  
Comments: SMMUSD VIA Amendment signed 8/22/2014

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: CEQA - Notice of Exemption  
Completed Date: 11/15/2014  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Land Use Restriction  
Completed Date: 03/29/2016  
Comments: On 3/29/2016, the Santa Monica Malibu Unified School District (SMMUSD) recorded the Land Use Covenant LUC for the 0.66 acre Bus Barn Area (Property) with the Los Angeles County Recorder's Office. The Preliminary Environmental Assessment (PEA) confirmed the presence of volatile organic compounds (VOCs) in soil vapor remain at the Property above levels acceptable for unrestricted (residential) land use. A Human Health Screening Evaluation was performed for the Property which concluded that no significant risks due to exposure to



Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**MALIBU HIGH SCHOOL (Continued)**

**S101297478**

chemicals in soil vapor would be expected for the current or future school students and teachers/staff. However, re-evaluation of risk associated with soil vapor would be required if the land use at the Property is re-zoned for future residential use.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Certification  
Completed Date: 05/09/2016  
Comments: On 5/09/2016, DTSC signed the Site Certification letter for 79.33 acres at the total 80 acre property. A Land Use Covenant (deed restriction) was filed for the Site's 0.66 acre Bus Barn Area on 3/29/2016. The Land Use Covenant was filed to prevent the Bus Barn Area being used for future unrestricted use (i.e., residential use). DTSC determined the remaining 79.33 acres at the Site are suitable for unrestricted use.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Annual Oversight Cost Estimate  
Completed Date: 09/18/2018  
Comments: FY 1819 Estimate: \$2,769

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Annual Oversight Cost Estimate  
Completed Date: 09/01/2017  
Comments: Annual cost estimate letter sent 9/1/17.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Phase 1  
Completed Date: 05/09/2000  
Comments: Phase I - Pursuant to an agreement between the Department of Toxic Substances Control (DTSC) and the California Department of Education, DTSC's Site Mitigation Program conducted a review of a Phase I Environmental Assessment prepared for the Malibu High School Site property.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 10/01/2008  
Comments: DTSC comment on NOP for EIR

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 07/01/2011  
Comments: July 2011 EIR approved by SMUSD

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Community Profile  
Completed Date: 04/04/2014  
Comments: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**MALIBU HIGH SCHOOL (Continued)**

**S101297478**

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Preliminary Endangerment Assessment Workplan  
Completed Date: 06/30/2014  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Fieldwork  
Completed Date: 08/13/2014  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Preliminary Endangerment Assessment Report  
Completed Date: 06/29/2015  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Preliminary Endangerment Assessment Workplan  
Completed Date: 10/14/2014  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Removal Action Workplan  
Completed Date: 12/15/2014  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Community Profile  
Completed Date: 12/15/2014  
Comments: Final Community Profile

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Removal Action Completion Report  
Completed Date: 03/26/2015  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Preliminary Endangerment Assessment Report  
Completed Date: 11/23/2015  
Comments: DTSC approved the Final Revised PEA and Site-wide Human Health Risk Screening Evaluation on 11/23/2015. The approval letter stated the approximately 0.66 acre Bus Barn Area (also known as Are of Interest 9) is not suitable for unrestricted (residential use) and will require land a covenant. DTSC determined the remainder of the Site, including the Malibu High School Building Area G is suitable for unrestricted use. DTSC will issue a certification for the Site property after the SMMUSD has filed the land use restriction with the Los Angeles County Recorder's Office.

Completed Area Name: PROJECT WIDE

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**MALIBU HIGH SCHOOL (Continued)**

**S101297478**

Completed Sub Area Name: Not reported  
Completed Document Type: Land Use Restriction Monitoring Report  
Completed Date: 05/24/2018  
Comments: DTSC approved the Report.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Land Use Restriction Monitoring Report  
Completed Date: 02/15/2019  
Comments: Not reported

Future Area Name: PROJECT WIDE  
Future Sub Area Name: Not reported  
Future Document Type: 5 Year Review Reports  
Future Due Date: 2021  
Schedule Area Name: Not reported  
Schedule Sub Area Name: Not reported  
Schedule Document Type: Not reported  
Schedule Due Date: Not reported  
Schedule Revised Date: Not reported

**LUST:**

Name: MALIBU HIGH SCHOOL  
Address: 30215 MORNING VIEW DR  
City,State,Zip: MALIBU, CA 90265  
Lead Agency: LOS ANGELES RWQCB (REGION 4)  
Case Type: LUST Cleanup Site  
Geo Track: [http://geotracker.waterboards.ca.gov/profile\\_report.asp?global\\_id=T0603704051](http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0603704051)  
Global Id: T0603704051  
Latitude: 34.0242177  
Longitude: -118.8280918  
Status: Completed - Case Closed  
Status Date: 09/11/1996  
Case Worker: YR  
RB Case Number: I-13216  
Local Agency: LOS ANGELES COUNTY  
File Location: Not reported  
Local Case Number: Not reported  
Potential Media Affect: Aquifer used for drinking water supply  
Potential Contaminants of Concern: Other Solvent or Non-Petroleum Hydrocarbon  
Site History: Not reported

**LUST:**

Global Id: T0603704051  
Contact Type: Local Agency Caseworker  
Contact Name: JOHN AWUJO  
Organization Name: LOS ANGELES COUNTY  
Address: 900 S FREMONT AVE  
City: ALHAMBRA  
Email: [jawujo@dpw.lacounty.gov](mailto:jawujo@dpw.lacounty.gov)  
Phone Number: 6264583507

Global Id: T0603704051  
Contact Type: Regional Board Caseworker  
Contact Name: YUE RONG  
Organization Name: LOS ANGELES RWQCB (REGION 4)  
Address: 320 W. 4TH ST., SUITE 200

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**MALIBU HIGH SCHOOL (Continued)**

**S101297478**

City: Los Angeles  
Email: yrong@waterboards.ca.gov  
Phone Number: Not reported

LUST:

Global Id: T0603704051  
Action Type: Other  
Date: 08/26/1992  
Action: Leak Discovery

Global Id: T0603704051  
Action Type: Other  
Date: 02/18/1993  
Action: Leak Reported

LUST:

Global Id: T0603704051  
Status: Completed - Case Closed  
Status Date: 09/11/1996

Global Id: T0603704051  
Status: Open - Case Begin Date  
Status Date: 08/26/1992

Global Id: T0603704051  
Status: Open - Site Assessment  
Status Date: 02/18/1993

LUST REG 4:

Region: 4  
Regional Board: 04  
County: Los Angeles  
Facility Id: I-13216  
Status: Case Closed  
Substance: Hydrocarbons  
Substance Quantity: Not reported  
Local Case No: Not reported  
Case Type: Groundwater  
Abatement Method Used at the Site: Not reported  
Global ID: T0603704051  
W Global ID: Not reported  
Staff: UNK  
Local Agency: 19000  
Cross Street: PACIFIC COAST HWY  
Enforcement Type: Not reported  
Date Leak Discovered: 8/26/1992  
Date Leak First Reported: 2/18/1993  
Date Leak Record Entered: 2/12/1993  
Date Confirmation Began: Not reported  
Date Leak Stopped: Not reported  
Date Case Last Changed on Database: 11/6/1996  
Date the Case was Closed: 9/11/1996  
How Leak Discovered: Not reported  
How Leak Stopped: Not reported  
Cause of Leak: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**MALIBU HIGH SCHOOL (Continued)**

**S101297478**

Leak Source: Not reported  
Operator: Not reported  
Water System: Not reported  
Well Name: Not reported  
Approx. Dist To Production Well (ft): 24678.062549386516025460773732  
Source of Cleanup Funding: Not reported  
Preliminary Site Assessment Workplan Submitted: 2/18/1993  
Preliminary Site Assessment Began: Not reported  
Pollution Characterization Began: Not reported  
Remediation Plan Submitted: Not reported  
Remedial Action Underway: Not reported  
Post Remedial Action Monitoring Began: Not reported  
Enforcement Action Date: Not reported  
Historical Max MTBE Date: Not reported  
Hist Max MTBE Conc in Groundwater: Not reported  
Hist Max MTBE Conc in Soil: Not reported  
Significant Interim Remedial Action Taken: Not reported  
GW Qualifier: Not reported  
Soil Qualifier: Not reported  
Organization: Not reported  
Owner Contact: Not reported  
Responsible Party: SANTA MONICA-MALIBU USD  
RP Address: 1651 16TH ST., SANTA MONICA CA 90404  
Program: LUST  
Lat/Long: 34.0242177 / -1  
Local Agency Staff: Not reported  
Beneficial Use: Not reported  
Priority: Not reported  
Cleanup Fund Id: Not reported  
Suspended: Not reported  
Assigned Name: Not reported  
Summary: SITE FILE RWB ASSESSMENT BY JDP ON 5/31/96

**SCH:**

Name: MALIBU HIGH SCHOOL PROJECT  
Address: 30215 MORNING VIEW DRIVE  
City,State,Zip: MALIBU, CA 90265  
Facility ID: 19820092  
Site Type: School Cleanup  
Site Type Detail: School  
Site Mgmt. Req.: NONE SPECIFIED  
Acres: 79.99  
National Priorities List: NO  
Cleanup Oversight Agencies: SMBRP  
Lead Agency: SMBRP  
Lead Agency Description: DTSC - Site Cleanup Program  
Project Manager: Johnson Abraham  
Supervisor: Shahir Haddad  
Division Branch: Southern California Schools & Brownfields Outreach  
Site Code: 304164  
Assembly: 50  
Senate: 27  
Special Program Status: Voluntary Cleanup Program  
Status: Certified O&M - Land Use Restrictions Only  
Status Date: 05/09/2016  
Restricted Use: YES

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**MALIBU HIGH SCHOOL (Continued)**

**S101297478**

Funding: School District  
Latitude: 34.02339  
Longitude: -118.8249  
APN: NONE SPECIFIED  
Past Use: \* EDUCATIONAL SERVICES  
Potential COC: Benzene, Chlordane, DDE, DDT, Lead, Polychlorinated biphenyls (PCBs, PCBs (unspeciated mixture, high risk, e.g. Aroclor 1254, No Contaminants found  
Confirmed COC: Benzene, Chlordane, DDE, DDT, Lead, PCBs (unspeciated mixture, high risk, e.g. Aroclor 1254, 30018-NO  
Potential Description: NMA, SOIL, SV  
Alias Name: CABARILLO ES  
Alias Type: Alternate Name  
Alias Name: JUAN CABARILLO ES  
Alias Type: Alternate Name  
Alias Name: MALIBU HIGH SCHOOL PROJECT  
Alias Type: Alternate Name  
Alias Name: SANTA MONICA-MALIBU UNIFIED SCHOOL DIST.  
Alias Type: Alternate Name  
Alias Name: SANTA MONICA-MALIBU USD-MALIBU HIGH/CDE  
Alias Type: Alternate Name  
Alias Name: 301648  
Alias Type: Project Code (Site Code)  
Alias Name: 304164  
Alias Type: Project Code (Site Code)  
Alias Name: 19820092  
Alias Type: Envirostor ID Number  
Completed Info:  
Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Inspections/Visit (Non LUR)  
Completed Date: 05/01/2000  
Comments: Not reported  
Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: School Cleanup Agreement  
Completed Date: 11/21/2014  
Comments: Not reported  
Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Voluntary Cleanup Agreement  
Completed Date: 11/06/2014  
Comments: Not reported  
Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Voluntary Cleanup Agreement  
Completed Date: 03/12/2014  
Comments: Not reported  
Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Amendment - Order/Agreement  
Completed Date: 08/22/2014  
Comments: SMMUSD VIA Amendment signed 8/22/2014

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**MALIBU HIGH SCHOOL (Continued)**

**S101297478**

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: CEQA - Notice of Exemption  
Completed Date: 11/15/2014  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Land Use Restriction  
Completed Date: 03/29/2016  
Comments: On 3/29/2016, the Santa Monica Malibu Unified School District (SMMUSD) recorded the Land Use Covenant LUC for the 0.66 acre Bus Barn Area (Property) with the Los Angeles County Recorder's Office. The Preliminary Environmental Assessment (PEA) confirmed the presence of volatile organic compounds (VOCs) in soil vapor remain at the Property above levels acceptable for unrestricted (residential) land use. A Human Health Screening Evaluation was performed for the Property which concluded that no significant risks due to exposure to chemicals in soil vapor would be expected for the current or future school students and teachers/staff. However, re-evaluation of risk associated with soil vapor would be required if the land use at the Property is re-zoned for future residential use.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Certification  
Completed Date: 05/09/2016  
Comments: On 5/09/2016, DTSC signed the Site Certification letter for 79.33 acres at the total 80 acre property. A Land Use Covenant (deed restriction) was filed for the Site's 0.66 acre Bus Barn Area on 3/29/2016. The Land Use Covenant was filed to prevent the Bus Barn Area being used for future unrestricted use (i.e., residential use). DTSC determined the remaining 79.33 acres at the Site are suitable for unrestricted use.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Annual Oversight Cost Estimate  
Completed Date: 09/18/2018  
Comments: FY 1819 Estimate: \$2,769

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Annual Oversight Cost Estimate  
Completed Date: 09/01/2017  
Comments: Annual cost estimate letter sent 9/1/17.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Phase 1  
Completed Date: 05/09/2000  
Comments: Phase I - Pursuant to an agreement between the Department of Toxic Substances Control (DTSC) and the California Department of Education, DTSC's Site Mitigation Program conducted a review of a Phase I Environmental Assessment prepared for the Malibu High School Site property.

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**MALIBU HIGH SCHOOL (Continued)**

**S101297478**

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 10/01/2008  
Comments: DTSC comment on NOP for EIR

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 07/01/2011  
Comments: July 2011 EIR approved by SMUSD

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Community Profile  
Completed Date: 04/04/2014  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Preliminary Endangerment Assessment Workplan  
Completed Date: 06/30/2014  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Fieldwork  
Completed Date: 08/13/2014  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Preliminary Endangerment Assessment Report  
Completed Date: 06/29/2015  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Preliminary Endangerment Assessment Workplan  
Completed Date: 10/14/2014  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Removal Action Workplan  
Completed Date: 12/15/2014  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Community Profile  
Completed Date: 12/15/2014  
Comments: Final Community Profile

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Removal Action Completion Report



Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**MALIBU HIGH SCHOOL (Continued)**

**S101297478**

Completed Date: 03/26/2015  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Preliminary Endangerment Assessment Report  
Completed Date: 11/23/2015  
Comments: DTSC approved the Final Revised PEA and Site-wide Human Health Risk Screening Evaluation on 11/23/2015. The approval letter stated the approximately 0.66 acre Bus Barn Area (also known as Are of Interest 9) is not suitable for unrestricted (residential use) and will require land a covenant. DTSC determined the remainder of the Site, including the Malibu High School Building Area G is suitable for unrestricted use. DTSC will issue a certification for the Site property after the SMMUSD has filed the land use restriction with the Los Angeles County Recorder's Office.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Land Use Restriction Monitoring Report  
Completed Date: 05/24/2018  
Comments: DTSC approved the Report.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Land Use Restriction Monitoring Report  
Completed Date: 02/15/2019  
Comments: Not reported

Future Area Name: PROJECT WIDE  
Future Sub Area Name: Not reported  
Future Document Type: 5 Year Review Reports  
Future Due Date: 2021  
Schedule Area Name: Not reported  
Schedule Sub Area Name: Not reported  
Schedule Document Type: Not reported  
Schedule Due Date: Not reported  
Schedule Revised Date: Not reported

**SWEEPS UST:**

Name: SANTA MONICA MALIBU UNI SCH D  
Address: 30215 MORNINGVIEW DR  
City: MALIBU  
Status: Active  
Comp Number: 13216  
Number: 9  
Board Of Equalization: 44-010099  
Referral Date: 03-15-91  
Action Date: 03-15-91  
Created Date: 06-30-89  
Owner Tank Id: Not reported  
SWRCB Tank Id: 19-000-013216-000001  
Tank Status: A  
Capacity: Not reported  
Active Date: 06-30-89  
Tank Use: UNKNOWN  
STG: W

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**MALIBU HIGH SCHOOL (Continued)**

**S101297478**

Content: Not reported  
Number Of Tanks: 2

Name: SANTA MONICA MALIBU UNI SCH D  
Address: 30215 MORNINGVIEW DR  
City: MALIBU  
Status: Active  
Comp Number: 13216  
Number: 9  
Board Of Equalization: 44-010099  
Referral Date: 03-15-91  
Action Date: 03-15-91  
Created Date: 06-30-89  
Owner Tank Id: Not reported  
SWRCB Tank Id: 19-000-013216-000002  
Tank Status: A  
Capacity: Not reported  
Active Date: 06-30-89  
Tank Use: UNKNOWN  
STG: W  
Content: Not reported  
Number Of Tanks: Not reported

**DEED:**

Name: MALIBU HIGH SCHOOL PROJECT  
Address: 30215 MORNING VIEW DRIVE  
City,State,Zip: MALIBU, CA 90265  
Envirostor ID: 19820092  
Area: PROJECT WIDE  
Sub Area: Not reported  
Site Type: SCHOOL CLEANUP  
Status: CERTIFIED O&M - LAND USE RESTRICTIONS ONLY  
Agency: Not reported  
Covenant Uploaded: Not reported  
Deed Date(s): 03/29/2016  
File Name: Envirostor Land Use Restrictions

**HIST CORTESE:**

edr\_fname: MALIBU HIGH SCHOOL  
edr\_fadd1: 30215 MORNING VIEW  
City,State,Zip: MALIBU, CA  
Region: CORTESE  
Facility County Code: 19  
Reg By: LTNKA  
Reg Id: I-13216

**CERS:**

Name: MALIBU HIGH SCHOOL  
Address: 30215 MORNING VIEW DR  
City,State,Zip: MALIBU, CA 90265  
Site ID: 242824  
CERS ID: T0603704051  
CERS Description: Leaking Underground Storage Tank Cleanup Site

**Affiliation:**

Affiliation Type Desc: Local Agency Caseworker

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**MALIBU HIGH SCHOOL (Continued)**

**S101297478**

Entity Name: JOHN AWUJO - LOS ANGELES COUNTY  
Entity Title: Not reported  
Affiliation Address: 900 S FREMONT AVE  
Affiliation City: ALHAMBRA  
Affiliation State: CA  
Affiliation Country: Not reported  
Affiliation Zip: Not reported  
Affiliation Phone: 6264583507

Affiliation Type Desc: Regional Board Caseworker  
Entity Name: YUE RONG - LOS ANGELES RWQCB (REGION 4)  
Entity Title: Not reported  
Affiliation Address: 320 W. 4TH ST., SUITE 200  
Affiliation City: Los Angeles  
Affiliation State: CA  
Affiliation Country: Not reported  
Affiliation Zip: Not reported  
Affiliation Phone: Not reported

Name: MALIBU HIGH SCHOOL P  
Address: 30215 MORNING VIEW DRIVE  
City,State,Zip: MALIBU, CA 90265  
Site ID: 339638  
CERS ID: 19820092  
CERS Description: School Cleanup

Affiliation:  
Affiliation Type Desc: Supervisor  
Entity Name: SHAHIR HADDAD  
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: Lead Project Manager  
Entity Name: JOHNSON ABRAHAM  
Entity Title: Not reported  
Affiliation Address: Not reported  
Affiliation City: CYPRESS  
Affiliation State: CA  
Affiliation Country: Not reported  
Affiliation Zip: Not reported  
Affiliation Phone: Not reported

Count: 0 records.

ORPHAN SUMMARY

<u>City</u>	<u>EDR ID</u>	<u>Site Name</u>	<u>Site Address</u>	<u>Zip</u>	<u>Database(s)</u>
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	Source: EPA
Date Data Arrived at EDR: 04/18/2019	Telephone: N/A
Date Made Active in Reports: 05/14/2019	Last EDR Contact: 07/02/2019
Number of Days to Update: 26	Next Scheduled EDR Contact: 10/14/2019
	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	Source: EPA
Date Data Arrived at EDR: 04/18/2019	Telephone: N/A
Date Made Active in Reports: 05/14/2019	Last EDR Contact: 07/02/2019
Number of Days to Update: 26	Next Scheduled EDR Contact: 10/14/2019
	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.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 07/02/2019  
Next Scheduled EDR Contact: 10/14/2019  
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: 07/03/2019  
Next Scheduled EDR Contact: 10/14/2019  
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 known 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: 07/02/2019  
Next Scheduled EDR Contact: 10/14/2019  
Data Release Frequency: Quarterly

## ***Federal CERCLIS NFRAP site list***

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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	Source: EPA
Date Data Arrived at EDR: 04/18/2019	Telephone: 800-424-9346
Date Made Active in Reports: 05/23/2019	Last EDR Contact: 07/02/2019
Number of Days to Update: 35	Next Scheduled EDR Contact: 10/14/2019
	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	Source: EPA
Date Data Arrived at EDR: 03/27/2019	Telephone: 800-424-9346
Date Made Active in Reports: 04/17/2019	Last EDR Contact: 06/26/2019
Number of Days to Update: 21	Next Scheduled EDR Contact: 10/07/2019
	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	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/27/2019	Telephone: (415) 495-8895
Date Made Active in Reports: 04/17/2019	Last EDR Contact: 06/26/2019
Number of Days to Update: 21	Next Scheduled EDR Contact: 10/07/2019
	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	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/27/2019	Telephone: (415) 495-8895
Date Made Active in Reports: 04/17/2019	Last EDR Contact: 06/26/2019
Number of Days to Update: 21	Next Scheduled EDR Contact: 10/07/2019
	Data Release Frequency: Quarterly

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## 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	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/27/2019	Telephone: (415) 495-8895
Date Made Active in Reports: 04/17/2019	Last EDR Contact: 06/26/2019
Number of Days to Update: 21	Next Scheduled EDR Contact: 10/07/2019
	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	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/27/2019	Telephone: (415) 495-8895
Date Made Active in Reports: 04/17/2019	Last EDR Contact: 06/26/2019
Number of Days to Update: 21	Next Scheduled EDR Contact: 10/07/2019
	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	Source: Department of the Navy
Date Data Arrived at EDR: 03/07/2019	Telephone: 843-820-7326
Date Made Active in Reports: 04/17/2019	Last EDR Contact: 05/10/2019
Number of Days to Update: 41	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	Source: Environmental Protection Agency
Date Data Arrived at EDR: 02/04/2019	Telephone: 703-603-0695
Date Made Active in Reports: 03/08/2019	Last EDR Contact: 05/29/2019
Number of Days to Update: 32	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	Source: Environmental Protection Agency
Date Data Arrived at EDR: 02/04/2019	Telephone: 703-603-0695
Date Made Active in Reports: 03/08/2019	Last EDR Contact: 05/29/2019
Number of Days to Update: 32	Next Scheduled EDR Contact: 09/09/2019
	Data Release Frequency: Varies



# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## **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: 06/26/2019

Next Scheduled EDR Contact: 10/07/2019

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: 04/29/2019

Date Data Arrived at EDR: 04/30/2019

Date Made Active in Reports: 06/27/2019

Number of Days to Update: 58

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 identifies 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: 04/29/2019

Date Data Arrived at EDR: 04/30/2019

Date Made Active in Reports: 06/27/2019

Number of Days to Update: 58

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 inventory of solid waste disposal facilities or landfills. These may be active or inactive 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**

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## 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	Source: California Regional Water Quality Control Board Los Angeles Region (4)
Date Data Arrived at EDR: 09/07/2004	Telephone: 213-576-6710
Date Made Active in Reports: 10/12/2004	Last EDR Contact: 09/06/2011
Number of Days to Update: 35	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	Source: California Regional Water Quality Control Board Central Coast Region (3)
Date Data Arrived at EDR: 05/19/2003	Telephone: 805-542-4786
Date Made Active in Reports: 06/02/2003	Last EDR Contact: 07/18/2011
Number of Days to Update: 14	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	Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Date Data Arrived at EDR: 10/20/2004	Telephone: 510-622-2433
Date Made Active in Reports: 11/19/2004	Last EDR Contact: 09/19/2011
Number of Days to Update: 30	Next Scheduled EDR Contact: 01/02/2012
	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	Source: California Regional Water Quality Control Board North Coast (1)
Date Data Arrived at EDR: 02/28/2001	Telephone: 707-570-7369
Date Made Active in Reports: 03/29/2001	Last EDR Contact: 08/01/2011
Number of Days to Update: 29	Next Scheduled EDR Contact: 11/14/2011
	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, Calaveras, 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	Source: California Regional Water Quality Control Board Central Valley Region (5)
Date Data Arrived at EDR: 07/22/2008	Telephone: 916-464-4834
Date Made Active in Reports: 07/31/2008	Last EDR Contact: 07/01/2011
Number of Days to Update: 9	Next Scheduled EDR Contact: 10/17/2011
	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	Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Date Data Arrived at EDR: 06/07/2005	Telephone: 760-241-7365
Date Made Active in Reports: 06/29/2005	Last EDR Contact: 09/12/2011
Number of Days to Update: 22	Next Scheduled EDR Contact: 12/26/2011
	Data Release Frequency: No Update Planned

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## 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	Source: California Regional Water Quality Control Board Santa Ana Region (8)
Date Data Arrived at EDR: 02/15/2005	Telephone: 909-782-4496
Date Made Active in Reports: 03/28/2005	Last EDR Contact: 08/15/2011
Number of Days to Update: 41	Next Scheduled EDR Contact: 11/28/2011
	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	Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Date Data Arrived at EDR: 02/26/2004	Telephone: 760-776-8943
Date Made Active in Reports: 03/24/2004	Last EDR Contact: 08/01/2011
Number of Days to Update: 27	Next Scheduled EDR Contact: 11/14/2011
	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	Source: California Regional Water Quality Control Board Lahontan Region (6)
Date Data Arrived at EDR: 09/10/2003	Telephone: 530-542-5572
Date Made Active in Reports: 10/07/2003	Last EDR Contact: 09/12/2011
Number of Days to Update: 27	Next Scheduled EDR Contact: 12/26/2011
	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	Source: California Regional Water Quality Control Board San Diego Region (9)
Date Data Arrived at EDR: 04/23/2001	Telephone: 858-637-5595
Date Made Active in Reports: 05/21/2001	Last EDR Contact: 09/26/2011
Number of Days to Update: 28	Next Scheduled EDR Contact: 01/09/2012
	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: 12/10/2018	Source: State Water Resources Control Board
Date Data Arrived at EDR: 12/11/2018	Telephone: see region list
Date Made Active in Reports: 01/15/2019	Last EDR Contact: 06/11/2019
Number of Days to Update: 35	Next Scheduled EDR Contact: 09/23/2019
	Data Release Frequency: Quarterly

## 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	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/08/2019	Telephone: 415-972-3372
Date Made Active in Reports: 05/01/2019	Last EDR Contact: 04/26/2019
Number of Days to Update: 54	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.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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 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

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 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 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 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 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

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## 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	Source: State Water Resources Control Board
Date Data Arrived at EDR: 12/11/2018	Telephone: 866-480-1028
Date Made Active in Reports: 01/15/2019	Last EDR Contact: 06/11/2019
Number of Days to Update: 35	Next Scheduled EDR Contact: 09/23/2019
	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	Source: California Regional Water Quality Control Board, North Coast Region (1)
Date Data Arrived at EDR: 04/07/2003	Telephone: 707-576-2220
Date Made Active in Reports: 04/25/2003	Last EDR Contact: 08/01/2011
Number of Days to Update: 18	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	Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Date Data Arrived at EDR: 10/20/2004	Telephone: 510-286-0457
Date Made Active in Reports: 11/19/2004	Last EDR Contact: 09/19/2011
Number of Days to Update: 30	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	Source: California Regional Water Quality Control Board Central Coast Region (3)
Date Data Arrived at EDR: 05/18/2006	Telephone: 805-549-3147
Date Made Active in Reports: 06/15/2006	Last EDR Contact: 07/18/2011
Number of Days to Update: 28	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	Source: Region Water Quality Control Board Los Angeles Region (4)
Date Data Arrived at EDR: 11/18/2004	Telephone: 213-576-6600
Date Made Active in Reports: 01/04/2005	Last EDR Contact: 07/01/2011
Number of Days to Update: 47	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	Source: Regional Water Quality Control Board Central Valley Region (5)
Date Data Arrived at EDR: 04/05/2005	Telephone: 916-464-3291
Date Made Active in Reports: 04/21/2005	Last EDR Contact: 09/12/2011
Number of Days to Update: 16	Next Scheduled EDR Contact: 12/26/2011
	Data Release Frequency: No Update Planned

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## 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: 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: 07/10/2019  
Next Scheduled EDR Contact: 10/21/2019  
Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## 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	Source: State Water Resources Control Board
Date Data Arrived at EDR: 03/13/2019	Telephone: 916-327-7844
Date Made Active in Reports: 04/03/2019	Last EDR Contact: 06/12/2019
Number of Days to Update: 21	Next Scheduled EDR Contact: 09/23/2019
	Data Release Frequency: Varies

## UST: Active UST Facilities

Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 12/10/2018	Source: SWRCB
Date Data Arrived at EDR: 12/11/2018	Telephone: 916-341-5851
Date Made Active in Reports: 01/15/2019	Last EDR Contact: 06/11/2019
Number of Days to Update: 35	Next Scheduled EDR Contact: 09/23/2019
	Data Release Frequency: Semi-Annually

## MILITARY UST SITES: Military UST Sites (GEOTRACKER)

Military ust sites

Date of Government Version: 12/10/2018	Source: State Water Resources Control Board
Date Data Arrived at EDR: 12/11/2018	Telephone: 866-480-1028
Date Made Active in Reports: 01/15/2019	Last EDR Contact: 06/11/2019
Number of Days to Update: 35	Next Scheduled EDR Contact: 09/23/2019
	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	Source: California Environmental Protection Agency
Date Data Arrived at EDR: 07/12/2016	Telephone: 916-327-5092
Date Made Active in Reports: 09/19/2016	Last EDR Contact: 06/17/2019
Number of Days to Update: 69	Next Scheduled EDR Contact: 09/30/2019
	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	Source: EPA, Region 1
Date Data Arrived at EDR: 03/07/2019	Telephone: 617-918-1313
Date Made Active in Reports: 05/01/2019	Last EDR Contact: 04/26/2019
Number of Days to Update: 55	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	Source: EPA Region 4
Date Data Arrived at EDR: 03/12/2019	Telephone: 404-562-9424
Date Made Active in Reports: 05/01/2019	Last EDR Contact: 04/26/2019
Number of Days to Update: 50	Next Scheduled EDR Contact: 08/05/2019
	Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## 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	Source: EPA Region 5
Date Data Arrived at EDR: 03/07/2019	Telephone: 312-886-6136
Date Made Active in Reports: 05/01/2019	Last EDR Contact: 04/26/2019
Number of Days to Update: 55	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	Source: EPA Region 6
Date Data Arrived at EDR: 03/07/2019	Telephone: 214-665-7591
Date Made Active in Reports: 05/01/2019	Last EDR Contact: 04/26/2019
Number of Days to Update: 55	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	Source: EPA Region 7
Date Data Arrived at EDR: 03/07/2019	Telephone: 913-551-7003
Date Made Active in Reports: 05/01/2019	Last EDR Contact: 04/26/2019
Number of Days to Update: 55	Next Scheduled EDR Contact: 08/05/2019
	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: 10/16/2018	Source: EPA Region 8
Date Data Arrived at EDR: 03/07/2019	Telephone: 303-312-6137
Date Made Active in Reports: 05/01/2019	Last EDR Contact: 04/26/2019
Number of Days to Update: 55	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	Source: EPA Region 9
Date Data Arrived at EDR: 03/08/2019	Telephone: 415-972-3368
Date Made Active in Reports: 05/01/2019	Last EDR Contact: 04/26/2019
Number of Days to Update: 54	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	Source: EPA Region 10
Date Data Arrived at EDR: 03/07/2019	Telephone: 206-553-2857
Date Made Active in Reports: 05/01/2019	Last EDR Contact: 04/26/2019
Number of Days to Update: 55	Next Scheduled EDR Contact: 08/05/2019
	Data Release Frequency: Varies

### ***State and tribal voluntary cleanup sites***



# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## 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	Source: EPA, Region 1
Date Data Arrived at EDR: 09/29/2015	Telephone: 617-918-1102
Date Made Active in Reports: 02/18/2016	Last EDR Contact: 06/20/2019
Number of Days to Update: 142	Next Scheduled EDR Contact: 10/07/2019
	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: 04/29/2019	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 04/30/2019	Telephone: 916-323-3400
Date Made Active in Reports: 06/27/2019	Last EDR Contact: 04/30/2019
Number of Days to Update: 58	Next Scheduled EDR Contact: 08/12/2019
	Data Release Frequency: Quarterly

## INDIAN VCP R7: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008	Source: EPA, Region 7
Date Data Arrived at EDR: 04/22/2008	Telephone: 913-551-7365
Date Made Active in Reports: 05/19/2008	Last EDR Contact: 04/20/2009
Number of Days to Update: 27	Next Scheduled EDR Contact: 07/20/2009
	Data Release Frequency: Varies

## ***State and tribal Brownfields sites***

### BROWNFIELDS: Considered Brownfields 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	Source: State Water Resources Control Board
Date Data Arrived at EDR: 03/26/2019	Telephone: 916-323-7905
Date Made Active in Reports: 04/29/2019	Last EDR Contact: 06/25/2019
Number of Days to Update: 34	Next Scheduled EDR Contact: 10/07/2019
	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	Source: Environmental Protection Agency
Date Data Arrived at EDR: 12/18/2018	Telephone: 202-566-2777
Date Made Active in Reports: 01/11/2019	Last EDR Contact: 06/04/2019
Number of Days to Update: 24	Next Scheduled EDR Contact: 09/30/2019
	Data Release Frequency: Semi-Annually

### ***Local Lists of Landfill / Solid Waste Disposal Sites***

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## 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	Source: State Water Resources Control Board
Date Data Arrived at EDR: 04/10/2000	Telephone: 916-227-4448
Date Made Active in Reports: 05/10/2000	Last EDR Contact: 04/25/2019
Number of Days to Update: 30	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	Source: Department of Conservation
Date Data Arrived at EDR: 03/13/2019	Telephone: 916-323-3836
Date Made Active in Reports: 04/30/2019	Last EDR Contact: 06/12/2019
Number of Days to Update: 48	Next Scheduled EDR Contact: 09/23/2019
	Data Release Frequency: Quarterly

## HAULERS: Registered Waste Tire Haulers Listing

A listing of registered waste tire haulers.

Date of Government Version: 03/26/2019	Source: Integrated Waste Management Board
Date Data Arrived at EDR: 03/27/2019	Telephone: 916-341-6422
Date Made Active in Reports: 04/30/2019	Last EDR Contact: 05/09/2019
Number of Days to Update: 34	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	Source: Environmental Protection Agency
Date Data Arrived at EDR: 12/03/2007	Telephone: 703-308-8245
Date Made Active in Reports: 01/24/2008	Last EDR Contact: 04/26/2019
Number of Days to Update: 52	Next Scheduled EDR Contact: 08/12/2019
	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	Source: Environmental Protection Agency
Date Data Arrived at EDR: 08/09/2004	Telephone: 800-424-9346
Date Made Active in Reports: 09/17/2004	Last EDR Contact: 06/09/2004
Number of Days to Update: 39	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	Source: EPA, Region 9
Date Data Arrived at EDR: 05/07/2009	Telephone: 415-947-4219
Date Made Active in Reports: 09/21/2009	Last EDR Contact: 04/22/2019
Number of Days to Update: 137	Next Scheduled EDR Contact: 08/05/2019
	Data Release Frequency: No Update Planned

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## 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	Source: Department of Health & Human Services, Indian Health Service
Date Data Arrived at EDR: 08/06/2014	Telephone: 301-443-1452
Date Made Active in Reports: 01/29/2015	Last EDR Contact: 04/23/2019
Number of Days to Update: 176	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	Source: Drug Enforcement Administration
Date Data Arrived at EDR: 02/26/2019	Telephone: 202-307-1000
Date Made Active in Reports: 04/17/2019	Last EDR Contact: 05/24/2019
Number of Days to Update: 50	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	Source: Department of Toxic Substance Control
Date Data Arrived at EDR: 08/03/2006	Telephone: 916-323-3400
Date Made Active in Reports: 08/24/2006	Last EDR Contact: 02/23/2009
Number of Days to Update: 21	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: 04/29/2019	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 04/30/2019	Telephone: 916-323-3400
Date Made Active in Reports: 06/27/2019	Last EDR Contact: 04/30/2019
Number of Days to Update: 58	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	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 06/12/2018	Telephone: 916-255-6504
Date Made Active in Reports: 08/06/2018	Last EDR Contact: 07/08/2019
Number of Days to Update: 55	Next Scheduled EDR Contact: 10/21/2019
	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	Source: State Water Resources Control Board
Date Data Arrived at EDR: 08/30/1995	Telephone: 916-227-4364
Date Made Active in Reports: 09/26/1995	Last EDR Contact: 01/26/2009
Number of Days to Update: 27	Next Scheduled EDR Contact: 04/27/2009
	Data Release Frequency: No Update Planned

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## 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	Source: CalEPA
Date Data Arrived at EDR: 04/11/2019	Telephone: 916-323-2514
Date Made Active in Reports: 05/08/2019	Last EDR Contact: 04/11/2019
Number of Days to Update: 27	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	Source: Drug Enforcement Administration
Date Data Arrived at EDR: 02/26/2019	Telephone: 202-307-1000
Date Made Active in Reports: 04/17/2019	Last EDR Contact: 05/24/2019
Number of Days to Update: 50	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	Source: State Water Resources Control Board
Date Data Arrived at EDR: 02/22/2019	Telephone: 866-480-1028
Date Made Active in Reports: 04/15/2019	Last EDR Contact: 06/28/2019
Number of Days to Update: 52	Next Scheduled EDR Contact: 09/23/2019
	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	Source: State Water Resources Control Board
Date Data Arrived at EDR: 07/07/2005	Telephone: N/A
Date Made Active in Reports: 08/11/2005	Last EDR Contact: 06/03/2005
Number of Days to Update: 35	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	Source: Department of Public Health
Date Data Arrived at EDR: 12/06/2018	Telephone: 707-463-4466
Date Made Active in Reports: 12/14/2018	Last EDR Contact: 05/24/2019
Number of Days to Update: 8	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.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 07/02/2019  
Next Scheduled EDR Contact: 10/14/2019  
Data Release Frequency: Semi-Annually

### DEED: Deed Restriction Listing

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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	Source: DTSC and SWRCB
Date Data Arrived at EDR: 03/05/2019	Telephone: 916-323-3400
Date Made Active in Reports: 04/01/2019	Last EDR Contact: 06/04/2019
Number of Days to Update: 27	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	Source: U.S. Department of Transportation
Date Data Arrived at EDR: 03/26/2019	Telephone: 202-366-4555
Date Made Active in Reports: 05/14/2019	Last EDR Contact: 06/26/2019
Number of Days to Update: 49	Next Scheduled EDR Contact: 10/07/2019
	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	Source: Office of Emergency Services
Date Data Arrived at EDR: 01/24/2019	Telephone: 916-845-8400
Date Made Active in Reports: 03/05/2019	Last EDR Contact: 06/24/2019
Number of Days to Update: 40	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	Source: State Water Quality Control Board
Date Data Arrived at EDR: 12/11/2018	Telephone: 866-480-1028
Date Made Active in Reports: 01/15/2019	Last EDR Contact: 06/11/2019
Number of Days to Update: 35	Next Scheduled EDR Contact: 09/23/2019
	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	Source: State Water Resources Control Board
Date Data Arrived at EDR: 12/11/2018	Telephone: 866-480-1028
Date Made Active in Reports: 01/15/2019	Last EDR Contact: 06/11/2019
Number of Days to Update: 35	Next Scheduled EDR Contact: 09/23/2019
	Data Release Frequency: Quarterly

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## 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	Source: FirstSearch
Date Data Arrived at EDR: 01/03/2013	Telephone: N/A
Date Made Active in Reports: 02/22/2013	Last EDR Contact: 01/03/2013
Number of Days to Update: 50	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	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/27/2019	Telephone: (415) 495-8895
Date Made Active in Reports: 04/17/2019	Last EDR Contact: 06/26/2019
Number of Days to Update: 21	Next Scheduled EDR Contact: 10/07/2019
	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	Source: U.S. Army Corps of Engineers
Date Data Arrived at EDR: 04/03/2019	Telephone: 202-528-4285
Date Made Active in Reports: 05/23/2019	Last EDR Contact: 05/21/2019
Number of Days to Update: 50	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	Source: USGS
Date Data Arrived at EDR: 11/10/2006	Telephone: 888-275-8747
Date Made Active in Reports: 01/11/2007	Last EDR Contact: 07/09/2019
Number of Days to Update: 62	Next Scheduled EDR Contact: 10/21/2019
	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	Source: U.S. Geological Survey
Date Data Arrived at EDR: 02/06/2006	Telephone: 888-275-8747
Date Made Active in Reports: 01/11/2007	Last EDR Contact: 07/10/2019
Number of Days to Update: 339	Next Scheduled EDR Contact: 10/21/2019
	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.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 06/26/2019  
Next Scheduled EDR Contact: 10/07/2019  
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: 06/18/2019  
Next Scheduled EDR Contact: 09/30/2019  
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.



# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 07/01/2019  
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

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 04/11/2019	Source: EPA
Date Data Arrived at EDR: 04/18/2019	Telephone: 202-564-6023
Date Made Active in Reports: 05/23/2019	Last EDR Contact: 07/01/2019
Number of Days to Update: 35	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	Source: EPA
Date Data Arrived at EDR: 04/10/2019	Telephone: 202-566-0500
Date Made Active in Reports: 05/14/2019	Last EDR Contact: 07/12/2019
Number of Days to Update: 34	Next Scheduled EDR Contact: 10/21/2019
	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	Source: Environmental Protection Agency
Date Data Arrived at EDR: 11/23/2016	Telephone: 202-564-2501
Date Made Active in Reports: 02/10/2017	Last EDR Contact: 07/03/2019
Number of Days to Update: 79	Next Scheduled EDR Contact: 10/21/2019
	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	Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Date Data Arrived at EDR: 04/16/2009	Telephone: 202-566-1667
Date Made Active in Reports: 05/11/2009	Last EDR Contact: 08/18/2017
Number of Days to Update: 25	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	Source: EPA
Date Data Arrived at EDR: 04/16/2009	Telephone: 202-566-1667
Date Made Active in Reports: 05/11/2009	Last EDR Contact: 08/18/2017
Number of Days to Update: 25	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: 08/30/2016	Source: Nuclear Regulatory Commission
Date Data Arrived at EDR: 09/08/2016	Telephone: 301-415-7169
Date Made Active in Reports: 10/21/2016	Last EDR Contact: 04/22/2019
Number of Days to Update: 43	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	Source: Department of Energy
Date Data Arrived at EDR: 08/07/2009	Telephone: 202-586-8719
Date Made Active in Reports: 10/22/2009	Last EDR Contact: 06/07/2019
Number of Days to Update: 76	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	Source: Environmental Protection Agency
Date Data Arrived at EDR: 09/10/2014	Telephone: N/A
Date Made Active in Reports: 10/20/2014	Last EDR Contact: 06/07/2019
Number of Days to Update: 40	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	Source: Environmental Protection Agency
Date Data Arrived at EDR: 11/30/2017	Telephone: 202-566-0517
Date Made Active in Reports: 12/15/2017	Last EDR Contact: 04/26/2019
Number of Days to Update: 15	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	Source: Environmental Protection Agency
Date Data Arrived at EDR: 04/02/2019	Telephone: 202-343-9775
Date Made Active in Reports: 05/14/2019	Last EDR Contact: 07/01/2019
Number of Days to Update: 42	Next Scheduled EDR Contact: 10/14/2019
	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	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/01/2007	Telephone: 202-564-2501
Date Made Active in Reports: 04/10/2007	Last EDR Contact: 12/17/2007
Number of Days to Update: 40	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.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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 Transportation, 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 Transportation, 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: 07/08/2019  
Next Scheduled EDR Contact: 10/21/2019  
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: 06/26/2019  
Next Scheduled EDR Contact: 10/07/2019  
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: 07/10/2019  
Next Scheduled EDR Contact: 10/21/2019  
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.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 07/01/2019  
Next Scheduled EDR Contact: 10/14/2019  
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 1931 and 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.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 06/19/2019  
Next Scheduled EDR Contact: 09/23/2019  
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

## 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: 07/15/2019  
Next Scheduled EDR Contact: 10/28/2019  
Data Release Frequency: Varies

## 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: 07/09/2019  
Next Scheduled EDR Contact: 10/21/2019  
Data Release Frequency: Quarterly

# 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	Source: Environmental Protection Agency
Date Data Arrived at EDR: 07/26/2018	Telephone: 202-564-0527
Date Made Active in Reports: 10/05/2018	Last EDR Contact: 05/24/2019
Number of Days to Update: 71	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	Source: EPA
Date Data Arrived at EDR: 02/21/2019	Telephone: 800-385-6164
Date Made Active in Reports: 04/01/2019	Last EDR Contact: 05/21/2019
Number of Days to Update: 39	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	Source: Department of Health Services
Date Data Arrived at EDR: 07/27/1994	Telephone: 916-255-2118
Date Made Active in Reports: 08/02/1994	Last EDR Contact: 05/31/1994
Number of Days to Update: 6	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	Source: CAL EPA/Office of Emergency Information
Date Data Arrived at EDR: 03/26/2019	Telephone: 916-323-3400
Date Made Active in Reports: 05/01/2019	Last EDR Contact: 06/25/2019
Number of Days to Update: 36	Next Scheduled EDR Contact: 10/07/2019
	Data Release Frequency: Quarterly

## CUPA SAN FRANCISCO CO: CUPA Facility Listing

Cupa facilities

Date of Government Version: 04/18/2019	Source: San Francisco County Department of Environmental Health
Date Data Arrived at EDR: 04/19/2019	Telephone: 415-252-3896
Date Made Active in Reports: 04/30/2019	Last EDR Contact: 04/18/2019
Number of Days to Update: 11	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	Source: Livermore-Pleasanton Fire Department
Date Data Arrived at EDR: 02/26/2019	Telephone: 925-454-2361
Date Made Active in Reports: 04/01/2019	Last EDR Contact: 05/14/2019
Number of Days to Update: 34	Next Scheduled EDR Contact: 08/26/2019
	Data Release Frequency: Varies

## DRYCLEAN AVAQMD: Antelope Valley Air Quality Management District Drycleaner Listing

A listing of dry cleaners in the Antelope Valley Air Quality Management District.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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

**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

**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: 06/24/2019  
Next Scheduled EDR Contact: 09/30/2019  
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 Resources 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: 04/22/2019  
Date Data Arrived at EDR: 04/23/2019  
Date Made Active in Reports: 06/26/2019  
Number of Days to Update: 64

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.



# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 07/12/2019  
Next Scheduled EDR Contact: 10/21/2019  
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 Substances 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: 07/09/2019  
Next Scheduled EDR Contact: 10/21/2019  
Data Release Frequency: Quarterly

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## MINES: Mines Site Location Listing

A listing of mine site locations from the Office of Mine Reclamation.

Date of Government Version: 12/10/2018	Source: Department of Conservation
Date Data Arrived at EDR: 12/12/2018	Telephone: 916-322-1080
Date Made Active in Reports: 01/15/2019	Last EDR Contact: 06/11/2019
Number of Days to Update: 34	Next Scheduled EDR Contact: 09/23/2019
	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	Source: Department of Public Health
Date Data Arrived at EDR: 03/05/2019	Telephone: 916-558-1784
Date Made Active in Reports: 04/02/2019	Last EDR Contact: 06/04/2019
Number of Days to Update: 28	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	Source: State Water Resources Control Board
Date Data Arrived at EDR: 02/12/2019	Telephone: 916-445-9379
Date Made Active in Reports: 03/07/2019	Last EDR Contact: 05/14/2019
Number of Days to Update: 23	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	Source: Department of Pesticide Regulation
Date Data Arrived at EDR: 03/05/2019	Telephone: 916-445-4038
Date Made Active in Reports: 04/05/2019	Last EDR Contact: 06/04/2019
Number of Days to Update: 31	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	Source: Department of Conservation
Date Data Arrived at EDR: 03/13/2019	Telephone: 916-323-3836
Date Made Active in Reports: 04/29/2019	Last EDR Contact: 06/12/2019
Number of Days to Update: 47	Next Scheduled EDR Contact: 09/23/2019
	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	Source: State Water Resources Control Board
Date Data Arrived at EDR: 03/19/2019	Telephone: 916-445-3846
Date Made Active in Reports: 04/29/2019	Last EDR Contact: 06/17/2019
Number of Days to Update: 41	Next Scheduled EDR Contact: 09/30/2019
	Data Release Frequency: No Update Planned

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## 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	Source: Department of Conservation
Date Data Arrived at EDR: 06/13/2018	Telephone: 916-445-2408
Date Made Active in Reports: 07/17/2018	Last EDR Contact: 06/11/2019
Number of Days to Update: 34	Next Scheduled EDR Contact: 09/23/2019
	Data Release Frequency: Varies

## UIC GEO: Underground Injection Control Sites (GEOTRACKER)

Underground control injection sites

Date of Government Version: 12/10/2018	Source: State Water Resource Control Board
Date Data Arrived at EDR: 12/11/2018	Telephone: 866-480-1028
Date Made Active in Reports: 01/15/2019	Last EDR Contact: 06/11/2019
Number of Days to Update: 35	Next Scheduled EDR Contact: 09/23/2019
	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	Source: RWQCB, Central Valley Region
Date Data Arrived at EDR: 07/11/2018	Telephone: 559-445-5577
Date Made Active in Reports: 09/13/2018	Last EDR Contact: 07/12/2019
Number of Days to Update: 64	Next Scheduled EDR Contact: 10/21/2019
	Data Release Frequency: Varies

## WDS: Waste Discharge System

Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007	Source: State Water Resources Control Board
Date Data Arrived at EDR: 06/20/2007	Telephone: 916-341-5227
Date Made Active in Reports: 06/29/2007	Last EDR Contact: 05/16/2019
Number of Days to Update: 9	Next Scheduled EDR Contact: 09/02/2019
	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	Source: Los Angeles Water Quality Control Board
Date Data Arrived at EDR: 07/21/2009	Telephone: 213-576-6726
Date Made Active in Reports: 08/03/2009	Last EDR Contact: 06/19/2019
Number of Days to Update: 13	Next Scheduled EDR Contact: 10/07/2019
	Data Release Frequency: No Update Planned

## MILITARY PRIV SITES: Military Privatized Sites (GEOTRACKER)

Military privatized sites

Date of Government Version: 12/10/2018	Source: State Water Resources Control Board
Date Data Arrived at EDR: 12/11/2018	Telephone: 866-480-1028
Date Made Active in Reports: 01/15/2019	Last EDR Contact: 06/11/2019
Number of Days to Update: 35	Next Scheduled EDR Contact: 09/23/2019
	Data Release Frequency: Varies

## PROJECT: Project Sites (GEOTRACKER)

Projects sites

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 06/11/2019  
Next Scheduled EDR Contact: 09/23/2019  
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: 06/12/2019  
Next Scheduled EDR Contact: 09/23/2019  
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: 06/11/2019  
Next Scheduled EDR Contact: 09/23/2019  
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: 06/11/2019  
Next Scheduled EDR Contact: 09/23/2019  
Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## 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: 06/11/2019  
Next Scheduled EDR Contact: 09/23/2019  
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: 06/11/2019  
Next Scheduled EDR Contact: 09/23/2019  
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: 06/11/2019  
Next Scheduled EDR Contact: 09/23/2019  
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

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## 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	Source: EDR, Inc.
Date Data Arrived at EDR: N/A	Telephone: N/A
Date Made Active in Reports: N/A	Last EDR Contact: N/A
Number of Days to Update: 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	Source: Department of Resources Recycling and Recovery
Date Data Arrived at EDR: 07/01/2013	Telephone: N/A
Date Made Active in Reports: 01/13/2014	Last EDR Contact: 06/01/2012
Number of Days to Update: 196	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	Source: State Water Resources Control Board
Date Data Arrived at EDR: 07/01/2013	Telephone: N/A
Date Made Active in Reports: 12/30/2013	Last EDR Contact: 06/01/2012
Number of Days to Update: 182	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	Source: Alameda County Environmental Health Services
Date Data Arrived at EDR: 01/11/2019	Telephone: 510-567-6700
Date Made Active in Reports: 03/05/2019	Last EDR Contact: 07/08/2019
Number of Days to Update: 53	Next Scheduled EDR Contact: 10/21/2019
	Data Release Frequency: Semi-Annually

#### UST ALAMEDA: Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 04/10/2019	Source: Alameda County Environmental Health Services
Date Data Arrived at EDR: 04/11/2019	Telephone: 510-567-6700
Date Made Active in Reports: 06/20/2019	Last EDR Contact: 07/08/2019
Number of Days to Update: 70	Next Scheduled EDR Contact: 04/24/2047
	Data Release Frequency: Semi-Annually

### AMADOR COUNTY:

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## 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: 06/17/2019  
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: 07/08/2019  
Next Scheduled EDR Contact: 10/21/2019  
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: 06/24/2019  
Next Scheduled EDR Contact: 10/07/2019  
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:

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

### 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: 06/26/2019  
Next Scheduled EDR Contact: 10/14/2019  
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: 04/24/2019  
Date Data Arrived at EDR: 04/25/2019  
Date Made Active in Reports: 06/27/2019  
Number of Days to Update: 63

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: 29

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: 07/15/2019  
Next Scheduled EDR Contact: 10/28/2019  
Data Release Frequency: Varies

## LASSEN COUNTY:

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## 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: 06/17/2019  
Next Scheduled EDR Contact: 09/30/2019  
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: 07/08/2019  
Next Scheduled EDR Contact: 10/21/2019  
Data Release Frequency: Semi-Annually

### LF LOS ANGELES: List of Solid Waste Facilities

Solid Waste Facilities in Los Angeles County.

Date of Government Version: 04/15/2019  
Date Data Arrived at EDR: 04/16/2019  
Date Made Active in Reports: 06/21/2019  
Number of Days to Update: 66

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: 07/12/2019  
Next Scheduled EDR Contact: 10/28/2019  
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: 06/25/2019  
Next Scheduled EDR Contact: 10/07/2019  
Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## 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	Source: Los Angeles County Department of Public Works
Date Data Arrived at EDR: 04/17/2019	Telephone: 626-458-6973
Date Made Active in Reports: 05/29/2019	Last EDR Contact: 04/17/2019
Number of Days to Update: 42	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	Source: Los Angeles Fire Department
Date Data Arrived at EDR: 04/05/2019	Telephone: 213-978-3800
Date Made Active in Reports: 05/29/2019	Last EDR Contact: 06/25/2019
Number of Days to Update: 54	Next Scheduled EDR Contact: 10/07/2019
	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	Source: Los Angeles Fire Department
Date Data Arrived at EDR: 04/05/2019	Telephone: 213-978-3800
Date Made Active in Reports: 05/29/2019	Last EDR Contact: 06/25/2019
Number of Days to Update: 54	Next Scheduled EDR Contact: 10/07/2019
	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: 04/08/2019	Source: Community Health Services
Date Data Arrived at EDR: 04/16/2019	Telephone: 323-890-7806
Date Made Active in Reports: 06/21/2019	Last EDR Contact: 04/16/2019
Number of Days to Update: 66	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	Source: City of El Segundo Fire Department
Date Data Arrived at EDR: 04/19/2017	Telephone: 310-524-2236
Date Made Active in Reports: 05/10/2017	Last EDR Contact: 07/12/2019
Number of Days to Update: 21	Next Scheduled EDR Contact: 10/28/2019
	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	Source: City of Long Beach Fire Department
Date Data Arrived at EDR: 04/23/2019	Telephone: 562-570-2563
Date Made Active in Reports: 06/27/2019	Last EDR Contact: 04/22/2019
Number of Days to Update: 65	Next Scheduled EDR Contact: 08/05/2019
	Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

UST TORRANCE: City of Torrance Underground Storage Tank  
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 04/04/2019	Source: City of Torrance Fire Department
Date Data Arrived at EDR: 04/23/2019	Telephone: 310-618-2973
Date Made Active in Reports: 06/27/2019	Last EDR Contact: 04/22/2019
Number of Days to Update: 65	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	Source: Madera County Environmental Health
Date Data Arrived at EDR: 02/22/2019	Telephone: 559-675-7823
Date Made Active in Reports: 03/07/2019	Last EDR Contact: 05/16/2019
Number of Days to Update: 13	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	Source: Public Works Department Waste Management
Date Data Arrived at EDR: 10/04/2018	Telephone: 415-473-6647
Date Made Active in Reports: 11/02/2018	Last EDR Contact: 06/26/2019
Number of Days to Update: 29	Next Scheduled EDR Contact: 10/14/2019
	Data Release Frequency: Semi-Annually

MERCED COUNTY:

CUPA MERCED: CUPA Facility List  
CUPA facility list.

Date of Government Version: 03/11/2019	Source: Merced County Environmental Health
Date Data Arrived at EDR: 03/19/2019	Telephone: 209-381-1094
Date Made Active in Reports: 05/08/2019	Last EDR Contact: 05/16/2019
Number of Days to Update: 50	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	Source: Mono County Health Department
Date Data Arrived at EDR: 02/26/2019	Telephone: 760-932-5580
Date Made Active in Reports: 04/01/2019	Last EDR Contact: 05/23/2019
Number of Days to Update: 34	Next Scheduled EDR Contact: 09/09/2019
	Data Release Frequency: Varies

MONTEREY COUNTY:

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## 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: 06/28/2019  
Next Scheduled EDR Contact: 10/14/2019  
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

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## 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: 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: 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: 06/17/2019  
Next Scheduled EDR Contact: 09/30/2019  
Data Release Frequency: Quarterly

### UST RIVERSIDE: Underground Storage Tank Tank List

Underground storage tank sites located in Riverside county.

Date of Government Version: 04/11/2019  
Date Data Arrived at EDR: 04/12/2019  
Date Made Active in Reports: 06/20/2019  
Number of Days to Update: 69

Source: Department of Environmental Health  
Telephone: 951-358-5055  
Last EDR Contact: 06/17/2019  
Next Scheduled EDR Contact: 09/30/2019  
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.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 02/05/2019  
Date Data Arrived at EDR: 04/02/2019  
Date Made Active in Reports: 06/18/2019  
Number of Days to Update: 77

Source: Sacramento County Environmental Management  
Telephone: 916-875-8406  
Last EDR Contact: 06/28/2019  
Next Scheduled EDR Contact: 10/14/2019  
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: 02/06/2019  
Date Data Arrived at EDR: 04/02/2019  
Date Made Active in Reports: 06/20/2019  
Number of Days to Update: 79

Source: Sacramento County Environmental Management  
Telephone: 916-875-8406  
Last EDR Contact: 06/28/2019  
Next Scheduled EDR Contact: 10/14/2019  
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

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## 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: 04/24/2019  
Date Data Arrived at EDR: 04/25/2019  
Date Made Active in Reports: 06/27/2019  
Number of Days to Update: 63

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 Oversight 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: No Update Planned

### 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: 06/17/2019  
Next Scheduled EDR Contact: 09/30/2019  
Data Release Frequency: Semi-Annually

## SAN LUIS OBISPO COUNTY:



# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## 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: 06/12/2019  
Next Scheduled EDR Contact: 09/23/2019  
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: 06/10/2019  
Next Scheduled EDR Contact: 09/23/2019  
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: No Update Planned

## 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

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## 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: No Update Planned

## 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:

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## 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: 06/19/2019  
Next Scheduled EDR Contact: 10/07/2019  
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: 06/19/2019  
Next Scheduled EDR Contact: 10/07/2019  
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 Environmental Protection  
Telephone: 209-525-6751  
Last EDR Contact: 07/15/2019  
Next Scheduled EDR Contact: 10/28/2019  
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

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 04/24/2019  
Date Data Arrived at EDR: 04/25/2019  
Date Made Active in Reports: 06/28/2019  
Number of Days to Update: 64

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: 03/26/2019  
Date Data Arrived at EDR: 04/25/2019  
Date Made Active in Reports: 06/27/2019  
Number of Days to Update: 63

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: 06/26/2019  
Next Scheduled EDR Contact: 10/14/2019  
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: 05/09/2019  
Next Scheduled EDR Contact: 08/26/2019  
Data Release Frequency: No Update Planned

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## 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	Source: Ventura County Resource Management Agency
Date Data Arrived at EDR: 04/25/2019	Telephone: 805-654-2813
Date Made Active in Reports: 05/30/2019	Last EDR Contact: 04/23/2019
Number of Days to Update: 35	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	Source: Environmental Health Division
Date Data Arrived at EDR: 03/13/2019	Telephone: 805-654-2813
Date Made Active in Reports: 04/03/2019	Last EDR Contact: 06/12/2019
Number of Days to Update: 21	Next Scheduled EDR Contact: 09/23/2019
	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: 03/29/2019	Source: Yolo County Department of Health
Date Data Arrived at EDR: 04/05/2019	Telephone: 530-666-8646
Date Made Active in Reports: 06/20/2019	Last EDR Contact: 06/26/2019
Number of Days to Update: 76	Next Scheduled EDR Contact: 10/14/2019
	Data Release Frequency: Annually

## YUBA COUNTY:

### CUPA YUBA: CUPA Facility List

CUPA facility listing for Yuba County.

Date of Government Version: 02/08/2019	Source: Yuba County Environmental Health Department
Date Data Arrived at EDR: 02/12/2019	Telephone: 530-749-7523
Date Made Active in Reports: 03/06/2019	Last EDR Contact: 04/25/2019
Number of Days to Update: 22	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	Source: Department of Energy & Environmental Protection
Date Data Arrived at EDR: 02/12/2019	Telephone: 860-424-3375
Date Made Active in Reports: 03/04/2019	Last EDR Contact: 05/14/2019
Number of Days to Update: 20	Next Scheduled EDR Contact: 08/26/2019
	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: 07/09/2019  
Next Scheduled EDR Contact: 10/21/2019  
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: 05/01/2019  
Date Made Active in Reports: 06/21/2019  
Number of Days to Update: 51

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: 07/15/2019  
Next Scheduled EDR Contact: 10/28/2019  
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: 06/10/2019  
Next Scheduled EDR Contact: 09/23/2019  
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 for 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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**APPENDIX F**  
**NOISE ANALYSIS**



<b>Construction Generated Noise</b>		
<b>Building Type</b>		<b>Distance (ft)</b>
<b>Construction Noise at 50 Feet (dBA Leq)</b>		
		50
<b>Construction Phase</b>	<b>Minimum Required Equipment in Use<sup>1</sup></b>	
Ground Clearing/Demolition	84	
Excavation	79	
Finishing and Site Cleanup	75	
<b>Residential Use to the West of the Project Site</b>		
<b>Average Construction Noise (dBA Leq)</b>		75
<b>Construction Phase</b>	<b>Minimum Required Equipment in Use<sup>1</sup></b>	
Ground Clearing/Demolition	80	
Excavation (Site Preparation)	75	
Foundation Construction	74	
Building Construction	71	
Paving	71	
<b>Residential Use to the North of the Project Site</b>		
<b>Average Construction Noise (dBA Leq)</b>		60
<b>Construction Phase</b>	<b>Minimum Required Equipment in Use<sup>1</sup></b>	
Ground Clearing/Demolition	82	
Excavation (Site Preparation)	77	
Foundation Construction	76	
Building Construction	73	
Paving	73	
<b>Residential Uses to the South of the Project Site</b>		
<b>Average Construction Noise (dBA Leq)</b>		60
<b>Construction Phase</b>	<b>Minimum Required Equipment in Use<sup>1</sup></b>	
Ground Clearing/Demolition	82	
Excavation (Site Preparation)	77	
Foundation Construction	76	
Building Construction	73	
Paving	73	
<b>Residential Use to the East of the Project Site</b>		
<b>Average Construction Noise (dBA Leq)</b>		100
<b>Construction Phase</b>	<b>Minimum Required Equipment in Use<sup>1</sup></b>	
Ground Clearing/Demolition	78	
Excavation (Site Preparation)	73	
Foundation Construction	72	
Building Construction	69	
Paving	69	
<p>Source: Bolt, Beranek and Newman, "Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances," prepared for the USEPA, December 31, 1971. Based on analysis for Office Building, Hotel, Hospital, School, and Public Works.</p>		

# Construction Generated Vibration

<b>Residential Use to the West of the Project Site</b>		Closest Distance (feet):	15
	Approximate RMS a 66	Approximate RMS 73.000	
Equipment	inch/second	inch/second	
Vibratory roller	0.21	0.452	
Large bulldozer	0.089	0.191	
Small bulldozer	0.003	0.006	
Jackhammer	0.035	0.075	
Loaded trucks	0.076	0.164	
	Criteria	0.900	
<b>Residential Use to the North of the Project Site</b>		Closest Distance (feet):	25
	<b>Approximate RMS a</b> Velocity at 25 ft, inch/second	Approximate RMS Velocity Level, inch/second	
Equipment	inch/second	inch/second	
Vibratory roller	0.21	0.210	
Caisson Drill	0.089	0.089	
Large bulldozer	0.089	0.089	
Small bulldozer	0.003	0.003	
Loaded trucks	0.076	0.076	
	Criteria	0.900	
<b>Residential Uses to the South of the Project Site</b>		Closest Distance (feet):	25
	<b>Approximate RMS a</b> Velocity at 25 ft, inch/second	Approximate RMS Velocity Level, inch/second	
Equipment	inch/second	inch/second	
Vibratory roller	0.21	0.210	
Caisson Drill	0.089	0.089	
Large bulldozer	0.089	0.089	
Small bulldozer	0.003	0.003	
Loaded trucks	0.076	0.076	
	Criteria	0.900	
<b>Residential Use to the East of the Project Site</b>		Closest Distance (feet):	25
	<b>Approximate RMS a</b> Velocity at 25 ft, inch/second	Approximate RMS Velocity Level, inch/second	
Equipment	inch/second	inch/second	
Vibratory roller	0.21	0.210	
Caisson Drill	0.089	0.089	
Large bulldozer	0.089	0.089	
Small bulldozer	0.003	0.003	
Loaded trucks	0.076	0.076	
	Criteria	0.900	
<p><sup>1</sup>: Determined based on use of jackhammers or pneumatic hammers that may be used for pavement demolition at a distance of 25 feet</p> <p>Notes: RMS velocity calculated from vibration level (VdB) using the reference of one microinch/second.</p> <p>Source: Based on methodology from the United States Department of Transportation Federal Transit Administration, <i>Transit Noise and Vibration Impact Assessment</i> (2006).</p>			