POSTED

JAN 18 2018

ORANGE COUNTY CLERK-RECORDER DEPARTMENT

BY: _____ DEPUTY

Irvine Ranch WATER DISTRICT

NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION FOR THE PROPOSED 3.7 MG ZONE 1 RESERVOIR PROJECT

This is to inform the general public that Irvine Ranch Water District (IRWD) proposes to adopt an Initial Study/Mitigated Negative Declaration (IS/MND) for the **3.7 MG Zone 1 Reservoir Project**.

Project Description: IRWD proposes the construction of a 3.7-million gallon (MG) reservoir adjacent to IRWD's existing 15-MG Zone 1 reservoir to serve existing IRWD customers in the Irvine service area. The primary purpose of the Project is to construct an additional permanent reservoir to allow for storage reliability and operational flexibility in the Zone 1 domestic water system. The Project would include construction of an aboveground 3.7-MG pre-stressed circular concrete tank. The tank would have an interior diameter of approximately 143 feet and an exterior diameter of approximately 145 feet with a maximum height of approximately 34.25 feet at the center of the tank. Proposed reservoir construction and operation would also require installation of tank inlet and outlet piping, overflow piping, a 12-inch drain pipe, a 15-foot-deep valve vault to house the inlet and outlet piping, 12- and 36-inch butterfly valves, and roof hatches to allow for tank access. As part of the project, the reservoir management system will be upgraded to accommodate the new reservoir tank. Additional site improvements will include new retaining walls, a relocated access road, a concrete gutter, and a motorized double-swing access gate at the site entry.

Project Location: The Project site is located in the City of Irvine, Orange County, California, on the east side of Sand Canyon Avenue, between Trabuco Road and Elysian, at the southeastern corner of the intersection of Sand Canyon Avenue and Elysian. The proposed Project site occupies approximately 1.9 acres in the northwestern corner of a 6.9-acre IRWD-owned parcel.

Public Review Period: The IS/MND is being made available for public review for a period of 30 days beginning January 18, 2018 and ending February 16, 2018. All written comments must be received in the offices of IRWD by 4:00 P.M. on February 16, 2018.

Public Meeting: The Board will consider adoption of the IS/MND and any comments received at a regularly scheduled Board meeting to be held on March 26, 2018 at 5:00 P.M. at IRWD's Board Room, located at 15600 Sand Canyon Avenue, Irvine, CA 92618.

The IS/MND as well as all referenced documents will be available for public review at IRWD's website: www.irwd.com. All comments on the IS/MND should be directed to IRWD's Water Resources Department, Attention: Jo Ann Corey at the above listed address. If you have any questions or would like any additional information, please contact IRWD at (949) 453-5300.

Initial Study and Mitigated Negative Declaration

3.7 MG Zone 1 Reservoir Project

Prepared for

Irvine Ranch Water District
15600 Sand Canyon Avenue
Irvine, California 92618
Contact: Jo Ann Corey, MPA
(949) 453-5300

Prepared by

Psomas
3 Hutton Centre Drive, Suite 200
Santa Ana, California 92707
Contact: Jennifer Marks
(714) 751-7373

January 18, 2018

Initial Study and Mitigated Negative Declaration

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January 18, 2018

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TABLES

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EXHIBITS

APPENDICES

ACRONYM LIST

AQMP	Air Quality Management Plan
BMP	Best Management Practice
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CDFW	California Department of Fish and Wildlife
CHRIS	California Historical Resources Information System
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRHR	California Register of Historic Resources
DOE	Determinations of Eligibility
GHG	greenhouse gas
HCP	Habitat Conservation Plan
HPDF	Historic Property Data File
LST	localized significance threshold
MG	Million Gallons
NCCP	Natural Communities Conservation Plan
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
OCFA	Orange County Fire Authority
OHP	Office of Historic Preservation
PA	Planning Area
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SoCAB	South Coast Air Basin
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
USEPA	U.S. Environmental Protection Agency
USGS	U.S. Geological Survey

SECTION 1.0 INTRODUCTION

1.1 PURPOSE OF THE INITIAL STUDY

The purpose of this Initial Study (IS) is to (1) describe the proposed 3.7 Million Gallon (MG) Zone 1 Reservoir Project (hereinafter referred to as the "Project"), which would be located in the city of Irvine and (2) provide an evaluation of potential environmental effects associated with the Project's construction and operation. This IS has been prepared pursuant to the California Environmental Quality Act (CEQA), as amended (*Public Resources Code* §21000 et seq.) and in accordance with the State CEQA Guidelines (*California Code of Regulations*, Title 14, §15000 et seq.).

Pursuant to Section 15367 of the State CEQA Guidelines, Irvine Ranch Water District (IRWD) is the lead agency for the Project. The lead agency is the public agency that has the principal responsibility for carrying out or approving a project that may have a significant effect on the environment. IRWD, as the lead agency, has the authority for Project approval and certification of the accompanying environmental documentation.

The purpose of this document is to evaluate the construction and operation of a new reservoir, which would be constructed on a lot owned by IRWD and which currently contains a larger reservoir, to serve existing and future IRWD customers.

1.2 SUMMARY OF FINDINGS

Based on the environmental checklist form prepared for the Project (Section 4.0) and supporting environmental analysis (Section 5.0), the proposed Project would have no impact or less than significant impacts in the following environmental areas: aesthetics, agriculture and forest resources, air quality, greenhouse gases, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, population and housing, public services, recreation, transportation/traffic, and utilities and services systems. The proposed Project has the potential to have significant impacts on the following topics unless the recommended mitigation measures described herein are incorporated into the Project: biological resources, cultural resources, geology and soils, noise, and tribal cultural resources.

According to the State CEQA Guidelines, it is appropriate to prepare a Mitigated Negative Declaration (MND) for the proposed Project because, after incorporation of the recommended mitigation measures, potentially significant environmental impacts would be eliminated or reduced to a level considered less than significant.

1.3 PROJECT APPROVAL

This IS/MND has been submitted to potentially affected agencies and individuals. Notices of the availability of the IS/MND for review and comment as well as the environmental documentation are available on IRWD's website (http://www.irwd.com) for review.

A 30-day public review period has been established for the IS/MND. The review period has been established in accordance with Section 15073 of the State CEQA Guidelines. During review of the IS/MND, affected public agencies and the interested public should focus on the document's adequacy in identifying and analyzing the potential environmental impacts and the ways in which the potentially significant effects of the Project area can be avoided or mitigated. Comments on

the IS/MND and the analysis contained herein must be received by 4:00 PM on **February 16, 2018**, and should be addressed to:

Irvine Ranch Water District
Water Resources and Policy Department
Attention: Ms. Jo Ann Corey, MPA
15600 Sand Canyon Avenue
Irvine, CA 92618

Following receipt and evaluation of comments from agencies, organizations, and/or individuals, IRWD will determine whether any substantial new environmental issues have been raised. If so, further documentation—such as an Environmental Impact Report (EIR) or an expanded IS/MND—may be required. If not, the Project and the environmental documentation are tentatively scheduled to be submitted to the Board of Directors for consideration.

1.4 ORGANIZATION OF THE INITIAL STUDY

The IS/MND is organized into sections, as described below.

- **Section 1.0: Introduction.** This section provides an introduction and overview of the conclusions in the IS/MND.
- **Section 2.0: Project Location and Environmental Setting.** This section provides a brief description of the Project location, relevant background information, and a description of the existing conditions of the Project site and vicinity.
- **Section 3.0: Project Description.** This section provides a description of the proposed Project, a statement of purpose and need, and necessary discretionary approvals.
- **Section 4.0: Environmental Checklist.** The completed Environmental Checklist Form from the State CEQA Guidelines provides an overview of the potential impacts that may or may not result from Project implementation. The Environmental Checklist Form also includes “mandatory findings of significance”, as required by CEQA.
- **Section 5.0: Discussion of Environmental Checklist Questions.** This section contains an analysis of environmental impacts identified in the environmental checklist and identifies regulatory requirements (RRs) and mitigation measures (MMs) that have been recommended to eliminate any potentially significant effects or to reduce them to a level considered less than significant.
- **Section 6.0: Report Preparers.** This section lists the authors, including staff from IRWD, who assisted in preparing and reviewing the IS/MND.
- **Section 7.0: References.** This section identifies the references used to prepare the IS/MND.

SECTION 2.0 PROJECT LOCATION AND ENVIRONMENTAL SETTING

2.1 PROJECT LOCATION

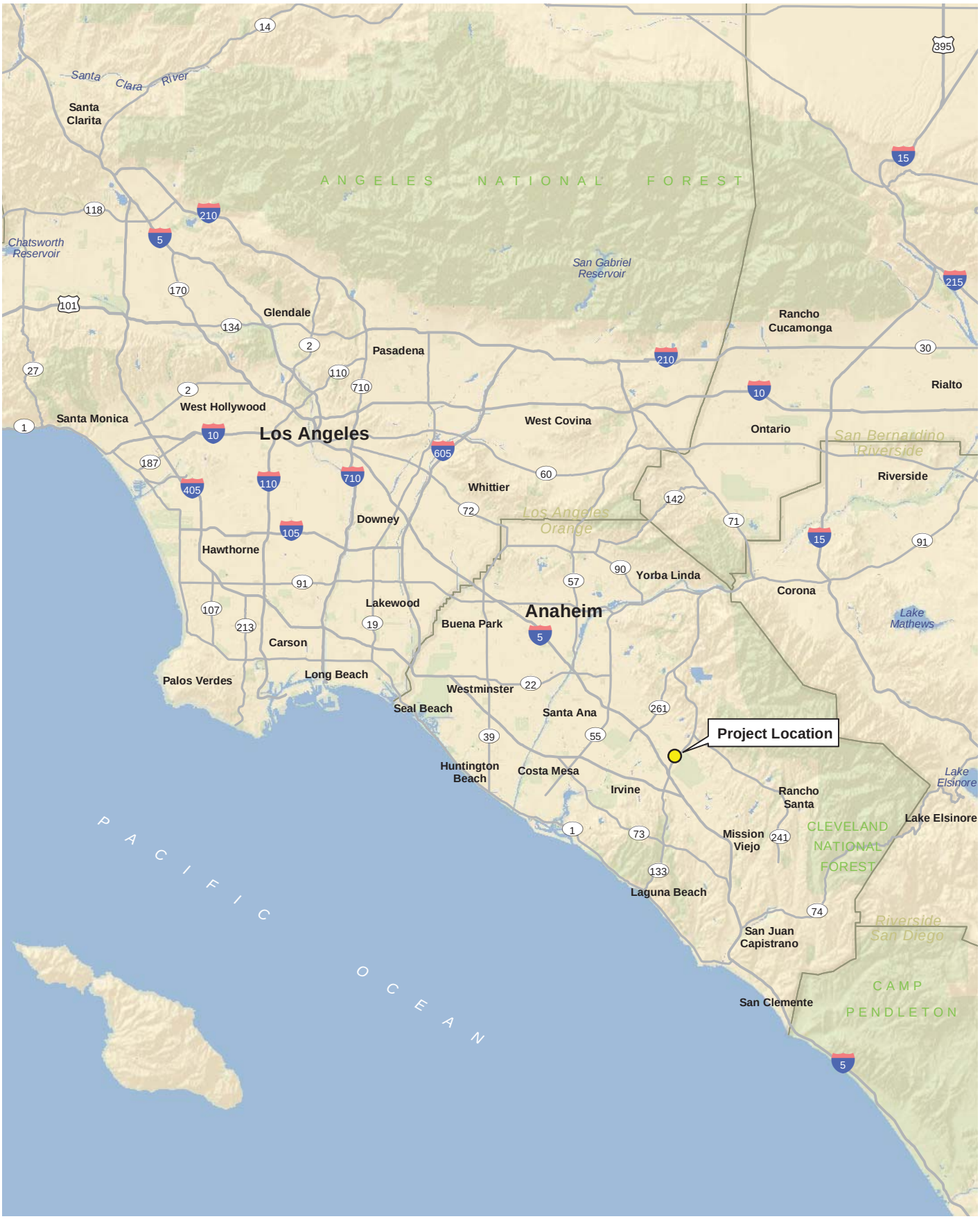
The proposed Project involves construction of an IRWD facility in the City of Irvine, as depicted on Exhibit 2-1, Regional Location. The Project site, as shown on Exhibit 2-2, Local Vicinity, and Exhibit 2-3 Aerial Photograph, is located on the east side of Sand Canyon Avenue, between Trabuco Road and Elysian, at the southeastern corner of the intersection of Sand Canyon Avenue and Elysian. The proposed Project site occupies approximately 1.9 acres in the northwestern corner of a 6.9-acre IRWD-owned parcel.

2.2 PROJECT BACKGROUND

IRWD currently operates a 15-million-gallon domestic water reservoir located off Sand Canyon Avenue between Trabuco Road and Elysian. This reservoir serves as the primary storage for the Zone 1 domestic water system as well as the forebay for both of IRWD's East Irvine Zone 1–3 booster pump station and the South County Zone 1–3 booster pump station. The Project will add 3.7 MG of storage in the Zone 1 system, which will provide operational flexibility and storage redundancy in IRWD's largest domestic water service area.

2.3 EXISTING CONDITIONS

The proposed Project site is located in an urban, developed area of the City of Irvine. Exhibit 2-3, Aerial Photograph, illustrates the location of the proposed Project. As discussed previously, the Project site is located on approximately 1.9 acres of a larger, approximate 6.9-acre IRWD-owned parcel. Approximately five acres of this parcel are currently occupied by the existing 15-MG Zone 1 Reservoir; the East Irvine Zone 1–3 booster pump station; the Crown Castle telecommunications facility; a reservoir management and chloramination system; the South County Zone 1–3 booster pump station; and a paved access road and parking area. As shown in Exhibit 2-3, Aerial Photograph, three buildings, an exterior pump station, two surge tanks, and a compressed air enclosure exist on the 6.9-acre parcel; these structures house components of the pumping stations and the reservoir management system, and provide limited storage space. Two portable structures and outdoor equipment related to the telecommunications facility also exist on the 6.9-acre parcel. The remainder of the 6.9-acre parcel exists as an undeveloped area with trees and other vegetation. Additionally, there is a wrought iron security fence surrounding the 6.9-acre parcel. Drainage flows from the Project site are currently directed to the existing catch basin located south of the South County Zone 1–3 booster pump station.



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Regional Location

Exhibit 2-1

3.7 MG Zone 1 Reservoir Project

N W E S

10 5 0 10

Miles

PSOMAS

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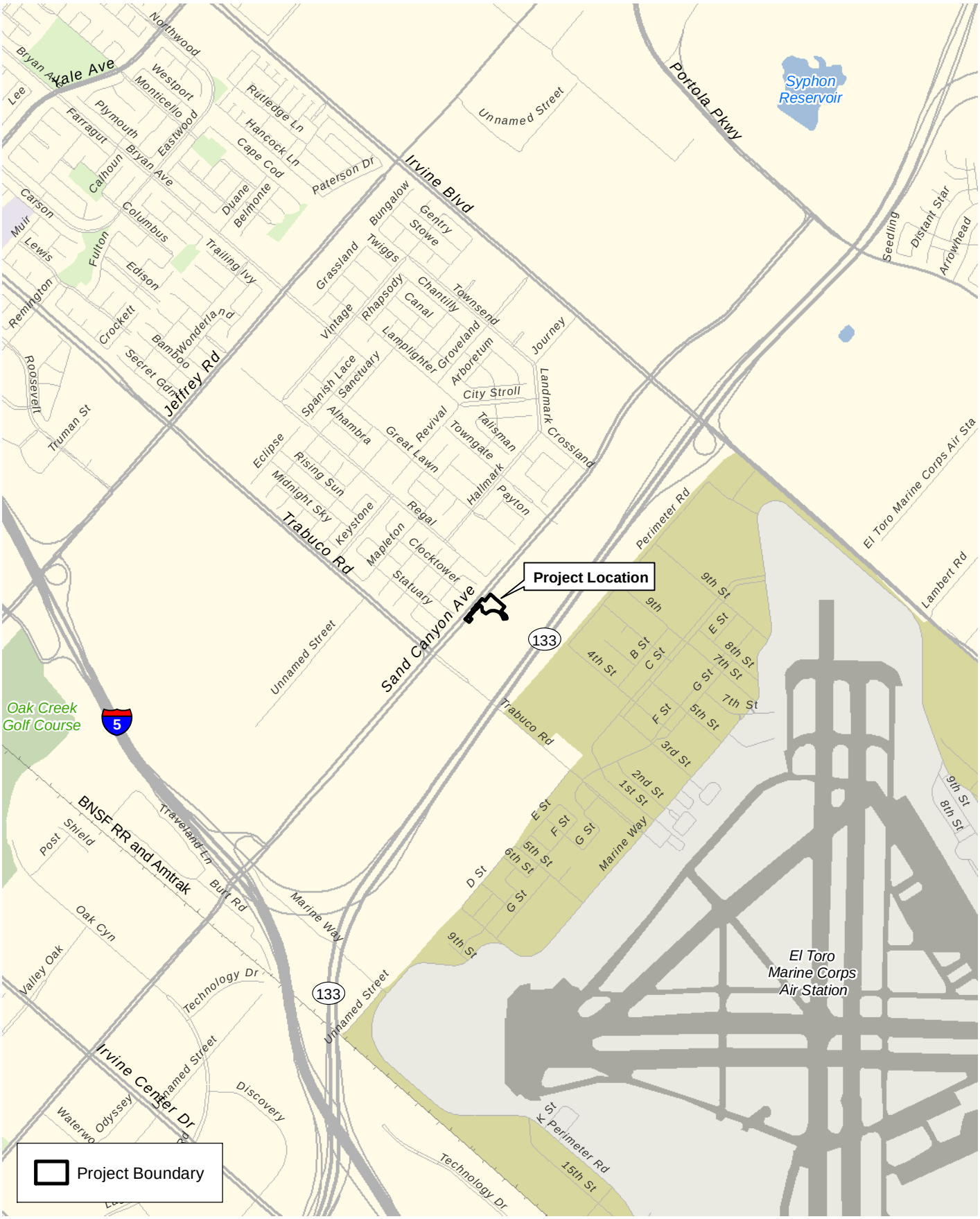

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Local Vicinity

Exhibit 2-2

3.7 MG Zone 1 Reservoir Project

N W E S

2,000 1,000 0 2,000

Feet

PSOMAS

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Aerial Photograph

Exhibit 2-3

3.7 MG Zone 1 Reservoir Project

N W E S

100 50 0 100

Feet

PSOMAS

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SECTION 3.0 PROJECT DESCRIPTION

3.1 PHYSICAL CHARACTERISTICS

The proposed Project involves the construction of a new reservoir in the northwestern corner of the existing Zone 1 Reservoir site, which would connect to the existing utilities on site. Individual components of the proposed Project are described in detail below.

3.1.1 ACCESS ROAD, SITE DEMOLITION, AND UTILITY RELOCATION

The proposed tank would be located on top of the existing access road; therefore, prior to any demolition of the existing access road, grading, or tank construction, a new access road would be constructed as shown on Exhibit 3-1, Site Plan. As part of this process, existing telecommunications conduits would be relocated from the existing access road to the new access road. Once the new access road is complete, portions of the existing access road would be demolished to allow for the tank construction. The existing driveway on Sand Canyon Avenue to the access road would not be affected during any part of the on-site work. Additionally, two 36-inch pipes, which connect the 3.7-MG reservoir to the existing drainage system and the existing domestic water fill/drain pipeline, would be installed. This would involve construction within the existing Sand Canyon Avenue right-of-way and require replacement of the existing driveway.

3.1.2 RESERVOIR FACILITIES

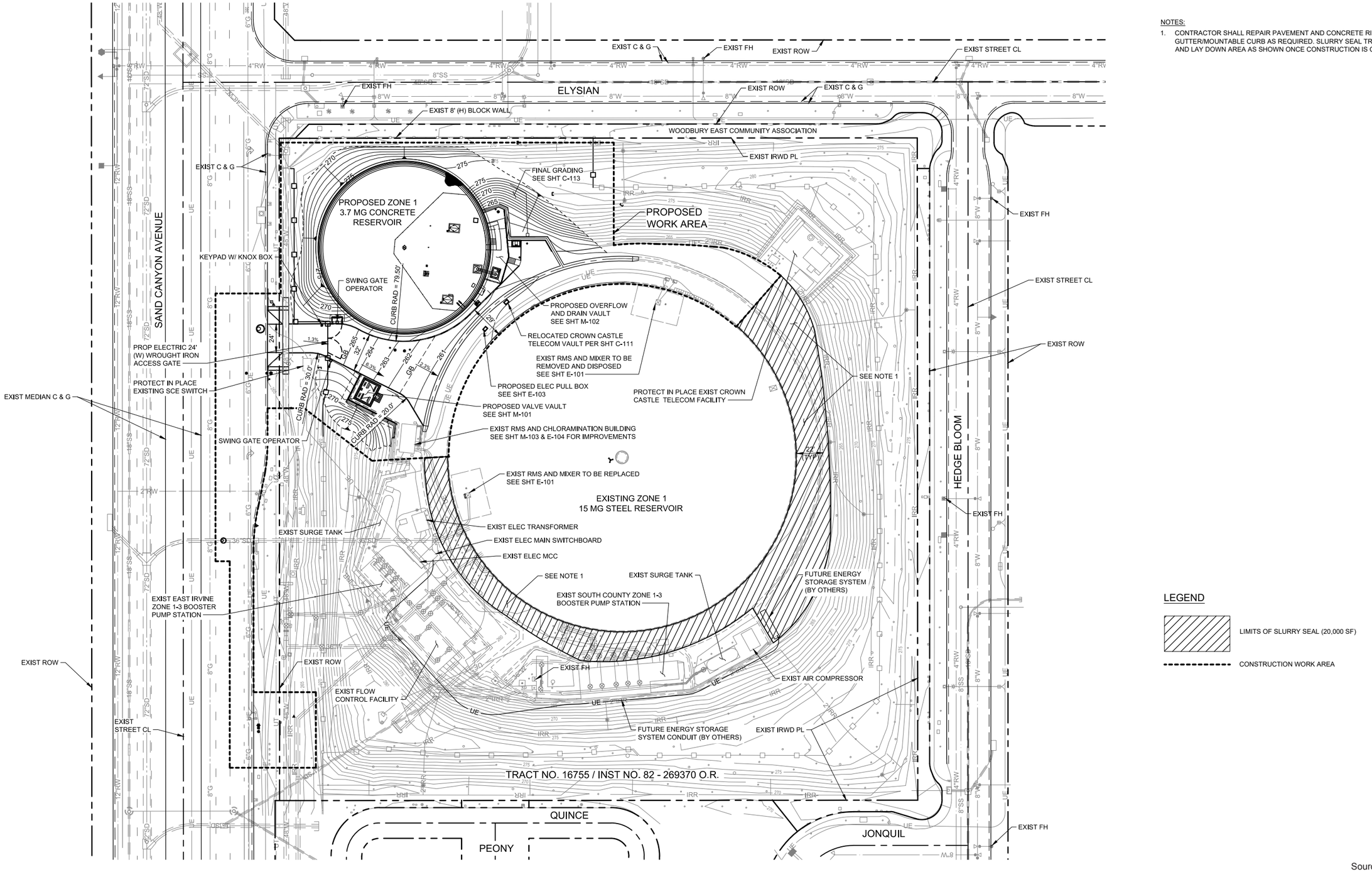
The Project proposes to construct a 3.7-MG reservoir adjacent to IRWD's existing 15-MG Zone 1 reservoir and within IRWD's property, as shown on Exhibit 3-1, Site Plan, and Exhibits 3-2a and 3-2b, Cross Sections. The proposed reservoir would be constructed as an aboveground pre-stressed circular concrete tank. The tank would have an interior diameter of approximately 143 feet and an exterior diameter of approximately 145 feet with a maximum height of approximately 34.25 feet at the center of the tank. The proposed reservoir would also have a depth of water of approximately 31 feet with 1 foot of freeboard.[1] Proposed reservoir construction and operation would also require the following improvements:

- **Tank Inlet and Outlet Piping.** The tank inlet and outlet piping have been sized to match the existing 36-inch inlet pipe to the 15-MG steel tank to maintain the inflow and outflow capabilities of the entire facility.
- **Overflow Piping.** The overflow piping will take excess water out of the tank to an air gap structure. After the air gap, the overflow pipeline will tie into the existing 36-inch-diameter overflow drain line for the existing 15-MG steel tank, and will be directed to the storm drain in the street.
- **Drain Piping.** A 12-inch pipeline would be installed for the drain line. Drain piping will exit through the bottom of the reservoir. The 12-inch drain line between the drain vault and the reservoir will be equipped with 2 isolation valves.
- **Valve and Drain Vaults.** The approximate 15-foot-deep valve vault will house parallel inlet and outlet piping with various reservoir appurtenances. Both the inlet and outlet piping will have isolation valves within or directly upstream or downstream of the vault to isolate the piping inside the vault for future maintenance. The tank overflow piping will discharge into a 5-foot by 7-foot overflow catch basin.

[1] Freeboard is the distance from the high water level (HWL) to the interior of the tank roof. Freeboard is required to minimize the effects of water sloshing forces on the roof deck. For water depths up to 40 feet, 1-foot freeboard is required. For water levels between 40 and 50 feet, a minimum of 2 feet freeboard is required.

NOTES:

1. CONTRACTOR SHALL REPAIR PAVEMENT AND CONCRETE RIBBON GUTTER/MOUNTABLE CURB AS REQUIRED. SLURRY SEAL TRAVEL PATH AND LAY DOWN AREA AS SHOWN ONCE CONSTRUCTION IS COMPLETE.



LEGEND

LIMITS OF SLURRY SEAL (20,000 SF)

CONSTRUCTION WORK AREA

Source: Tetra Tech 2017

Site Plan

Exhibit 3-1

3.7 MG Zone 1 Reservoir Project

0 20 40 80 Feet

PSOMAS

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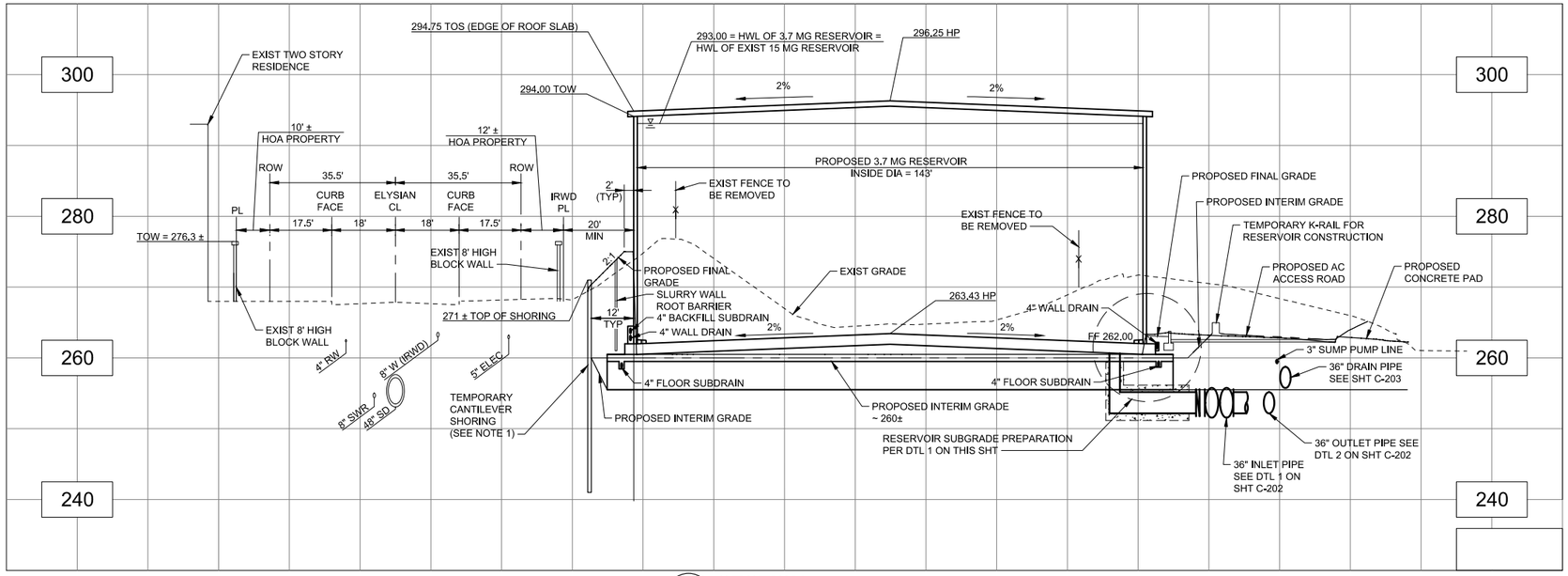
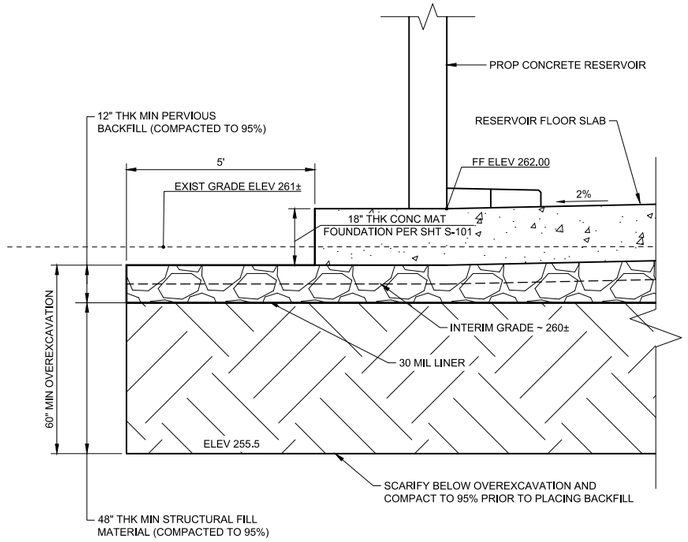
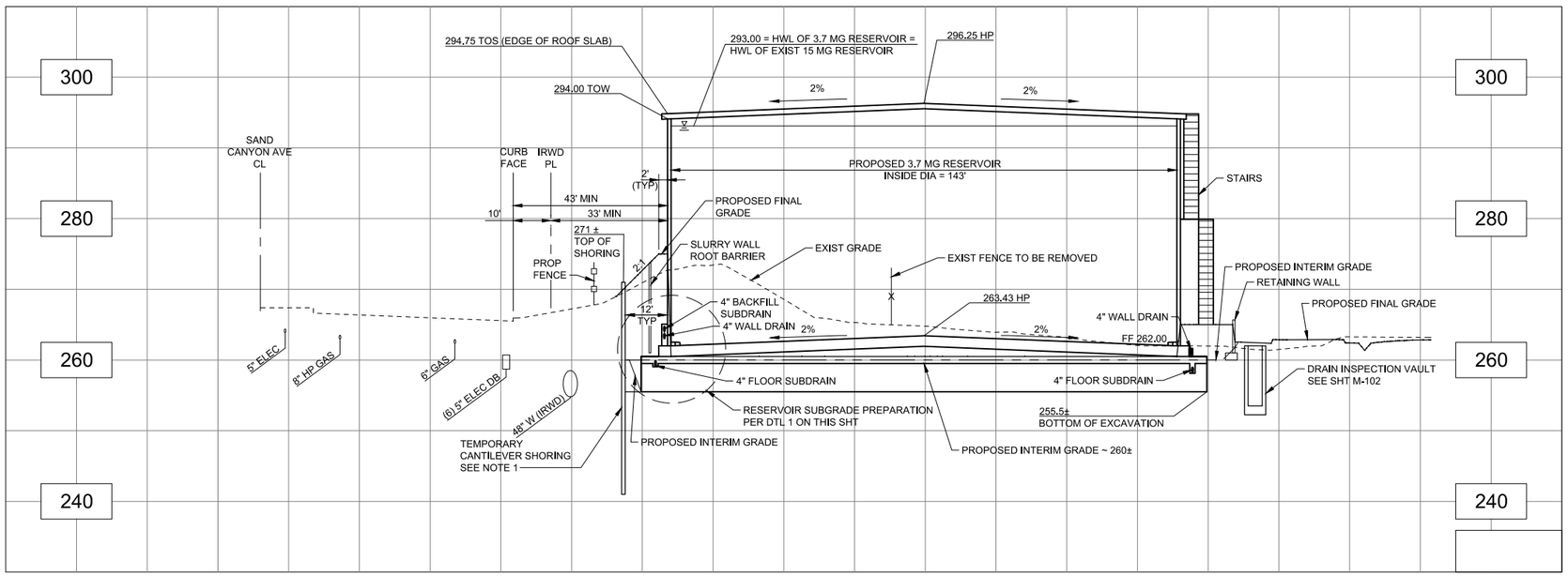


A SECTION



1 CONCRETE RESERVOIR SUBGRADE

SCALE: NTS



B SECTION

NOTE:

1. SHORING SYSTEM MAY BE ABANDONED IN PLACE. ALL SHORING MUST BE REMOVED TO 4' BELOW FINISHED SURFACE. CONTRACTOR HAS OPTION TO ABANDON IN PLACE OR REMOVE SHORING SYSTEM.

Source: Tetra Tech, 2017

Cross Sections

3.7 MG Zone 1 Reservoir Project

Exhibit 3-2a

PSOMAS

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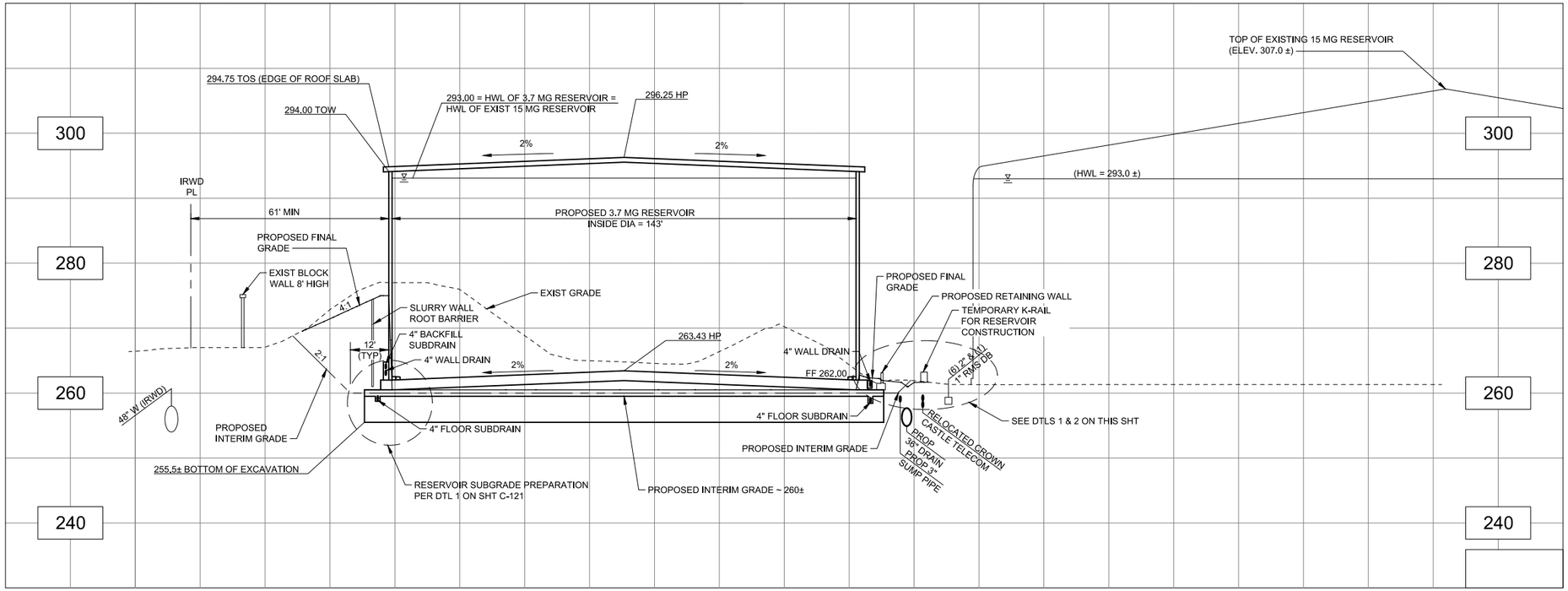
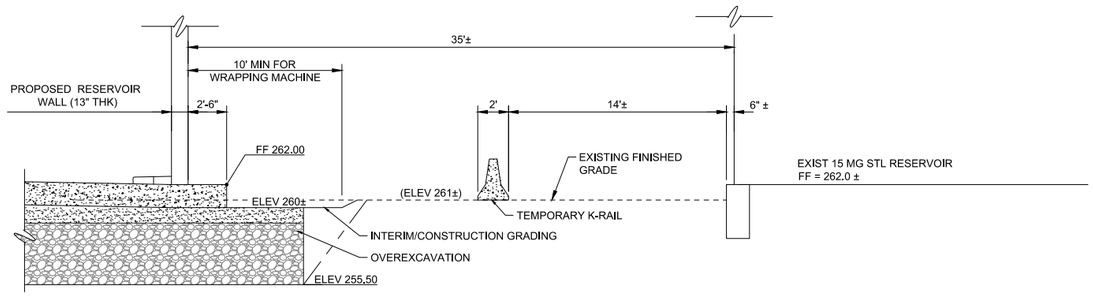
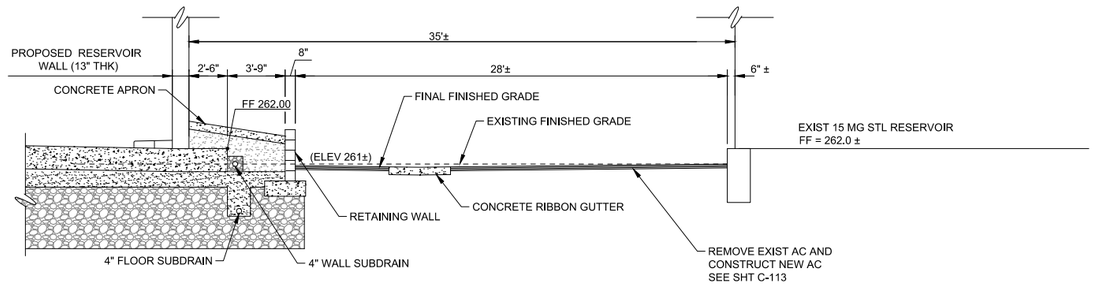


C – SECTION



1 – INTERIM/CONSTRUCTION GRADING SECTION



2 – FINAL GRADING SECTION

Source: Tetra Tech, 2017

Cross Sections

3.7 MG Zone 1 Reservoir Project

Exhibit 3-2b

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- **Valves.** Both 12-inch and 36-inch valves are required for the Project; 12-inch valves and 36-inch valves will be buried and exposed butterfly valves.
- **Roof Hatches.** Hatches located on the tank roof will provide access to the tank for cleaning and various maintenance operations.
- **Reservoir Management System.** The existing reservoir management system located at the project site will remain in place, including all chemical tanks, chemical delivery pumps, CMU building and appurtenances. The existing 15-MG tank currently utilizes two chemical injection points and two mixers, these two mixers will be replaced with one larger unit. The existing second mixer will be dedicated to the new 3.7 MG reservoir. The amount of sodium hypochlorite and ammonia stored on site will remain the same. New conduits and chemical lines will be installed from an existing pull box located within the access road to the new 3.7 MG reservoir.

3.1.3 ADDITIONAL SITE IMPROVEMENTS

As shown in Exhibit 3-1, Site Plan, the following site improvements in addition to the improvements described above would be constructed under the proposed Project. A 6-foot high retaining wall would be located adjacent to the eastern portion of the tank for the tank access stairs and overflow catch basin. This retaining wall will transition to a 4-foot high retaining wall located between the access road and the southern portion of the tank. An additional approximate seven-foot-high retaining wall will be constructed adjacent to the access road, southwest of the proposed reservoir, surrounding the valve control vault. This retaining wall would be located within a landscaped slope, and would be cut into the existing berm along Sand Canyon Avenue. A small slough wall will be constructed south and west of the proposed reservoir, approximately five feet from the tank wall. Stairs would be constructed along the southeastern wall of the proposed reservoir, which would lead to the top of the tank. A concrete ribbon gutter would be installed, which would direct site drainage to the existing catch basin located south of the South County Zone 1–3 booster pump station. Portions of the existing wrought iron fence that are located on the Project site would be removed and relocated, as required, to encompass the proposed reservoir and vaults. A motorized double-swing access gate would also be installed at the site entry along Sand Canyon Avenue.

3.2 CONSTRUCTION ACTIVITIES AND PROJECT COMPONENTS

Construction at the Project site is anticipated to begin in mid-2018 and last approximately 16 months. Grading activities would be conducted in three phases: initial grading, interim grading, and final grading. The initial grading phase would involve grading of the new access road; interim grading would involve preparation of a flat pad for the reservoir and installation of the retaining wall east of the proposed reservoir; and final grading would involve replacement of the berm around the new reservoir and near the corner of Sand Canyon Avenue and Elysian. Construction activities for the proposed Project include site demolition, construction of the access road, utility relocation, grading and shoring, tank construction, vault construction, modifications to the existing chloramine booster pump station, electrical and other site improvements.

3.3 PURPOSE

The objective of the proposed Project is to construct a new 3.7 MG Zone 1 Reservoir at the site of the existing 15-MG Zone 1 Reservoir to serve existing IRWD customers in the Irvine service area. The primary purpose of the Project is to construct an additional permanent reservoir to allow for storage reliability and operational flexibility in the Zone 1 domestic water system. IRWD's Zone 1 is the largest pressure zone in its domestic water system so storage reliability and operational flexibility are essential.

3.4 DISCRETIONARY APPROVALS

This IS/MND is intended to serve as the primary CEQA environmental document for all actions associated with the proposed Project, including all discretionary approvals requested or required to implement the Project. In addition, this is the primary reference document for the formulation and implementation of a mitigation monitoring program for the proposed Project.

The following construction easements are anticipated to be required during Project construction:

- **City of Irvine.** Encroachment permit.
- **Regional Water Quality Control Board.** Construction Activities, Stormwater, and General Permit.

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SECTION 4.0 ENVIRONMENTAL CHECKLIST

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this Project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agriculture Resources	☐ Air Quality
☒ Biological Resources	☒ Cultural Resources	☒ Geology/Soils
☐ Greenhouse Gas Emissions	☐ Hazards & Hazardous Materials	☐ Hydrology/Water Quality
☐ Land Use/Planning	☐ Mineral Resources	☒ Noise
☐ Population/Housing	☐ Public Services	☐ Recreation
☐ Transportation/Traffic	☒ Tribal Cultural Resources	☐ Utilities/Service Systems
☒ Mandatory Findings of Significance		

DETERMINATION: (To be completed by the Lead Agency.)

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the Project have been made by or agreed to be the Project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because al potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature	Date 1/16/18
Jo Ann Corey	Irvine Ranch Water District
Printed Name	For

EVALUATION OF ENVIRONMENTAL IMPACTS:

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analysis," as described in (5) below, may be cross-referenced).

5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063 (c)(3)(D). In this case, a brief discussion should identify the following:

   a) Earlier Analysis Used. Identify and state where they are available for review.

   b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

   c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9) The explanation of each issue should identify:

   a) the significance criteria or threshold, if any, used to evaluate each question; and

   b) the mitigation measure identified, if any, to reduce the impact to less than significance.

This section includes the completed Environmental Checklist Form. The checklist form is used to assist in evaluating the potential environmental impacts of the proposed Project. The Environmental Checklist Form identifies potential Project effects as follows: (1) Potentially Significant Impact; (2) Less Than Significant With Mitigation Incorporated; (3) Less Than Significant Impact; and, (4) No Impact. Substantiation and clarification for each checklist response is provided in Section 5.0, Environmental Evaluation. Included in each discussion are mitigation measures, as appropriate, that are recommended for implementation as part of the proposed Project.

	ENVIRONMENTAL ISSUES (See attachments for information sources)	**Potentially Significant Impact**	**Less Than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
I.	**AESTHETICS.** Would the project:				
	a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
	b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
	c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
	d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐
II.	**AGRICULTURE AND FOREST RESOURCES.** 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 Dept. 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 provided in Forest Protocols adopted by the California Air Resources Board. 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 non-agricultural use?	☐	☐	☐	☒
	b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
	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])?	☐	☐	☐	☒
	d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
	e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to nonagricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

ENVIRONMENTAL ISSUES (See attachments for information sources)	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
III. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project**:**				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
c) 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 (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐
IV. BIOLOGICAL RESOURCES. 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 Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
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 Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinances?	☐	☒	☐	☐
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?	☐	☐	☐	☒

ENVIRONMENTAL ISSUES (See attachments for information sources)	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
V. CULTURAL RESOURCES. Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐
VI. GEOLOGY AND SOILS. Would the project:				
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 Publication 42.	☐	☒	☐	☐
ii) Strong seismic ground shaking?	☐	☒	☐	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
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?	☐	☒	☐	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☒	☐	☐
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?	☐	☐	☐	☒
VII. GREENHOUSE GAS EMISSIONS. Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☐	☒
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☒

ENVIRONMENTAL ISSUES (See attachments for information sources)	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
VIII. HAZARDS AND HAZARDOUS MATERIALS. Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
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?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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 for people residing or working in the project area?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒
IX. HYDROLOGY AND WATER QUALITY. Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g. the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off- site?	☐	☐	☒	☐

ENVIRONMENTAL ISSUES (See attachments for information sources)	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner in which would result in flooding on- or off-site?	☐	☐	☒	☐
e) 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?	☐	☐	☒	☐
f) Otherwise substantially degrade water quality?	☐	☐	☒	☐
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒
X. LAND USE AND PLANNING. Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒
XI. MINERAL RESOURCES. 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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
XII. NOISE. Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐

ENVIRONMENTAL ISSUES (See attachments for information sources)	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
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 expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
XIII. POPULATION AND HOUSING. Would the project:				
a) Induce substantial 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)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
XIV. PUBLIC SERVICES.				
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?	☐	☐	☐	☒
Police Protection?	☐	☐	☐	☒
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other Public Facilities?	☐	☐	☐	☒
XV. RECREATION.				
a) Would the project 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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

ENVIRONMENTAL ISSUES (See attachments for information sources)	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI. TRANSPORTATION/TRAFFIC. Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system. Including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☒	☐
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☒
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?	☐	☐	☐	☒
e) Result in inadequate emergency access?	☐	☐	☒	☐
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decreased the performance or safety of such facilities?	☐	☐	☐	☒
XVII. TRIBAL CULTURAL RESOURCES.				
a) Would the project 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	☐	☒	☐	☐
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.	☐	☒	☐	☐

ENVIRONMENTAL ISSUES (See attachments for information sources)	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XVIII. UTILITIES AND SERVICE SYSTEMS. Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects – and/or would the project include a new or retrofitted storm water treatment control Best Management Practice (BMP), (e.g. water quality treatment basin, constructed treatment wetlands), the operation of which could result in significant environmental effects (e.g. increased vectors and odors)?	☐	☐	☒	☐
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒
e) 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?	☐	☐	☐	☒
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☒
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒
XIX. MANDATORY FINDINGS OF SIGNIFICANCE.				
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 rare or endangered plants or animals, or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects 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 probable future projects.)	☐	☒	☐	☐
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

Fish and Wildlife Determination

(Per Section 21089(b) of the Public Resources Code, all project applicants and public agencies subject to the California Environmental Quality Act shall pay a Fish and Game filing fee for each proposed project that would adversely affect wildlife resources.)*

Based on the responses contained in this Environmental Checklist, there is no evidence that the project has a potential for a change that would adversely affect wildlife resources or the habitat upon which the wildlife depends. Has the presumption of adverse effect set forth in 14 CCR 753.5 (d) been rebutted by substantial evidence?

__ Yes (Certificate of Fee Exemption and County Administrative fee required)

_X_ No (Pay fee)

***Note:** Fish and Game Code Section 711.4(c)(2)(A) states that projects that are Categorically Exempt from CEQA are also exempt from filing fee.

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SECTION 5.0 DISCUSSION OF ENVIRONMENTAL CHECKLIST QUESTIONS

I. AESTHETICS

IMPACT ANALYSIS

Would the Project:

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

No Impact. Although the *City of Irvine General Plan's* Land Use Element includes policies directed at the preservation of aesthetic character and value of natural landforms in the City, the Project site does not fall within a City-designated major view, which would be considered a scenic vista. As shown on Figure A-4 of the *City of Irvine General Plan's* Land Use Element, there are two major views in the vicinity of the Project site: one looking southwest along Sand Canyon Avenue and one looking northeast along Sand Canyon Avenue (City of Irvine 2015). The first major view does not include the Project site, as the vantage point is located on Sand Canyon Avenue southwest of the intersection of Trabuco Road and Sand Canyon Avenue, approximately 0.2 mile from the Project site, and looks away from the Project site toward the southwest. The vantage point for the second major view is located at the intersection of Portola Parkway and Sand Canyon Avenue and looks northeast, away from the Project site. As discussed, since the Project site is not within a major view, no impacts would occur and no mitigation is required.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

Less Than Significant Impact. According to the California Department of Transportation's (Caltrans') California Scenic Highway Mapping System, there are no officially designated or eligible State scenic highways within or in proximity to the City of Irvine (Caltrans 2011). As shown on Figure A-4 of the *City of Irvine General Plan's* Land Use Element, there are no scenic highways which are rural or have natural character; however, the portion of Sand Canyon Avenue adjacent to the Project site is a designated scenic highway of urban character (City of Irvine 2015). As discussed in Section 3.0, Project Description, the proposed Project would construct a new 3.7-MG reservoir on the same site as an existing 15-MG reservoir. As shown on Exhibit 3-1, Site Plan, the proposed reservoir would be located approximately 25 feet from the northwest property line and approximately 19 feet from the northeast property line. Additionally, the reservoir would be located approximately 43 feet from Sand Canyon Avenue and approximately 49 feet from Elysian. As shown on Exhibits 3-2a and 3-2b, Cross Sections, the maximum height of the reservoir would be approximately 296 feet above mean sea level (msl), which is lower than the maximum height of the existing reservoir at 307 feet above msl. To the extent feasible, the existing earthen berms and vegetation located in the northern corner of the Project site and shown in Exhibit 5-1, Site Photographs, would be preserved in place. The existing eight-foot block wall located at the northern corner of the Project site would be maintained in place. Additionally, the hill along Elysian would be maintained at its current height and would slope up to partially bury the proposed reservoir. Vegetation on both the berm and the hill would be maintained to the extent feasible; in areas where trees would be removed for excavation and construction, new trees would be planted. Although the newly planted trees would take several years to mature and reach full height, the species types would be selected based on a fast growth rate, drought tolerance, and ability to provide visual shielding of the proposed reservoir through both height and canopy.

Photo 1

Photo 2

Aerial Source: Esri NAIP 2016

Site Photographs

Exhibit 5-1

3.7 MG Zone 1 Reservoir Project

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Farmland Resources

Exhibit 5-2

3.7 MG Zone 1 Reservoir Project

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Feet

PSOMAS

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The proposed reservoir would be visible to passing motorists along Sand Canyon Avenue and residents in the immediate area; however, the Project has been designed to reduce the visual impact of the concrete tank by providing additional landscaping and painting the exterior walls to match the nearby residential color theme. Therefore, the Project would not substantially damage scenic resources visible from Sand Canyon Avenue, nor would it substantially degrade the visual character of the site and its surroundings. A less than significant impact would occur and no mitigation is required.

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

Less Than Significant Impact. Under existing conditions, the proposed Project site has a minimal amount of night-lighting associated with the Zone 1 reservoir. The proposed Project site is subject to security lighting associated with the existing Zone 1 reservoir, booster pump stations, and telecommunications facility. These existing lighting elements would remain at the Project site, and minimal, additional security lighting would be installed at the proposed reservoir. This new security lighting would be focused onto the Project site, within the Project boundaries, and would not be visible off site. Additionally, the Project area is subject to night-lighting associated with street lamps along Sand Canyon Avenue, Elysian, and other local streets, which would not be changed or removed under the proposed Project. Project impacts pertaining to light or glare would be less than significant and no mitigation is required.

II. AGRICULTURE AND FOREST RESOURCES

IMPACT ANALYSIS

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 non-agricultural use?

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

No Impact. Data from the State of California Department of Conservation, Farmland Mapping and Monitoring Program indicate that the proposed Project site contains no land designated as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance (DOC 2016). As shown on Exhibit 5-2, Farmland Resources, this area and the areas immediately adjacent to the Project site are designated as Urban and Built-Up Land. Figure A-3 of the *City of Irvine General Plan's* Land Use Element shows that the Project site and immediately adjacent areas are zoned for Medium High Density Residential. The Project site is not used for agricultural purposes, nor is it under a Williamson Act contract No agricultural-related impacts would result from Project implementation; therefore, no impacts would occur and no mitigation 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))?

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

No Impact. According to Section 12220(g) of the *California Public Resources Code*, "forest land is land that can support 10 percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits". The proposed Project site does not meet the definition of forest land; therefore, no impacts would occur and no mitigation 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 Impact. As discussed previously, the proposed Project site is not designated as farmland of significance and is not being used for agricultural production. There are no areas adjacent to the Project site that are currently used for agricultural purposes. Further, there are no forest lands in the vicinity of the Project site; therefore, the Project would not convert forest land to non-forest use. No impacts would occur and no mitigation is required.

III. AIR QUALITY

IMPACT ANALYSIS

Would the Project:

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

No Impact. Air quality in Orange County is regulated by the South Coast Air Quality Management District (SCAQMD), which is the agency principally responsible for comprehensive air pollution control in the South Coast Air Basin (SoCAB). The SCAQMD develops rules and regulations; establishes permitting requirements for stationary sources; inspects emissions sources; and enforces such measures through educational programs or fines, when necessary. The SCAQMD is directly responsible for reducing emissions from stationary (area and point), mobile, and indirect sources. It has responded to this requirement by preparing a sequence of Air Quality Management Plans (AQMPs).

On March 3, 2017, the SCAQMD adopted the 2016 AQMP, which is a regional and multi-agency effort (SCAQMD, CARB, Southern California Association of Governments [SCAG], and USEPA). The 2016 AQMP incorporates the latest scientific and technical information and planning assumptions, including the 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS); updated emission inventory methodologies for various source categories; and SCAG's latest growth forecasts. The main purpose of an AQMP is to bring an area into compliance with the requirements of federal and State air quality standards.

The two principal criteria for conformance to an AQMP are:

1. Whether the project would result in an increase in the frequency or severity of existing air quality violations; cause or contribute to new violations; or delay timely attainment of air quality standards and
2. Whether the project would exceed the assumptions in the AQMP.

With respect to the first criterion, the analyses in Responses to Questions III.b and III.c below demonstrate that the Project would not (1) generate short-term or long-term emissions of volatile

organic compounds (VOCs), oxides of nitrogen [NOx, which are O_3 (ozone) precursors], or fine particulate matter with a diameter of 2.5 microns or less (PM2.5) that could potentially cause an increase in the frequency or severity of existing air quality violations; (2) cause or contribute to new violations; or (3) delay timely attainment of air quality standards.

With respect to the second criterion, the Project would not increase or modify SCAG's population, housing, or employment projections. The Project would accommodate the projected growth in population accounted for in the 2016 AQMP emissions forecast and would provide additional storage capacity to serve the demands in the region. Therefore, the Project would be consistent with the region's AQMP. No impacts would occur and no mitigation is required.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Less Than Significant Impact. The SCAQMD has developed significance thresholds to determine whether State and federal air quality standards would be violated or whether a substantial contribution to a violation would occur. These significance thresholds have been developed for the construction and operations phases of the Project and examine the potential impacts of the Project's emissions on both a regional and local context.

Existing Conditions

Project site is located within the SoCAB and is under the jurisdiction of the SCAQMD. Both the State of California and the USEPA 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 O_3, carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), respirable particulate matter with a diameter of 10 microns or less (PM10), PM2.5, and lead are shown in Table 1.

TABLE 1
CALIFORNIA AND FEDERAL AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	California Standards	Federal Standards	
			Primary[a]	Secondary[b]
O_3	1 Hour	0.09 ppm (180 µg/m^3)	–	–
	8 Hour	0.070 ppm (137 µg/m^3)	0.075 ppm (147 µg/m^3)	Same as Primary
PM10	24 Hour	50 µg/m^3	150 µg/m^3	Same as Primary
	AAM	20 µg/m^3	–	Same as Primary
PM2.5	24 Hour	–	35 µg/m^3	Same as Primary
	AAM	12 µg/m^3	12.0 µg/m^3	15.0 µg/m^3
CO	1 Hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	–
	8 Hour	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)	–
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)	–	–
NO_2	AAM	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)	Same as Primary
	1 Hour	0.18 ppm (339 µg/m^3)	0.100 ppm (188 µg/m^3)	–
SO_2	24 Hour	0.04 ppm (105 µg/m^3)	–	–
	3 Hour	–	–	0.5 ppm (1,300 µg/m^3)
	1 Hour	0.25 ppm (655 µg/m^3)	0.075 ppm (196 µg/m^3)	–
Lead	30-day Avg.	1.5 µg/m^3	–	–
	Calendar Quarter	–	1.5 µg/m^3	Same as Primary
	Rolling 3-month Avg.	–	0.15 µg/m^3	
Visibility Reducing Particles	8 hour	Extinction coefficient of 0.23 per km – visibility ≥ 10 miles (0.07 per km – ≥30 miles for Lake Tahoe)	**No Federal Standards**	
Sulfates	24 Hour	25 µg/m^3		
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)		
Vinyl Chloride	24 Hour	0.01 ppm (26 µg/m^3)		

O_3: ozone; ppm: parts per million; µg/m^3: micrograms per cubic meter; PM10: respirable particulate matter; AAM: Annual Arithmetic Mean; –: No Standard; PM2.5: fine particulate matter; CO: carbon monoxide; mg/m^3: milligrams per cubic meter; NO_2: nitrogen dioxide; SO_2: sulfur dioxide; km: kilometer.

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

[b] *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).

Source: CARB 2013

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.

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 2 summarizes the attainment status of the SoCAB for the criteria pollutants.

TABLE 2
CRITERIA POLLUTANT DESIGNATIONS
IN THE SOUTH COAST AIR BASIN

Pollutant	State	Federal
O_3 (1-hour)	Nonattainment	Extreme Nonattainment
O_3 (8-hour)		Extreme Nonattainment
PM10	Nonattainment	Attainment/Maintenance
PM2.5	Nonattainment	Moderate Nonattainment
CO	Attainment	Attainment/Maintenance
NO_2	Attainment	Attainment/Maintenance
SO_2	Attainment	Attainment
Lead	Attainment	Nonattainment/Attainment[a]
Visibility-Reducing Particles	Unclassified[b]	No Standards
Sulfates	Attainment	
Hydrogen Sulfide	Unclassified	

O_3: 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_2: nitrogen dioxide; SO_2: sulfur dioxide; CARB: California Air Resources Board; SoCAB: South Coast Air Basin

[a] Los Angeles County is classified as nonattainment for lead; the remainder of the SoCAB is in attainment of State and federal standards.

[b] "Unclassified" designation indicates that the air quality data for the area are incomplete and do not support a designation of attainment or nonattainment.

Source: CARB 2016, USEPA 2017

O_3 is formed by photochemical reactions between NOx and VOCs rather than being directly emitted. O_3 is the principal component of smog. Elevated O_3 concentrations cause eye and respiratory infection; reduce resistance to lung infection; and may aggravate pulmonary conditions in persons with lung disease. O_3 is also damaging to vegetation and untreated rubber. The entire SoCAB is designated as a nonattainment area for the State one-hour O_3 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_2 (a "whiskey brown"-colored gas) and nitric oxide (NO) (a colorless, odorless gas) are formed from combustion devices. These compounds are referred to as NOx. NOx is a primary component of the photochemical smog reaction. The severity of health effects of NOx depend 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_2 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_2 irritates the respiratory tract and can result in lung disease and breathing problems for asthmatics. Atmospheric SO_2 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.

Air quality data for the Project site is represented by the Mission Viejo monitoring station located at 26081 Via Pera, Mission Viejo. The monitoring station is located approximately 6 miles southeast of the Project site. Pollutants measured at the Mission Viejo Monitoring Station include O_3, PM10, and PM2.5. The monitoring data presented in Table 3, Air Quality Levels Measured at the Mission Viejo Monitoring Station, were obtained from CARB (CARB 2017). Federal and State air quality standards are presented with the frequency that may be exceeded.

TABLE 3
AIR QUALITY LEVELS MEASURED AT THE MISSION VIEJO MONITORING STATION

Pollutant	California Standard	National Standard	Year	Max. Level[a]	Days State Standard Exceeded	Days National Standard Exceeded
O_3 (1 hour)	0.09 ppm	None	2014	0.155	4	0
			2015	0.099	2	0
			2016	0.122	5	0
O_3 (8 hour)	0.070 ppm	0.070 ppm	2014	0.088	10	10
			2015	0.088	8	8
			2016	0.094	13	13
PM10 (24 hour)	50 µg/m^3	150 µg/m^3	2014	40.0	0	0
			2015	48.0	--	--
			2016	--	--	0
PM2.5 (24 Hour)	None	35 µg/m^3	2014	25.5	N/A	--
			2015	31.5	N/A	0
			2016	24.7	N/A	0

–: Data Not Reported or insufficient data available to determine the value; O_3: ozone; ppm: parts per million; PM10: respirable particulate matter with a diameter of 10 microns or less; µg/m^3: micrograms per cubic meter; AAM: Annual Arithmetic Mean; NO_2: nitrogen dioxide; CO: carbon monoxide; PM2.5: fine particulate matter with a diameter of 2.5 microns or less; SO_2: sulfur dioxide. N/A indicates that there is no applicable standard.

[a] California maximum levels were used.

Source: CARB 2017.

The Mission Viejo monitoring data shows that O_3 is the air pollutant of primary concern in the Project area. At the monitoring station, the State 1-hour O_3 standard was exceeded 4 days in 2014, 2 days in 2015, and 5 days in 2016. The State and federal 8-hour O_3 standards were exceeded 10 days in 2014, 8 days in 2015, and 13 days in 2016. O_3 is a secondary pollutant and is not directly emitted from a source; it occurs as the result of photochemical reactions from ozone precursors, which include VOCs and NO_2 and sunlight.

The sensitive receptors near the Project site are single-family residences and multi-family residences located on all sides of the Project site. The nearest sensitive receptor is 95 feet from the Project site.

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 presents the current significance thresholds.

TABLE 4
SCAQMD AIR QUALITY SIGNIFICANCE THRESHOLDS

Mass Daily Thresholds[a]		
Pollutant	**Construction**	**Operation**
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
TACs, Odor, and GHG Thresholds		
TACs (including carcinogens and non-carcinogens)	Maximum Incremental Cancer Risk ≥ 10 in 1 million Cancer Burden > 0.5 excess cancer cases (in areas ≥ 1 in 1 million) Chronic & Acute Hazard Index ≥ 1.0 (project increment)	
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402	
GHG	10,000 MT/yr CO_2e for industrial facilities	
Ambient Air Quality Standards for Criteria Pollutants[b, c]		
NO_2 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 µg/m^3 (construction)[c] & 2.5 µg/m^3 (operation) 1.0 µg/m^3	
PM2.5 24-hour average	 10.4 µg/m^3 (construction)[c] & 2.5 µg/m^3 (operation)	
SO_2 1-hour average 24-hour average	 0.25 ppm (State) & 0.075 ppm (federal – 99th percentile) 0.04 ppm (State)	
Sulfate 24-hour average	 25 µg/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 µg/m^3 (State) 0.15 µg/m^3 (federal)	

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_2e: metric tons per year of carbon dioxide equivalents, NO_2: nitrogen dioxide, ppm: parts per million, µg/m^3: micrograms per cubic meter; SCAQMD: South Coast Air Quality Management District

[a] Source: SCAQMD CEQA Handbook (SCAQMD 1993)
[b] Ambient air quality thresholds for criteria pollutants based on SCAQMD Rule 1303, Table A-2 unless otherwise stated
[c] Ambient air quality threshold is based on SCAQMD Rule 403

Source: SCAQMD 2015

Construction Emissions – Regional

Criteria pollutant emissions would occur during construction from operation of construction equipment; grading and earth-moving activities, which would generate fugitive dust; export of excavated soil; import of construction materials; and operation of vehicles driven to and from the site by construction workers. Emissions would vary from day to day, depending on the level of activity; the specific type of construction activity occurring; and, for fugitive dust, prevailing weather conditions.

A construction-period mass emissions inventory was compiled based on an estimate of construction equipment as well as scheduling and Project phasing assumptions. More specifically, the mass emissions analysis takes into account the following:

- Combustion emissions from operating on-site stationary and mobile construction equipment;
- Fugitive dust emissions from demolition, site preparation, and grading phases; and
- Mobile-source combustion emissions and fugitive dust from worker commute and truck travel.

Project emissions were estimated using the California Emissions Estimator Model (CalEEMod) version 2016.3.1 computer program (CAPCOA 2016). CalEEMod is designed to model construction and operational emissions for land development projects and allows for the input of project- and County-specific information. CalEEMod has separate databases for specific counties and air districts, and the Orange County database was used for the proposed Project.

The mass emissions thresholds (see Table 3) are based on the rate of emissions (i.e., pounds of pollutants emitted per day). Therefore, the quantity, duration, and the intensity of construction activity are important in ensuring the analysis of worst case (i.e., maximum daily emissions) scenarios. The Project activities (e.g., grading, building) are identified by start date and duration. Each activity has associated off-road equipment (e.g., dozers, backhoes, cranes) and on-road vehicles (e.g., haul trucks, concrete trucks, worker commute vehicles).

For the purposes of estimating emissions associated with construction activities, a 16-month timeframe was applied to the analysis. Construction hauling truck trips were estimated based on the phase length and amount of debris or soil to export. Project-specific inputs can be found in the CalEEMod output data, located in Appendix B of this IS/MND.

Dust control by watering was assumed, consistent with the requirements of SCAQMD Rule 403 as noted in **AQ-1**.

Maximum daily emissions for the peak work day are shown in Table 5, Estimated Maximum Daily Construction Emissions. If construction is delayed or occurs over a longer time period, emissions could be reduced because of (1) a more modern and cleaner-burning construction equipment fleet mix and/or (2) a less intensive buildout schedule (i.e., fewer daily emissions occurring over a longer time interval). As shown, all criteria pollutant emissions would be less than their respective thresholds. Thus, impacts would be less than significant.

TABLE 5
ESTIMATED MAXIMUM DAILY CONSTRUCTION EMISSIONS
(LBS/DAY)

	VOC	NOx	CO	SOx	PM10	PM2.5
Maximum daily emissions in 2018	5	46	32	<1	6	4
Maximum daily emissions in 2019	1	13	11	<1	1	1
SCAQMD Daily Thresholds *(Table 3)*	***75***	***100***	***550***	***150***	***150***	***55***
Exceeds SCAQMD Thresholds?	**No**	**No**	**No**	**No**	**No**	**No**

lbs/day: pounds per day; VOC: volatile organic compound(s); NOx: nitrogen oxides; CO: carbon monoxide; SOx: sulfur oxides; PM10: inhalable particulate matter with a diameter of 10 microns or less; PM2.5: fine particulate matter with a diameter of 2.5 microns or less; SCAQMD: South Coast Air Quality Management District.

Source: CalEEMod data in Appendix B.

Construction Emissions – Local/Ambient Air Quality

The localized effects from the on-site portion of daily emissions were evaluated at receptor locations potentially impacted by the Project according to the SCAQMD's localized significance threshold (LST) method, which utilizes on-site emissions rate look up tables and Project-specific modeling, where appropriate. LSTs are applicable to the following criteria pollutants: NO_2, CO, PM10, and PM2.5. LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or State ambient air quality standard, and are developed based on the ambient concentrations of that pollutant for each source receptor area and distance to the nearest receptor. For the LST CO and NO_2 exposure analysis, receptors who could be exposed for one hour or more are considered. For PM10 and PM2.5 exposure analysis, receptors who could be exposed for 24 hours are considered. The mass rate look-up tables were developed for each source receptor area and can be used to determine whether or not a project may generate significant adverse localized air quality impacts. The SCAQMD provides LST mass rate look-up tables for projects that are less than or equal to five acres, which means this is the appropriate method for the Project. When quantifying mass emissions for localized analysis, only emissions that occur on site are considered. Consistent with the SCAQMD's LST method guidelines, emissions related to off-site delivery/haul truck activity and employee trips are not considered in the evaluation of localized impacts.

As shown in Table 6, localized emissions for all criteria pollutants would be less than their respective SCAQMD LSTs for all pollutants. Thus, impacts would be less than significant and no mitigation is required.

TABLE 6
LOCALIZED CONSTRUCTION POLLUTANT EMISSIONS
(LBS/DAY)

	NOx	CO	PM10	PM2.5
Maximum Daily Emissions	25.1	14.0	3.9	2.6
SCAQMD LSTs*	92.0	647.0	4.0	3.0
Exceeds SCAQMD Thresholds?	**No**	**No**	**No**	**No**

lbs/day: pounds per day; NOx: nitrogen oxides; CO: carbon monoxide; 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; SCAQMD: South Coast Air Quality Management District; LST: Localized Significance Threshold.

* Thresholds for Source Receptor Area 20, Central Orange County Coastal, 1-acre site, 25-meter receptor distance

Source: SCAQMD 2009.

Long-Term Operational Emissions

IRWD staff would visit the tank for routine inspection and maintenance activities similar to current operations on a daily basis. This routine inspection would occur concurrent with the current inspection schedule for the existing 15 MG tank and no additional trips would occur. Therefore, new pollutant emissions would be negligible; the impact would be less than significant and no mitigation is required.

c) 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 (Including releasing emissions which exceed quantitative thresholds for ozone precursors)?

Less than Significant Impact. The Orange County portion of the SoCAB is a nonattainment area for O_3, PM10, and PM2.5. The proposed Project would generate these pollutants during construction, and short-term cumulative impacts related to air quality could occur if Project construction and nearby construction activities were to occur simultaneously. In particular, with respect to local impacts, cumulative construction particulate (i.e., fugitive dust) impacts are considered when projects are located within a few hundred yards of each other. As described in the response to Question III.b, construction emissions would be below the SCAQMD regional and localized significance thresholds. Therefore, short-term construction emissions of nonattainment pollutants would not be cumulatively considerable, and Project impacts would be less than significant.

As previously discussed in the Response to Question III.b, long-term emissions would be negligible and therefore not cumulatively considerable; the long-term cumulative impact would be less than significant. No mitigation is required.

d) Expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact. Exposure of sensitive receptors is addressed for the following situations: CO hotspots; criteria pollutants from on-site construction; and TACs from on-site construction.

Carbon Monoxide Hotspot

A CO hotspot is an area of localized CO pollution caused by severe vehicle congestion on major roadways, typically near intersections. If a project increases average delay at signalized intersections operating at level of service (LOS) E or F or causes an intersection that would operate at LOS D or better without the project to operate at LOS E or F with the project, a quantitative screening is required. As discussed previously in the Response to Question III.b, operational traffic would be negligible. Thus, it may be inferred that the Project would neither cause new severe congestion nor significantly worsen existing congestion. There would be no potential for a CO hotspot or exposure of sensitive receptors to substantial, Project-generated local CO emissions. The impact would be less than significant and no mitigation is required.

Criteria Pollutants from On-Site Construction

Exposure of persons to NO_2, CO, PM10, and PM2.5 emissions is discussed in the LST analysis under Response III.b above. As discussed, there would be a less than significant impact and no mitigation is required.

Toxic Air Contaminant (Diesel PM) Emissions from On-Site Construction

Construction activities would result in short-term, Project-generated emissions of diesel PM from the exhaust of off-road, heavy-duty diesel equipment used for site preparation (e.g., demolition, excavation, and grading); paving; and building construction. CARB identified diesel PM as a TAC in 1998. The dose to which receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the duration of exposure to the substance. Thus, the risks estimated for a maximally exposed individual (MEI) are higher if a fixed exposure occurs over a longer time period. According to the Office of Environmental Health Hazard Assessment, health risk assessments—which determine the exposure of sensitive receptors to TAC emissions—should be based on a 30- to 70-year exposure period; however, such assessments should be limited to the period/duration of activities associated with a project.

For the Project, there would be few pieces of off-road, heavy-duty diesel equipment in operation, and the construction period would be short when compared to a 30- to 70-year exposure period. When considering these facts combined with the highly dispersive properties of diesel PM and additional reductions in particulate emissions from newer construction equipment, as required by USEPA and CARB regulations, it can be concluded that TAC emissions during construction of the Project would not expose sensitive receptors to substantial emissions of TACs. There would be a less than significant impact, and no mitigation is required.

e) Create objectionable odors affecting a substantial number of people?

Less than Significant Impact. Objectionable odors are generally associated with agricultural activities; landfills and transfer stations; the generation or treatment of sewage; the use or generation of chemicals; food processing; or other activities that generate unpleasant odors (SCAQMD 1993). The proposed Project would involve construction and operation of a water storage tank and associated access road and valve vault. None of the proposed Project elements would generate objectionable odors. There would be no impact and no mitigation is required.

During construction, the proposed Project would operate equipment that may generate odors resulting from on-site construction equipment's diesel exhaust emissions or paving operations. However, these odors would be temporary and would dissipate rapidly from the source with an

increase in distance. Therefore, construction odors would be considered less than significant and no mitigation would be required.

MITIGATION PROGRAM

AQ-1 During construction of the Project, Irvine Ranch Water District (IRWD) and its contractors shall be required to comply with regional rules, which would assist in reducing short-term air pollutant emissions. SCAQMD Rule 402 requires that air pollutant emissions not be a nuisance off site. SCAQMD Rule 403 requires that fugitive dust be controlled with the best available control measures so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source.

IV. BIOLOGICAL RESOURCES

This section is based on a field visit conducted by Psomas Senior Biologist Amber Heredia on June 12, 2017. Prior to the field visit, the California Native Plant Society's (CNPS') Inventory of Rare and Endangered Plants (CNPS 2017) and the California Department of Fish and Wildlife's (CDFW's) California Natural Diversity Database (CNDDB) (CDFW 2017) were reviewed to identify special status plants, wildlife, and habitats known to occur in the vicinity of the Project site. Database searches included the U.S. Geological Survey's (USGS') El Toro 7.5-minute quadrangle map.

The Project site is comprised entirely of developed areas landscaped with ornamental tree species. Tree species present include gum trees (*Eucalyptus* sp.), pine (*Pinus* sp.), and bottlebrush (*Melaleuca* sp.). Ornamental areas either had no understory (i.e., bare ground with pine needle litter) or were comprised of an ornamental ground cover of wattle (*Acacia* sp.). There are no native habitats on or adjacent to the Project site.

IMPACT ANALYSIS

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 Wildlife or U.S. Fish and Wildlife Service?

No Impact. The Project site is comprised entirely of developed areas with only ornamental vegetation. No suitable habitat for special status plant or wildlife species is present. Therefore, the Project would not impact special status plant or wildlife species.

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 Wildlife or US Fish and Wildlife Services?

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 Impact. The Project site is comprised entirely of developed areas with only ornamental vegetation. No riparian habitat, sensitive natural communities, or jurisdictional resources are

present. Therefore, the Project would not impact riparian habitats, sensitive natural communities, or resources protected by Section 404 of the Clean Water Act.

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 Impact. The Project site is currently developed and is surrounded by other developed areas. The Project site is not within or adjacent to a wildlife corridor. Therefore, the Project would not impact wildlife movement.

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

Less Than Significant With Mitigation. Raptor species (i.e., birds of prey) have potential to nest in the ornamental trees surrounding the tank on the Project site. If construction occurs during the raptor nesting season (i.e., February 1 to June 30), the loss of an active nest of any raptor species, including common raptor species, would be considered a violation of Sections 3503, 3503.5, and 3513 of the *California Fish and Game Code* and would be a significant impact. Implementation of **Mitigation Measure BIO-**1 would be required to reduce this impact to a less than significant level.

Many common bird species have potential to nest in the ornamental trees, vegetated understory, or on existing structures on the Project site. If construction occurs during the bird nesting season (i.e., February 15 to August 31), the loss of an active bird nest would be considered a violation of the Migratory Bird Treaty Act (MBTA, see *Code of Federal Regulations,* Title 50, §10.13) and *California Fish and Game Code* (§3503, §3511, and §3513). These regulations protect the taking of migratory birds and their nests and eggs. Any direct impact on an active bird nest would be considered a violation of the MBTA and *California Fish and Game Code* and would be considered significant. Implementation of **BIO-1** would be required to reduce this impact to a less than significant level.

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 Impact. The Project is consistent with provisions in the Central/Coastal Natural Communities Conservation Plan (NCCP)/Habitat Conservation Plan (HCP). The Project site is located within a development area.

MITIGATION PROGRAM

Mitigation Measure

BIO-1 To the extent practicable, Irvine Ranch Water District (IRWD) will plan vegetation removal efforts to occur between September 1 and January 31, which is outside the breeding season for nesting birds and raptors. If tree trimming or vegetation removal occurs during the breeding season for nesting raptors (i.e., February 1 to June 30) or nesting birds (i.e., between February 15 and August 31), IRWD will retain a qualified Biologist to conduct a pre-construction nesting bird survey within seven to ten days prior to ground disturbances to ensure that no active bird or raptor nests would be impacted. If an active nest is observed within the proposed work area, IRWD, in consultation with a qualified Biologist, will determine the appropriate construction limitations, which may include but are not limited to

erection of sound barriers, full-time monitoring by a qualified biologist or establishment of no-construction barriers. If necessary, limits of construction to avoid an active nest shall be established in the field with flagging, fencing or other appropriate barriers. Any nest found during survey efforts will be mapped on construction plans. If no active nests are found, no further mitigation will be required.

V. CULTURAL RESOURCES

Psomas reviewed recent cultural and paleontological records searches prepared for the City of Irvine's Planning Area (PA) 12 and PA 40 General Plan Amendment and Zone Change project, which is located nearby and these records included as Appendix C to this document. This project is located in the City of Irvine and is approximately 0.2 mile southwest of the proposed Project site; therefore, because a ½-mile radius was used for the records searches, the proposed Project site and adjacent areas were captured in both the cultural resources and paleontological resources records searches.

The cultural resources records search was conducted by Psomas at the South Central Coastal Information Center (SCCIC) at California State University, Fullerton on January 3, 2017. The SCCIC is the designated branch of the California Historical Resources Information System (CHRIS) for the Project area and houses records concerning archaeological and historic resources in Los Angeles, Ventura, San Bernardino, and Orange Counties. The review consisted of an examination of the USGS' Tustin, California 7.5-minute quadrangles to determine if any cultural resources studies had been conducted in the area and provided data on recorded archaeological and built environment resources. Sources consulted at the SCCIC included archaeological records, Archaeological Determinations of Eligibility (DOE), historic maps, and the Historic Property Data File (HPDF) maintained by the California Office of Historic Preservation (OHP). The HPDF contains listings for the California Register of Historic Resources (CRHR) and/or the National Register of Historic Places (NRHP), California Historical Landmarks, and California Points of Historical Interest.

The paleontological resources records search and literature review was conducted by Dr. Samuel A. McLeod at the Natural History Museum of Los Angeles (NHMLC) on December 20, 2016.

A pedestrian survey of the Project site was conducted by Psomas on June 23, 2017.

IMPACT ANALYSIS

Would the Project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

No Impact. Based on the pedestrian survey, the Project site consists of facilities associated with the existing reservoir, including a paved access road and fencing. The existing Zone 1 reservoir was constructed in 1982 and other on-site facilities, including the booster pump station and telecommunication facility, were constructed subsequent to 1982. The Project site does not contain any historical resources, as defined in Section 15064.5 of the State CEQA Guidelines. No impact would occur and no mitigation is required.

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

Less Than Significant With Mitigation. Based on the pedestrian survey, the Project site consists of facilities associated with the existing reservoir, including a paved access road and fencing; no cultural resources were noted during the survey.

According to the records search results, three cultural resource studies have been conducted within a ¼-mile radius of the Project site. One of the studies was for the telecommunications facility adjacent to the Project site and did not identify any cultural resources. The remaining two studies resulted in the identification of cultural resources within ¼-mile of the Project site. One of the resources is a eucalyptus windbreak of historic age located in the median of Sand Canyon Avenue, approximately 75 feet from the Project site at its nearest point; this resource was determined ineligible for listing in the NRHP or CRHR. The additional resource is the Bee Canyon Wash Canal, which is of historic age, located approximately 0.2 mile east of the Project site on the eastern side of State Route (SR) 133; this resource was determined ineligible for listing in the NRHP or CRHR. No cultural resources have been identified on the Project site.

Previous grading activities have occurred within the boundaries of the proposed Project site associated with construction of the reservoir and the surrounding residential development, but not to a depth that would destroy all potential subsurface archaeological resources. Native sediments exist below five feet on the Project site; therefore, excavations exceeding five feet in depth may encounter previously undiscovered archaeological resources.

Based on this analysis, there is a potential for subsurface cultural deposits to be discovered during grading activities, which would be considered a potentially significant impact. Implementation of **CULT-1**, which requires retention of a qualified archaeologist to be available "on-call" and spot-check monitoring during grading activities, would reduce potential impacts to less than significant levels.

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

Less Than Significant With Mitigation. Based on the results of the NHMLC records search, there are no vertebrate fossil localities that lie directly within the proposed Project boundaries; however, there is a fossil vertebrate locality nearby from the same sedimentary deposits that occur in the proposed Project area (NHMLC 2016; Appendix C). Therefore, excavations exceeding five feet in depth in previous undisturbed soils may encounter sensitive fossils, thereby resulting in a potentially significant impact.

Based on this analysis, there is a minor potential for subsurface cultural deposits to be discovered during grading activities, which would be considered a potentially significant impact. Implementation of **CULT-2**, which requires retention of a qualified Paleontologist to be available "on-call" throughout the duration of grading activities, would reduce potential impacts to less than significant levels.

d) Disturb any human remains, including those interred outside of formal cemeteries?

Less Than Significant With Mitigation. There are no known formal cemeteries on the Project site. However, this does not preclude the possibility that individual burial sites may be discovered during grading activities. Implementation of **CULT-3**, which requires compliance with Section 7050.5 of the *California Health and Safety Code* and Section 5097.98 of the *California Public Resources Code,* would reduce potential impacts to less than significant levels.

MITIGATION PROGRAM

Mitigation Measures

CULT-1 **Archaeological Observation and Salvage.** Prior to the initiation of construction, IRWD shall retain a qualified Archaeologist to be available "on-call" throughout the duration of ground-disturbing activities. The Archaeologist shall be present at the pre-construction conference; shall, in consultation with IRWD, establish procedures for archaeological resource surveillance; and shall establish, in consultation with IRWD, procedures for temporarily halting or redirecting work to permit the sampling, identification, and evaluation of the artifacts as appropriate. If the archaeological resources are found to be significant, the Archaeological Observer shall determine appropriate actions, in consultation with IRWD, for exploration and/or salvage. Following the completion of all earth-disturbance activities, the Archaeologist's Report will be provided to IRWD.

CULT-2 **Paleontological Observation and Salvage.** Prior to the initiation of grading, IRWD shall retain a qualified Paleontologist to be available "on-call" throughout the duration of grading activities that exceed five feet in depth in previously undisturbed soils. In the event that prehistoric or historic subsurface cultural resources are discovered during ground-disturbing activities, all work within 50 feet of the resources will be halted and IRWD will consult with the qualified Paleontologist to assess the significance of the find according to Section 15064.5 of the California Environmental Quality Act (CEQA) Guidelines. If any find is determined to be significant, IRWD and the Paleontologist will meet to determine the appropriate avoidance measures or other appropriate mitigation. IRWD will make the final determination. All significant cultural materials recovered will be reviewed by the consulting Paleontologist and discussed with IRWD. IRWD and the consulting Paleontologist will discuss the subject to scientific analysis, professional museum curation, and documentation according to current professional standards and IRWD will make the final determination. The qualified Paleontologist shall be retained to review Project design plans and to consult with IRWD as to when and where monitoring is required during construction. Based on observations, monitoring may be reduced or discontinued if the qualified Paleontologist determines that the possibility of encountering fossiliferious deposits is low. The qualified Paleontologist will prepare a final monitoring report to be submitted to IRWD.

CULT-3 In the unlikely event that human remains are encountered, Section 7050.5 of the *California Health and Safety Code* states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Section 5097.98 of the *California Public Resources Code.* The County Coroner shall be notified immediately if any human remains are found. If the remains are determined to be prehistoric, the Coroner will notify the Native American Heritage Commission, which will determine and notify the most likely descendant. With the permission of IRWD or an authorized representative, the most likely descendant (MLD) may inspect the site of the discovery. IRWD will meet and confer with the MLD regarding his/her recommendations prior to disturbing the site by further construction activity.

VI. GEOLOGY AND SOILS

Information in this section is derived from the *Geotechnical Exploration Report, Irvine Ranch Water District Second Zone 1 Reservoir Project, Southerly Corner of Sand Canyon Avenue and Elysian, City of Irvine, California* (Geotechnical Investigation) prepared by Leighton Consulting, Inc. and dated January 23, 2017 (Leighton 2017).

IMPACT ANALYSIS

Would the Project:

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 Publication 42.

ii) Strong seismic ground shaking?

Less than Significant With Mitigation. The Project site, as with the entire Southern California region, is subject to secondary effects from earthquakes, including ground shaking due to future earthquakes on regionally active faults. According to the Geotechnical Investigation, the proposed reservoir site is not located within a State-designated Alquist-Priolo Earthquake Fault Zone (Leighton 2017). Known regional active faults that could produce significant ground shaking at the site include the San Joaquin Hills Blind Thrust, Newport-Inglewood, and Elsinore-Whittier Faults. These faults are located approximately 2.3 miles, 11.5 miles, and 12.6 miles from the site, respectively. There are no active faults mapped or known to cross the site. Figure D-2, Inactive Fault Locations, of the *City of Irvine General Plan's* Seismic Element shows that no known inactive faults are located on or near the Project site.

Potential surface rupture associated with the nearest significant faults would not occur at the proposed Project site; however, strong seismic shaking would occur on the Project site. With incorporation of the recommendations provided in the Geotechnical Investigation (refer to **GEO-1**), there would be a less than significant impact related to fault rupture and seismic ground shaking.

iii) Seismic-related ground failure, including liquefaction?

Less Than Significant Impact. Soil liquefaction occurs when saturated, cohesionless soils lose their strength due to the buildup of excess pore water pressure during cycling loading, such as that induced by earthquakes, causing it to behave as a liquid. The types of soils that are most susceptible to liquefaction are loose, saturated, fine-to-medium grained, cohesionless solids. According to the Geotechnical Investigation, the Project site is not identified in the *Seismic Hazard Zone Report for the El Toro Quadrangle* as being located within an area susceptible to liquefaction. Additionally, the potential for liquefaction and related effects at the Project site is low due to the absence of shallow groundwater table (Leighton 2017).

Ground lurching is defined as movement of low density soil materials on a bluff, steep slope, or embankment due to earthquake shaking. As there are no significant slopes on the Project site, the potential for ground lurching due to seismic events is low.

Impacts related to seismic-related ground failure, including liquefaction, would be less than significant and no mitigation would be required.

iv) Landslides?

Less Than Significant Impact. Although the existing berm on the Project site is not considered a significant slope according to the Geotechnical Investigation, a portion of this berm would be removed during grading and a retaining wall would be constructed. The Geotechnical Investigation concludes that, due to the absence of significant slopes at the site, the potential for seismically induced landsliding is considered low (Leighton 2017). Additionally, according to the California Geological Survey, the Project site is not located in an area susceptible to earthquake-induced landslides (CGS 2001). Therefore, impacts due to landslides would be less than significant.

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

Less Than Significant Impact. The largest source of erosion and topsoil loss is uncontrolled drainage during construction. As discussed in more detail in Subsection XI, Hydrology and Water Quality, the National Pollutant Discharge Elimination System (NPDES) permit program controls water pollution by regulating point sources that discharge pollutants into “waters of the U.S.”. Construction activities shall be conducted in compliance with the statewide NPDES General Permit for Storm Water Discharges Associated with the Construction and Land Disturbance Activities (Order No 2012-0006-DWQ, NPDES No. CAS000002), adopted by the State Water Resources Control Board (SWRCB) on July 17, 2012. In compliance with the NPDES permit, erosion potential during construction of the proposed Project would be managed with Best Management Practices (BMPs) implemented on the Project site as part of a Storm Water Pollution Prevention Plan (SWPPP) during construction activities in accordance with NPDES requirements. Implementation of the BMPs would reduce construction-related erosion impacts to less than significant levels.

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?

Less Than Significant With Mitigation. According to the Geotechnical Investigation, there is low potential for landslides at the Project site (Leighton 2017). Additionally, potential impacts related to liquefaction and subsequent lateral spreading would be less than significant at the proposed reservoir site as discussed previously in the response to Question VI.a(iii). The Geotechnical Investigation concludes that the proposed reservoir site is suitable for development from a geotechnical standpoint provided that the recommendations provided in the Geotechnical Investigation are incorporated into the Project (Leighton 2017). There would be less than significant impacts related to development on an unstable geologic unit or soil with implementation of **GEO-1**, which would ensure the specific recommendations of the Draft Geotechnical Investigation prepared for the Project are fully incorporated in the design and construction of the Project.

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

Less Than Significant With Mitigation. According to the Geotechnical Investigation, the near-surface soils on the Project site are considered to have medium expansion potential. Implementation of **GEO-1** would ensure the specific recommendations of the Draft Geotechnical Investigation prepared for the Project and any future geotechnical reporting are fully incorporated

in the design and construction of the Project. There would be less than significant impacts related to expansive soils with implementation of **GEO-1**.

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

No Impact. The proposed Project would not involve the use of septic tanks or alternative wastewater disposal systems. No impacts would occur and no mitigation is required.

MITIGATION PROGRAM

Mitigation Measure

GEO-1 Prior to approval of final plans and specifications for the proposed Project, IRWD shall review the Project plans to confirm that all recommendations in the *Geotechnical Exploration Report, Irvine Ranch Water District Second Zone 1 Reservoir Project, Southerly Corner of Sand Canyon Avenue and Elysian, City of Irvine, California* (dated January 23, 2017 and prepared by Leighton Consulting, Inc.) and any future geotechnical reports have been fully and appropriately incorporated.

VII. GREENHOUSE GASES

IMPACT ANALYSIS

Would the Project:

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

No Impact. Climate change refers to any significant change in climate, such as the 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 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 greenhouse gas (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 into 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 (OPR 2008). Table 7 shows the magnitude of GHG emissions on the global, national, State, and regional scales.[2]

[2] GHG emissions for project-level analyses are commonly expressed in metric tons of carbon dioxide equivalent ($MTCO_2e$). Larger quantities of emissions, such as on the State or world scale, as shown in Table 10, are expressed in million metric tons of carbon dioxide equivalent ($MMTCO_2e$). (Metric tons may also be stated as "tonnes".) The CO_2e for a gas is derived by multiplying the tons of the gas by the associated Global Warming Potential (GWP) such that $MMTCO_2e$ = (million metric tons of a GHG) x (GWP of the GHG). For example, the GWP for CH_4 is 21. This means that emissions of 1 million metric tons of CH_4 are equivalent to the emissions of 21 million metric tons of CO_2e.

TABLE 7
COMPARISON OF WORLDWIDE
GREENHOUSE GAS EMISSIONS

Area and Data Year	Annual GHG Emissions ($MMTCO_2e$)
World (2013)	45,261
United States (2013)	6,280
California (2015)	440
Orange County (2011)	21
GHG: greenhouse gas; $MMTCO_2e$: million metric tons of carbon dioxide equivalent Source: WRI 2017; CARB 2017; SCAG 2011	

GHGs, as defined under California's Assembly Bill (AB) 32, include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). General discussions on climate change often include water vapor, O_3, and aerosols in the GHG category. Water vapor and atmospheric O_3 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 regulatory bodies, such as CARB, or climate change groups, such as The Climate Registry, as gases to be reported or analyzed for control. Therefore, no further discussion of water vapor, O_3, or aerosols is provided herein.

GHGs vary widely in the power of their climatic effects; therefore, climate scientists have established a unit called global warming potential (GWP). The GWP of a gas is a measure of both its potency and lifespan in the atmosphere as compared to CO_2. For example, since CH_4 and N_2O are approximately 21 and 310 times more powerful than CO_2, respectively, in their ability to trap heat in the atmosphere, they have GWPs of 21 and 310, respectively (CO_2 has a GWP of 1). Carbon dioxide equivalent (CO_2e) is a quantity that enables all GHG emissions to be considered as a group despite their varying GWP. The GWP of each GHG is multiplied by the emission rate of that gas to produce the CO_2e emissions.

On June 1, 2005, Governor Arnold Schwarzenegger signed Executive Order S-3-05, which proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce snowpack in the Sierra Nevada Mountains; could further exacerbate California's air quality problems; and could potentially cause a rise in sea levels. In an effort to avoid or reduce the impacts of climate change, Executive Order S-3-05 calls for a reduction in GHG emissions to the year 2000 level by 2010, to year 1990 levels by 2020, and to 80 percent below 1990 levels by 2050.

AB 32, the California Global Warming Solutions Act of 2006 (*California Health and Safety Code* §38501), recognizes that California is the source of substantial amounts of GHG emissions. The statute states that:

> Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural

environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.

In order to avert these consequences, AB 32 establishes a State goal of reducing GHG emissions to 1990 levels by the year 2020, which is a reduction of approximately 16 percent from forecasted emission levels, with further reductions to follow (CARB 2011). In an effort to help achieve this reduction, on November 17, 2008, Governor Arnold Schwarzenegger signed Executive Order S-14-08, raising California's renewable energy goals to 33 percent by 2020.

California Executive Order B-30-15 (April 29, 2015) set an "interim" statewide emission target to reduce GHG emissions to 40 percent below 1990 levels by 2030, and directed State agencies with jurisdiction over GHG emissions to implement measures pursuant to statutory authority to achieve this 2030 target and the 2050 target of 80 percent below 1990 levels.

On September 8, 2016, the Governor signed Senate Bill 32 (SB 32) to codify the GHG reduction goals of EO B-30-15, requiring the State to reduce GHG emissions by 40 percent below 1990 levels by 2030 (Health and Safety Code Section 38566). This goal is expected to keep the State on track to meeting the goal set by EO S-3-05 of reducing GHG emissions by 80 percent below 1990 levels by 2050 (California Legislative Information 2017a). SB 32's findings state that CARB will "achieve the state's more stringent greenhouse gas emission reductions in a manner that benefits the state's most disadvantaged communities and is transparent and accountable to the public and the Legislature."

Orange County has not formally adopted a quantitative GHG emissions significance criterion to date. 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_2 equivalent per year ($MTCO_2e$/yr) for projects where the SCAQMD is the lead agency (SCAQMD 2008). In September 2010, the Working Group proposed that the 10,000 $MTCO_2e$/yr threshold be expanded to apply to industrial projects where SCAQMD is not the lead agency (SCAQMD 2010). The Working Group has not convened since the fall of 2010. As of July 2017, the proposal has not been considered or approved for use by the SCAQMD Board. However, this threshold is selected by IRWD as appropriate for the proposed Project.

Proposed Project Greenhouse Gas Emissions

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 concurrently with air quality criteria pollutant emissions by using CalEEMod Version 2016.3.1 and the Project information as described in Section III., Air Quality.

The results are output in $MTCO_2e$ for each year of construction. The estimated construction GHG emissions for the Project are shown in Table 8.

TABLE 8
ESTIMATED ANNUAL GREENHOUSE GAS EMISSIONS
FROM CONSTRUCTION

Year	Emissions ($MTCO_2e$)
2018	395
2019	71
Total	**466**
Annual Emissions*	**16**

$MTCO_2e$: metric tons of carbon dioxide equivalent
* Combined total amortized over 30 years
Source: CalEEMod data in Appendix B.

GHG emissions generated from construction activities are finite and occur for a relatively short-term period of time. 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 7, Estimated Annual Greenhouse Gas Emissions from Construction, the 30-year amortized construction emissions would be 16 $MTCO_2e$/yr.

Operational GHG emissions for the Project are estimated by including purchased electricity; the electricity embodied in water consumption; the energy associated with solid waste disposal; and mobile source emissions. The Project would not require additional IRWD employees or generate regular vehicle trips, nor would it use natural gas. Water consumption and solid waste generation would be negligible with respect to the generation of GHGs. There would be a less than significant impact and no mitigation measures are required.

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

No Impact. As discussed above, the principal State plan and policy adopted for the purpose of reducing GHG emissions is AB 32. The quantitative goal of AB 32 is to reduce GHG emissions to 1990 levels by 2020. The Project contributes to this goal by reducing the quantity of GHG emissions resulting from electricity generation. Similarly, the Project supports the goals of Executive Orders S-3-05 and B-30-15. Therefore, the Project does not conflict with these plans and regulations.

Senate Bill (SB) 375, signed in September 2008 (Chapter 728, Statutes of 2008), aligns regional transportation planning efforts, regional GHG reduction targets, and land use and housing allocations. SB 375 requires Metropolitan Planning Organizations (MPOs) to adopt a Sustainable Communities Strategy (SCS) or alternative planning strategy (APS) that will address land use allocation in that Metropolitan Planning Organization's Regional Transportation Plan (RTP). The principles of SB 375 are incorporated in SCAG's adopted 2016-2040 RTP/SCS. The Project is neither a housing development project nor a transportation project. The Project would also not result in substantial amounts of GHG emissions from the construction phase and negligible amounts of GHG emissions from the operations phase. Therefore, the Project would not conflict with the goals of SB 375 or the SCAG RTP/SCS.

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.

VIII. HAZARDS AND HAZARDOUS MATERIALS

IMPACT ANALYSIS

Would the Project:

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

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?

Less than Significant Impact. Project construction activities would require the transport and use of standard construction equipment and materials, some of which may include a hazardous component such as transport and storage of fuels. These activities would be conducted in compliance with existing federal, State, and local regulations.

Daily Project operations would be the same as existing operations, which involve minimal use or transport of hazardous materials. The Project site is located near several major transportation facilities and arterials, including Sand Canyon Avenue, Trabuco Road, Irvine Boulevard, SR-133, and SR-241. These roadways may be used to transport hazardous materials; however, the proposed Project would neither increase the frequency of transport, nor would it introduce hazards that would increase the likelihood for accidental release of hazardous materials into the environment.

Due to the on-site storage of chemicals associated with the 15-MG Zone 1 reservoir, the existing reservoir has been operating under a Fire Master Plan approved by the Orange County Fire Authority (OCFA). No additional chemicals would be stored on the proposed Project site. However, under the proposed Project, there would be changes to the existing site access road; therefore, a new Fire Master Plan would be prepared for the proposed Project (Tetra Tech 2017). Should storage of additional chemicals be deemed necessary in the future, the Fire Master Plan would need to be updated and storage of the additional chemicals would occur in accordance with applicable regulations. Therefore, a less than significant impact related to the transport, use, or disposal of hazardous materials or the release of hazardous materials into the environment would occur.

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 Impact. There are no existing schools within ¼ mile of the Project site. The nearest school to the proposed Project sites is Woodbury Elementary School, located approximately 0.46 mile northwest of the site. Additionally, there are no proposed schools within ¼ mile of the Project site. Therefore, there would be no impact associated with the emission or handling of hazardous materials within ¼ mile of an existing or proposed school and no mitigation is required.

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 Impact. An EDR Radius Map™ with Geocheck® Report was prepared for the Project by Environmental Data Resources, Inc. (EDR 2017). Search parameters were based on a one-mile radius of the Project site and consisted of a search of federal, State, local, tribal, and other databases. The complete list of databases and additional information regarding the identified sites can be found in Appendix D. According to the EDR Radius Map, no hazardous materials sites were identified within the Project site boundaries. The following two listings were reported within ¼ mile of the Project site.

> **Chevron 306957 (13303 Sand Canyon Avenue).** This site is identified in the Resource Conservation and Recovery Act Non-Generators/No Longer Regulated (RCRA NONGEN/ NLR) database. According to the EDR Report, no violations have been found (EDR 2017).
>
> **Unocal #4473 (14886 Sand Canyon Avenue).** This site is identified in the Cortese List (HIST CORTESE) database. There are no additional details for this site in the EDR Report.

The EDR Report also identifies 2 additional sites within 1 mile of the Project site: Heritage Fields (the former MCAS El Toro) located approximately 0.73 mile from the Project site and the PA 40 Elementary School located approximately 0.77 mile from the Project site. Of the two hazardous materials sites identified within ¼ mile, none of the sites pose a hazard to the proposed Project. Based on a search of hazardous materials sites compiled pursuant to Section 65962.5 of the *California Government Code,* no sites are identified within ½ mile of the Project site. No impacts related to known hazardous materials sites would occur and no mitigation is required.

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 for people residing or working in the Project area?

f) For a project within the vicinity of a private airstrip, would the Project result in a safety hazard for people residing or working in the Project area?

No Impact. The Project site is not located within an adopted Airport Land Use Plan or in the vicinity of a private airstrip, heliport, or helistop. The nearest airport is John Wayne Airport, located approximately 6.5 miles southwest of the Project site. The Project would be located outside the John Wayne Airport influence area and would not expose additional people to safety hazards related to airport operations. Implementation of the proposed Project would not impact the airport facilities or their operation; no mitigation would be required.

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

No Impact. The City of Irvine has prepared and adopted the City of Irvine Emergency Management Plan for the protection of residents and properties (City of Irvine 2004). The Emergency Management Plan does not provide an evacuation plan for all emergency situations; however, it does state that all major streets within the City would be utilized as evacuation routes under flood emergencies. The proposed Project would construct a new reservoir adjacent to an existing reservoir and realign an access road on site; the Project would not alter traffic conditions or modify Sand Canyon Avenue or any street within the local or regional circulation system. Therefore, development of the Project would not interfere with the implementation of the City of Irvine's Emergency Management Plan. Additionally, should an emergency occur at the proposed Project site, the internal access road would provide access to Sand Canyon Avenue, which is the nearest major street. Therefore, no impacts related to the adopted emergency response or evacuation plans would occur and no mitigation is required.

h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

No Impact. The *City of Irvine General Plan's* Safety Element designates high-risk fire areas as "High Fire Severity Rating" and "Open Space with Fire Potential". According to Figure J-2, Fire Hazard Areas, of the *City of Irvine General Plan's* Safety Element, the Project site is not located in or near any designated high-risk fire areas. Additionally, the Project area is fully developed with residential uses, and there are no wildlands adjacent to the Project site; thus, there is no potential for the site to be exposed to wildland fires. As proposed, the Project would not include construction of habitable structures intended for human occupancy. Therefore, there would be no impacts related to wildland fires, and no mitigation is required.

IX. HYDROLOGY AND WATER QUALITY

IMPACT ANALYSIS

Would the Project:

a) Violate any water quality standards or waste discharge requirements?

e) 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?

f) Otherwise substantially degrade water quality?

Short-Term Construction-Related Water Quality Impacts

Less Than Significant Impact. Potential impacts of construction activities on water quality focus on sediments, turbidity, and pollutants associated with sediments. Construction-related activities that are primarily responsible for sediment releases are related to exposing soils to potential mobilization by rainfall, runoff, and wind. These activities include grading and other earth-disturbance activities. Non-sediment-related pollutants that are also of concern during construction include waste construction materials and chemicals, liquid products, and petroleum products used in building construction or the maintenance of heavy equipment. Based on **HYDRO-1**, stated below, construction impacts from implementation of the proposed Project would be minimized through compliance with the Construction General Permit. This permit requires the development and implementation of an SWPPP for the proposed Project site, which must include erosion- and sediment-control BMPs that meet or exceed measures required by the NPDES Construction General Permit, as well as BMPs that control the other potential construction-related pollutants. An SWPPP would be developed, as required by and in compliance with, the NPDES Construction General Permit. Erosion-control BMPs are designed to prevent erosion, whereas sediment controls are designed to trap sediment once it has been mobilized. The NPDES Construction General Permit requires the SWPPP to include BMPs to be selected and implemented based on the phase of construction and weather conditions.

The SWPPP would be designed and implemented to address site-specific conditions related to Project construction. The SWPPP would identify and describe the sources of sediment and other pollutants that may affect the quality of storm water discharges; it would also ensure the implementation and maintenance of BMPs to reduce or eliminate sediment, pollutants adhering to sediment, and other non-sediment pollutants in storm water and non-storm water discharges.

Compliance with the NPDES Construction General Permit and the preparation of an SWPPP would ensure that any impacts to downstream waters resulting from construction activities on the Project site would be less than significant. Erosion-control and treatment-control BMPs would be implemented per NPDES requirements.

Full compliance with applicable local, State, and federal regulations, including **HYDRO-1**, would ensure that water quality impacts associated with construction would be less than significant.

Long-Term Operational Water Quality Impacts

Less Than Significant Impact. As discussed in Section 2.3, Existing Conditions, and as shown in Exhibit 5-1, Site Photographs, the proposed Project site is partially developed with an access road, a wrought iron security fence, and an access gate; the remainder of the site is undeveloped and exists in a natural state with pervious surface area. As previously discussed, the Project site is located on a larger IRWD-owned parcel that contains the existing 15-MG Zone 1 reservoir, facilities associated with the 15-MG Zone 1 reservoir, and a telecommunication facility. Therefore, the Project site and larger IRWD-owned parcel are subject to storm water runoff from these facilities as well as any IRWD vehicles visiting the existing reservoir. Project implementation would expand existing water infrastructure uses and would not introduce new uses to the proposed reservoir site; as such, development of the Project would not introduce substantial amounts of urban pollutants to the storm water runoff beyond existing conditions. Therefore, impacts related to long-term operational water quality impacts would not represent a significant impact.

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

Less Than Significant Impact. Project implementation would increase the amount impervious surface area at the proposed reservoir site by 25,000 square feet (sf), which would limit the amount of runoff infiltrating the ground surface and reaching the groundwater basin. It is noted that a portion of the site along the Sand Canyon Avenue and Elysian would remain as pervious surface. Orange County Water District is responsible for managing the groundwater basin and has established recharge basins throughout the county. There are no recharge basins in the City of Irvine; therefore, the increase in impervious surface area would not interfere substantially with groundwater recharge.

The proposed reservoir would become part of the existing 15-MG Zone 1 domestic water system, and implementation of the proposed Project would not involve direct or indirect withdrawals of groundwater. Therefore, no impacts would occur and no mitigation is required.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

Less Than Significant Impact. Development of the proposed Project would involve the construction of a new aboveground water reservoir, which would increase the impervious surface

area on the proposed Project site by 25,000 sf. Because the proposed Project would introduce impervious surfaces to a previously natural area, the post-development runoff that would be generated on site would be slightly higher than the pre-development runoff. Under existing conditions, surface storm water flows from the existing 15-MG Zone 1 Reservoir and the access road are directed into a concrete-lined V-ditch that runs along the outside of the access road and then conveyed off site by the V-ditch through a 21-inch drainage pipe located on the southwestern portion of the site. Drainage from the undeveloped vegetated areas in the southern and western portions of the site is directed into the V-ditch along the access road through V-ditches that run along the slopes of the undeveloped areas. Storm water runoff from the proposed Project site would be collected and conveyed to a concrete ribbon gutter, which would direct site drainage to the existing catch basin located south of the South County Zone 1–3 booster pump station; this would keep the overall drainage pattern of the IRWD-owned parcel similar to the existing drainage pattern. Additionally, the proposed reservoir would have overflow piping, which would be used in the event of an emergency and would outlet into the existing drainage channel. A less than significant impact would occur related to changes in the drainage pattern.

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

No Impact. According to Figure J-3, Flood Hazard Areas, of the *City of Irvine General Plan* Safety Element, the proposed Project site is not located within the a 100-year flood hazard area, and the Project would not expose people or structures to flood hazard conditions. No impact would occur and no mitigation is required.

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

No Impact. There are several dams present in the City of Irvine. Specifically, the Syphon Reservoir dam is located approximately 1.6 miles northeast of the Project site; the Rattlesnake Reservoir dam is located approximately 2.6 miles north of the Project site; and the Sand Canyon Reservoir dam is located approximately 4.0 miles southwest of the Project site. The proposed Project would not introduce any new uses that would expose people or structures to hazards associated with any dam failures at the Syphon, Rattlesnake, or Sand Canyon Reservoirs; therefore, no impacts would occur.

j) Inundation by seiche or mudflow?

No Impact. There are several large bodies of water in the City of Irvine, none of which are near the Project site. Consistent with the previous discussion, Syphon Reservoir is located approximately 1.6 miles northeast of the Project site; the Rattlesnake Reservoir is located approximately 2.6 miles north of the Project site; and the Sand Canyon Reservoir is located approximately 4.0 miles southwest of the Project site. While a seiche, or standing wave, is possible within any of these water bodies, the likelihood of the seiche effects reaching the Project site is low due to intervening topography and physical distance. The Project site is located within a developed area and would not be subject to mudflow. Additionally, the proposed Project would not introduce any uses that would expose people or structures to hazards associated with a seiche or mudflows. Consequently, no impacts are anticipated and no mitigation is required.

MITIGATION PROGRAM

Mitigation Measures

HYDRO-1 Prior to initiation of construction, IRWD shall ensure that a Notice of Intent with the State Water Resources Control Board (SWRCB) has been filed in order to obtain coverage under the Construction General Permit. Pursuant to the permit requirements, the Construction Contractor shall develop a Storm Water Pollution Prevention Plan (SWPPP) that incorporates Best Management Practices for reducing or eliminating construction-related pollutants in the site runoff.

X. LAND USE AND PLANNING

IMPACT ANALYSIS

Would the Project:

a) Physically divide an established community?

No Impact. The proposed reservoir would be located on a developed lot adjacent to the existing Zone 1 reservoir and its associated facilities. The Project site is surrounded by residential development; however, there are no residential uses on the Project site itself. Therefore, implementation of the proposed Project components would not divide an established community. Construction of the proposed Project would not extend into the adjacent residential areas. As the proposed Project would be located on a lot which is currently developed with similar uses, the Project would not physically divide an established community. No impact would occur and no mitigation is required.

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project (including, but not limited to the general plan, specific plan or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

No Impact. The proposed Project site is currently zoned 6.1 Institutional and the General Plan land use designation is Medium High Density Residential. The proposed Project would be a conditionally permitted use according to the City's zoning code (City of Irvine 2017). The Project does not propose to change the existing land use designations of the site and, pursuant to Section 53091(e) of the *California Government Code,* the proposed Project would be exempt from city zoning ordinances because it involves the construction of facilities for the production, generation, storage, treatment, or transmission of water. Implementation of the proposed Project would not conflict with applicable plans, policies, and regulations. Therefore, no impacts would occur and no mitigation is required.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

No Impact. As discussed previously in Subsection IV, Biological Resources, the Project is consistent with provisions of the Central/Coastal NCCP/HCP, and the Project site is located within a development area. No impact would occur and no mitigation is required.

XI. MINERAL RESOURCES

IMPACT ANALYSIS

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?

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 Impact. According to Figure 3.11-1 of the *Irvine CEQA Guidelines*, the proposed Project site is designated as MRZ-1 by the State Mining and Geology Board and is defined as an area where "adequate information indicates that no significant mineral deposits are present or likely to be present, or where it is judged that little likelihood exists for their presence" (City of Irvine 2012). There are no areas in the vicinity of the Project site that are designated as MRZ-2, which indicates the presence of significant mineral resources; the nearest MRZ-2 designation is over five miles away. No impacts would occur and no mitigation is required.

XII. NOISE

IMPACT ANALYSIS

Would the Project:

a) Expose persons to or generate noise levels in excess of standards established in a local general plan or noise ordinance or applicable standards of other agencies?

Less than Significant. Construction and operational noise associated with the Project would result in impacts that are less than significant, as described below.

Noise-Sensitive Receptors and Existing Conditions at the Project Sites

Noise-sensitive land uses typically include residences, hospitals, convalescent and day care facilities, schools and libraries, which could all be adversely affected by an increase in noise levels.

The sensitive receptors near the Project sites are residences surrounding the northern, southern, eastern, and western boundaries of the Project site.

Regulatory Background

For the evaluation of potential noise impacts, IRWD complies with the City of Irvine Noise Ordinances.

City of Irvine Municipal Code

The City of Irvine Municipal Code (Title 6, Division 8, Chapter 2) contains the City of Irvine Noise Ordinance. The Noise Ordinance is designed to control unnecessary, excessive, and annoying sounds from sources on private property by setting limits that cannot be exceeded at adjacent properties. Noise Ordinance requirements cannot be applied to mobile noise sources (e.g., heavy trucks traveling on public roadways, trains, or aircraft). Control of noise generated by these

transportation sources is preempted by federal and State laws, and is therefore not subject to the provisions of the Noise Ordinance. However, the Noise Ordinance does apply to vehicles while they are on private property. All activities within the City are subject to the Noise Ordinance unless specifically exempted. All new development must implement measures to ensure that activities at the new development do not violate the Noise Ordinance.

The Noise Ordinance specifies that noise generated on a site cannot exceed defined noise levels at adjacent properties for a specified period of time as shown in Table 9, City of Irvine Noise Ordinance Standards for Zones 1 through 4. Both interior and exterior noise level limits are specified by noise zones. The applicable noise zone is based on the land use being exposed to the noise. The residential units on all sides of the Project are in Zone 1.

TABLE 9
CITY OF IRVINE NOISE ORDINANCE STANDARDS FOR ZONES 1 THROUGH 4

Noise Levels for a Period Not Exceeding (minutes/hour)							
			Minutes				
			30	15	5	1	0 (anytime)
Noise Zone[a]		Time Period	Noise Level – dBA				
1	Exterior	7:00 AM–10:00 PM	55	60	65[b]	70	75
		10:00 PM–7:00 AM	50	55	60	65[b]	70
	Interior	7:00 AM–10:00 PM	–	–	55	60	65
		10:00 PM–7:00 AM	–	–	45	50	55
2	Exterior	Any time	55	60	65	70	75
	Interior	Any time	–	–	55	60	65
3	Exterior	Any time	60	65	70	75	80
	Interior	Any time	--	--	55	60	65
4	Exterior	Any time	70	75	80	85	90
	Interior	Any time	--	--	55	60	65

dBA: A-weighted decibel(s)

[a] Noise zone 1: All hospitals, libraries, churches, schools and residential properties.
Noise zone 2: All professional office and public institutional properties.
Noise zone 3: All commercial properties excluding professional office properties.
Noise zone 4: All industrial properties.

[b] This standard does not apply to multi-family residence private balconies. Multi-family developments with balconies that do not meet the 65 CNEL are required to provide occupancy disclosure notices to all future tenants regarding potential noise impacts.

Source: City of Irvine 2017.

Section 6-8-205, Special provisions, of the City of Irvine municipal code limits construction activities to between the hours of 7:00 AM and 7:00 PM Mondays through Fridays, and 9:00 AM and 6:00 PM on Saturdays, with no construction activities permitted outside of the hours listed above or on Sundays or federal holidays unless a temporary waiver is granted by the Chief Building Official or his or her authorized representative. Any waiver granted shall take impact upon the community into consideration.

Construction Noise

Local residents would be subject to elevated noise levels due to the operation of Project-related construction equipment. Construction activities are 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 U.S. Environmental Protection Agency's (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 an industrial 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 the development of the proposed Project are shown in Table 10.

TABLE 10
CONSTRUCTION NOISE LEVELS AT NOISE-SENSITIVE USES

	Noise Levels (L_{eq} dBA)							
	Residents North of Elysian St. (northeast of project site)		Residents West of Sand Canyon Ave. (northwest of project site)		Residents East of Sand Canyon Ave. (south of project site)		Residents East of Hedge Bloom (east of project site)	
Construction Phase	Max (100 ft)	Avg (185 ft)	Max (215 ft)	Avg (300 ft)	Max (420 ft)	Avg (530 ft)	Max (300 ft)	Avg (480 ft)
Ground Clearing/Demolition	77	72	70	67	65	62	67	63
Excavation	82	77	75	72	70	67	72	68
Foundation Construction	75	70	68	65	63	60	65	61
Building Construction	75	70	68	65	63	60	65	61
Paving and Site Cleanup	82	77	75	72	70	67	72	68

L_{eq} 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 9 shows both the maximum average and typical average noise levels. Maximum average noise levels represent the noise levels from construction occurring at the center of the Project site component that is occurring nearest to the noise sensitive use/receptor. Average noise levels represent the noise exposure to sensitive uses based on the distance to the center of all Project components. Noise levels from general Project-related construction activities would range from 63 to 82 dBA L_{eq} for the maximum noise levels and 60 to 77 dBA L_{eq} for the average noise levels.

As stated above, the City of Irvine municipal code limits construction activities to between the hours of 7:00 AM and 7:00 PM Mondays through Fridays, and 9:00 AM and 6:00 PM on Saturdays, with no construction activities permitted outside of the hours listed above or on Sundays or federal holidays unless a temporary waiver is granted by the Chief Building Official or his or her authorized representative. Project construction would not occur between 7:00 PM and

7:00 AM on weekdays or before 9:00 AM or after 6:00 PM Saturdays, or at any time on Sundays or federal holidays, consistent with the Cities or Irvine standards. The City has limited construction activities to the least sensitive portions of the day. Due to the relatively short duration of construction activities, the low overall magnitude of noise, and the compliance of construction during allowable hours, the Project would not expose persons to or generate noise levels in excess of the applicable standards. The impact would be less than significant and no mitigation is required.

Operational Noise

The proposed tank is not a noise-generating facility. The Project would not generate any additional vehicle trips because routine inspection would occur concurrent with the schedule for the adjacent 15 MG tank at the Project site. As such, traffic noise would be negligible. Operational noise produced from the tank would likewise be negligible; the impact would be less than significant and no mitigation is required.

b) Expose persons to or generation of excessive ground borne vibration or ground borne noise levels?

Less Than Significant Impact. The proposed Project would not generate or expose persons or structures to excessive groundborne vibration from the construction phase. There are no applicable City standards for vibration-induced annoyance or structural damage from vibration. The California Department of Transportation (Caltrans) has adopted vibration damage thresholds shown in Table 11 to assess the potential for structural damage from Project-generated vibration.

TABLE 11
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	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

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 structural damage threshold for “New residential structures” 1.0 peak particle velocity (ppv) inch per second (in/sec) is selected for analysis. This threshold represents the adjacent uses to the Project site.

The Caltrans vibration annoyance potential guideline thresholds are shown in Table 12. Based on the guidance in Table 12, the residence vibration level of 78 day/75 night VdB is applicable to the land uses to the north, south, east, and west of the Project site. These thresholds are used to assess the potential for a significant vibration impact for human annoyance. Annoyance is evaluated within occupied buildings.

TABLE 12
VIBRATION ANNOYANCE CRITERIA

Average Human Response	VdB
Workshop	90
Office	84
Residence	78 day/75 night
Hospital Operating Room	72
ppv: peak particle velocity; in/sec: inch(es) per second Source: Caltrans 2013.	

Pile driving and blasting are generally the sources of the most severe vibration during construction. Neither pile driving nor blasting would be used during Project construction. Table 13 summarizes typical vibration levels measured during construction activities for various vibration-inducing pieces of equipment.

TABLE 13
VIBRATION LEVELS FOR CONSTRUCTION EQUIPMENT

Equipment		ppv at 25 ft (in/sec)
Pile driver (impact)	upper range	1.518
	typical	0.644
Pile driver (sonic)	upper range	0.734
	typical	0.170
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; FTA 2006.		

Demolition, grading, and construction would occur on the northwestern portion of the Project site and, as noted above, some land uses are relatively close to the property lines. There would be no pile driving, which is one of the more severe sources of construction vibration, and there would be no blasting activities. Table 14 shows the vibration annoyance criteria from construction-generated vibration activities proposed at the Project site. Table 14, Vibration Annoyance Criteria at the nearest structures to the Project site, shows the anticipated vibration (measured in VdB, or velocity decibels) relative to residences near the Project site. It should be noted that, although it is not anticipated that the Project would use large or small bulldozers, the equipment is included to represent vibration from similar vibration-generating equipment such as a crane or an excavator.

TABLE 14
VIBRATION ANNOYANCE CRITERIA AT SENSITIVE USES

	Vibration Level (VdB)							
	Residents North of Elysian St. (northeast of project site)		Residents West of Sand Canyon Ave. (northwest of project site)		Residents East of Sand Canyon Ave. (south of project site)		Residents East of Hedge Bloom (east of project site)	
Equipment	**Closest (100 ft)**	**Avg (140 ft)**	**Closest (215 ft)**	**Avg (300 ft)**	**Closest (420 ft)**	**Avg (530 ft)**	**Closest (300 ft)**	**Avg (480 ft)**
Large bulldozer	75	70	68	65	62	60	65	61
Small bulldozer	46	41	39	36	33	31	36	32
Jackhammer	67	62	60	57	54	52	57	53
Loaded trucks	74	69	67	64	61	59	64	60
Criteria	**78**	**78**	**78**	**78**	**78**	**78**	**78**	**78**
Exceeds Criteria?	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**

Max: maximum; Avg: average; ft: feet, VdB: Velocity Decibels; St: street; Ave.: avenue
Source: USEPA 1971

As shown in Table 14, vibration decibel levels would not exceed the criteria threshold when construction activities occur under maximum (i.e., closest to the receptor) or average exposure conditions. Under average and closest conditions, as represented by equipment operating near the center of the Project site, vibration levels would be below the vibration annoyance thresholds. Impacts from vibration annoyance would be less than significant and no mitigation measures are required.

Table 15, Structural Damage Criteria at Sensitive Uses, shows the peak particle velocity levels (ppv) relative to structural damage to sensitive uses from vibration activities.

TABLE 15
STRUCTURAL DAMAGE CRITERIA AT SENSITIVE USES

	Vibration Levels (ppv)			
	Residents North of Elysian St. (northeast of project site)	Residents West of Sand Canyon Ave. (northwest of project site)	Residents East of Sand Canyon Ave.(south of project site)	Residents East of Hedge Bloom (east of project site)
Equipment	**(ppv @ 100 ft)**	**(ppv @ 215 ft)**	**(ppv @ 420 ft)**	**(ppv @ 300 ft)**
Large bulldozer	0.011	0.004	0.001	0.002
Small bulldozer	0.000	0.000	0.000	0.000
Jackhammer	0.004	0.001	0.001	0.001
Loaded trucks	0.010	0.003	0.001	0.002
Criteria	**0.500**	**0.500**	**0.500**	**0.500**
Exceeds Criteria?	**No**	**No**	**No**	**No**

ppv: peak particle velocity; Max: maximum; avg: average; ft: feet
Source: USEPA 1971 (Calculations can be found in Attachment B to the USEPA document).

As shown in Table 15, all ppv levels would be below the structural damage threshold criteria. Impacts would be less than significant and no mitigation measures are required.

c) Result in a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project?

Less Than Significant Impact. As discussed in response to impact Question XII.a above, permanent, operational noise levels would be negligible and, therefore, would not be substantial. The impact would be less than significant; no mitigation is required.

d) Result in a substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project?

Less Than Significant Impact. As discussed in response to impact Question XII.a above, construction activities would cause temporary noise increases. Although daytime construction noise levels at residences adjacent to the Project site may be heard above ambient traffic noise, neither the magnitude nor the duration of the noise would be substantial. The impact would be less than significant; no mitigation is required.

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

f) For a Project within the vicinity of a private airstrip, would the Project expose people residing or working in the Project area to excessive noise levels?

No Impact. The Project is not located in an airport land use plan or in the vicinity of a private airstrip or heliport, and it would not expose people to excessive noise levels associated with airport operations or aircraft travel. The closest airport to the Project site is John Wayne Airport, located more than six miles west of the Project site. No impacts would result, and no mitigation is required.

XIII. POPULATION AND HOUSING

IMPACT ANALYSIS

Would the Project:

a) Induce substantial 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)?

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

No Impact. The proposed Project involves the construction of a new reservoir adjacent to the existing Zone 1 reservoir in order to provide water storage redundancy, which will serve existing and planned future IRWD customers. The proposed Project would require routine checks by IRWD employees, which would occur in combination with maintenance activities at the existing Zone 1 reservoir; therefore, no new employees are anticipated. As such, maintenance of the

Project site will not require new staff and the Project is intended to serve existing IRWD customers or new customers within established or planned areas of the City of Irvine. The Project would not extend water service into an area that is not currently developed or approved for future development; therefore, the Project would not result in either direct or indirect population growth. Additionally, as described in Subsection X, Land Use and Planning, the Project would not displace existing housing or population, resulting in construction of replacement housing elsewhere. Therefore, no impacts would occur and no mitigation is required.

XIV. PUBLIC SERVICES

IMPACT ANALYSIS

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, police protection, schools, parks, and other public facilities?

No Impact. Due to the nature of the proposed Project, no new demand for public services such as fire protection, police protection, schools, parks, libraries, or other public facilities would occur. Any increase in maintenance of the proposed facilities would be the responsibility of the IRWD. No impact would occur and no mitigation is required.

XV. RECREATION

IMPACT ANALYSIS

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?

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

No Impact. The proposed Project involves the construction of a new reservoir adjacent to the existing Zone 1 reservoir in order to provide water storage redundancy, which will serve existing and planned future IRWD customers. As mentioned previously, the Project is not anticipated to induce population growth; therefore, it would not directly or indirectly impact any local recreational facilities through increase of use. No impacts related to demand or use of recreational facilities would occur, and no mitigation is required.

XVI. TRANSPORTATION/TRAFFIC

IMPACT ANALYSIS

Would the Project:

a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

Less Than Significant Impact. Implementation of the proposed Project is expected to generate short-term traffic impacts generated during the construction period. Vehicle trips would be generated by trucks hauling materials and supplies to the site and workers commuting to and from the Project site. It is anticipated that these trips would occur throughout the day and would not be concentrated during traffic peak hours. The Project would involve temporary, partial road closures along Sand Canyon Avenue along the Project site frontage to accommodate installation of pipelines. Through traffic will be maintained in each direction and, as part of the Project, a traffic control management plan is being prepared and will be subject to approval by the City of Irvine. Therefore, short-term construction-related impacts would be less than significant.

Under existing conditions, a small number of vehicle trips are associated with routine inspection and maintenance at the existing Zone 1 reservoir site. Because the Project components are located adjacent to existing IRWD utilities, it is anticipated that routine inspection and maintenance trips would continue and no new operational trips would occur with implementation of the proposed Project. Therefore, because there would be no increase in daily trips associated with daily operation of the Project components, no Project-related traffic impacts are anticipated.

b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

No Impact. The nearest intersections to the proposed Project that have been designated by the Orange County Transportation Authority as Congestion Management Program intersections are SR-133 Northbound Ramps/Irvine Boulevard and SR-133 Southbound Ramps/Irvine Boulevard (OCTA 2015). These intersections are approximately 0.8 mile northeast of the Project site. Due to the nominal amount of traffic generated by the proposed Project and its distance from the designated intersection, no impact would occur at the intersection and no mitigation is required.

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

No Impact. The proposed Project involves the construction of a new reservoir and would have no effect on air travel volumes, nor would it impact air traffic patterns. No impact would occur and no mitigation is required.

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses?

No Impact. Under the proposed Project, the existing driveway location would remain unchanged and access road would be realigned behind the driveway within the Project boundaries. Modifications to internal circulation would meet all emergency access requirements set forth by the OCFA and would not increase hazards on-site. Additionally, the entrance to the Project site along Sand Canyon Avenue would not be moved; therefore, no new hazards related to the interface with traffic along Sand Canyon Avenue would occur. Further, traffic patterns and the types of vehicles traveling along the roads near the proposed Project would not be affected, as the proposed Project does not change uses on the Project site or the amount or type of traffic entering and exiting the site. Therefore, no impact would occur related to hazards due to a design feature or incompatible uses. No impact would occur and no mitigation is required.

e) Result in inadequate emergency access?

Less Than Significant Impact. The proposed Project would involve the construction of a new reservoir adjacent to an existing IRWD facility; the existing driveway location would remain unchanged and access road would be realigned behind the driveway within the Project boundaries. During construction, existing access routes would be maintained at the existing Project site. As noted previously, the Project would involve construction of a reservoir adjacent to an existing reservoir. Emergency access routes are already in place at the Project site, and proposed Project actions would not alter access. Therefore, no impact to local or regional emergency access routes would occur and no mitigation is required.

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

No Impact. Access to the Project site would be provided by Sand Canyon Avenue, which includes both Class I and Class II Trails. The City of Irvine defines Class I Trails as off-street trails and Class II Trails as on-street trails. Due to the nature of the Project, no impacts related to adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or the performance or safety of such facilities would occur and no mitigation is required.

XVII. TRIBAL CULTURAL RESOURCES

On June 16, 2017, tribes that previously requested to be informed of IRWD projects under Assembly Bill (AB) 52 were mailed an informational letter, which describes the Project and requests any information regarding resources that may exist on or near the Project site. In addition, an email with an electronic copy of this letter was sent to these tribes on June 19, 2017.

IMPACT ANALYSIS

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

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.

Less Than Significant With Mitigation. As previously addressed in the response to Question V.a, there are no historic resources on the Project site. No tribal cultural resources, including tribal cultural resources listed or eligible for listing in the CRHR or in a local register of historical resources, have ever been recovered or recorded on the Project site. Therefore, with respect to historic resources, no impact would result and no mitigation is required.

As mentioned above, all tribes previously requesting notification of IRWD projects were notified in writing of the proposed Project on June 16, 2017 and via email on June 19, 2017, and asked to provide any information they may have regarding historic or prehistoric sites near the Project area. Two responses were received from tribal representatives notified of the Project. One response was from Mr. Andrew Salas, the Chairman of the Gabrieleno Band of Mission Indians – Kizh Nation on July 14, 2017 requesting consultation. According to the letter received, the Project site is located within the ancestral tribal territory of the Gabrieleno Band of Mission Indians – Kizh Nation. IRWD responded back to Mr. Salas via email on July 18, 2017 to coordinate a conference call with the tribe. Additionally, several follow-up emails were sent to Mr. Salas, but IRWD received no further response from the tribe. The other response was from Joyce Perry, Representing Tribal Chairperson, of the Juaneño Band of Mission Indians, Acjachemen Nation on June 19, 2017 requesting consultation and the results of the records search. On July 24, 2017, IRWD sent a letter to Ms. Perry that included the results of the records search.

Based on consultation with the two interested tribes, no cultural tribal resources were identified on the Project site; however, excavation and grading at the Project site may disturb native sediments and, therefore, could have the potential to impact unidentified tribal cultural resources. In order to reduce the potential for impacts to unidentified tribal cultural resources, the Project would implement TRIB CULT-1 and CULT-3, identified previously in Section V. Cultural Resources, which would reduce potential impacts to less than significant levels.

Mitigation Measures

TRIB CULT-1 Tribal Cultural Resource Observation and Salvage. Prior to the initiation of construction, IRWD shall retain a qualified Archaeologist, knowledgeable in Native American Tribal Resources, to be available "on-call" throughout the duration of ground-disturbing activities. The Archaeologist shall be present at the pre-grade conference; shall, in consultation with IRWD and consulting Native American tribal representative(s), establish procedures for tribal cultural resource surveillance; and shall establish, in consultation with IRWD and consulting Native American tribal representative(s), procedures for temporarily halting or redirecting work to permit the sampling, identification, and evaluation of the artifacts as appropriate. If the tribal cultural resources are found to be significant, the Archaeologist shall determine appropriate actions, in consultation with IRWD and consulting Native American tribal representative(s), for exploration and/or salvage. Following the completion of all earth-disturbance activities, the Archaeologist's Report will be provided to IRWD and consulting Native American tribal representative(s).

XVIII. UTILITIES AND SERVICE SYSTEMS

IMPACT ANALYSIS

Would the Project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

e) 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 Impact. The Project would involve construction of a water reservoir and associated facilities and the installation of a security fence; the existing driveway location would remain unchanged and access road would be realigned behind the driveway within the Project boundaries. Minor amounts of wastewater would be generated on an irregular basis during backwash and strainer cleanouts at the proposed Project site; however, this wastewater would be recycled back into the untreated system. The Project would not require any new connections to IRWD's sewer system. The Project would not exceed wastewater treatment requirements.

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Water

No Impact. Development of the proposed Project would serve to enhance the water supply system by improving the reliability of IRWD's water supply. No additional impacts related to water-related facilities are anticipated and no mitigation is required.

Wastewater

No Impact. As noted previously in the responses to Questions XVIII.a and XVIII.e, the Project would involve construction of a water reservoir and associated facilities and would generate minor

amounts of backwash water on an irregular basis. No impacts would occur related to capacity of wastewater infrastructure or wastewater treatment facilities.

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Less Than Significant Impact. Development of the proposed Project would involve construction of a new domestic water reservoir. As discussed previously in Section IX, Hydrology and Water Quality, development of the proposed Project would increase the impervious surface area on the proposed Project site by 25,000 sf. Because the proposed Project would introduce impervious surfaces to a previously natural area, the post-development runoff that would be generated on-site would be slightly higher than the pre-development runoff. Under existing conditions, surface storm water flows from the existing Zone 1 Reservoir and the access road are directed into a concrete-lined V-ditch that runs along the outside of the access road, and then conveyed off site by the V-ditch through a 21-inch drainage pipe located in the southwestern portion of the site. Drainage from the undeveloped vegetated areas in the southern and western portions of the site is directed into the V-ditch along the access road through V-ditches that run along the slopes of the undeveloped areas. Storm water runoff from the proposed Project site would be collected and conveyed to a concrete ribbon gutter, which would direct site drainage to the existing catch basin located south of the South County Zone 1–3 booster pump station; this would keep the overall drainage pattern of the IRWD-owned parcel similar to the existing drainage pattern. Additionally, the proposed reservoir would have overflow piping, which would connect directly to a buried storm drain pipe within Sand Canyon Avenue. Therefore, the Project would not require the expansion of existing storm drain facilities, and impacts would be less than significant.

d) Have sufficient water supplies available to serve the Project from existing entitlements and resources, or are new or expanded entitlements needed?

No Impact. As discussed previously in the response to Question XVIII.b, development of the proposed Project would serve to enhance the water supply by improving the reliability of IRWD's water supply. No additional impacts related to utilities and service systems are anticipated and no mitigation is required.

f) Be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs?

No Impact. Solid waste generated from the Project site would most likely be disposed of at the Frank R. Bowerman Landfill, which is part of the Orange County landfill system operated by OC Waste & Recycling. The landfill is permitted to receive a maximum of 11,500 tons per day (tpd). The Frank R. Bowerman Landfill is approximately 725 acres with 530 acres permitted for refuse disposal. The landfill opened in 1990 and is scheduled to close in approximately 2075. The increase in solid waste disposal resulting from implementation of the Project could be accommodated within the permitted capacity of the County's overall landfill system, which includes the Frank R. Bowerman Landfill (Arnau 2017). No impact related to landfill capacity would occur from implementation of the proposed Project and no mitigation is required.

g) Comply with Federal, State, and local statutes and regulations related to solid waste?

No Impact. Solid waste practices in California are governed by multiple federal, State, and local agencies that enforce legislation and regulations to ensure landfill operations minimize impacts to public health and safety and the environment. OC Waste & Recycling is obligated to obtain a

Solid Waste Facilities Permit, a Storm Water Discharge Permit, and a permit to construct and operate gas management systems and to meet Waste Discharge Requirements. The Local Enforcement Agency (the SCAQMD) and the SWRCB enforce landfill regulations related to health, air quality, and water quality, respectively. The proposed Project would not inhibit OC Waste & Recycling's compliance with the requirements of each of these governing bodies. No impact would occur and no mitigation is required.

XIX. MANDATORY FINDINGS OF SIGNIFICANCE

IMPACT ANALYSIS

Does the Project:

a) 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?

Less Than Significant With Mitigation. As described throughout the analysis in Section 5.0, with the incorporation of the identified mitigation measures, implementation of the proposed Project would not degrade the quality of the environment; would not substantially reduce the habitats of fish or wildlife species; would not cause a fish or wildlife population to drop below self-sustaining levels; would not threaten to eliminate a plant or animal; and would not eliminate important examples of major periods of California history or prehistory. With respect to the quality of the environment, the Project would not preclude the ability to achieve long-term environmental goals.

b) 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)?

Less Than Significant With Mitigation. While the Project may have the potential to impact the environment, specific regulatory requirements and mitigation measures would be implemented to reduce these impacts to a less than significant level.

c) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Less Than Significant With Mitigation. Based on the analysis of the above-listed topics, the proposed Project could have the potential to impact human beings, either directly or indirectly; however, the implementation of the mitigation measures described throughout this document would reduce all potential impacts to less than significant levels.

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Appendix A

Mitigation Monitoring and Reporting Program

MITIGATION MONITORING AND REPORTING PROGRAM

INTRODUCTION

In accordance with the requirements of Public Resources Code Section 21081.6, and as part of its certification of the adequacy of the Mitigated Negative Declaration (MND) for the ILP North Conversion Project, the following "Mitigation Monitoring and Reporting Plan" ("MMRP" or "Plan") is hereby adopted for this Project. The principal purpose of the MMRP is to ensure that the mitigation measures for the adopted Project are reported and monitored so as to ensure compliance with the measures' requirements.

MITIGATION MONITORING AND REPORTING PLAN

The MMRP is provided in tabular format to facilitate effective tracking and documentation of the status of mitigation measures. The attached MMRP Table provides the following monitoring information:

- **Mitigation Program.** The text of all adopted mitigation program for the Project from the MND.
- **Implementation Action.** This summarizes the action that must be taken to implement the required measure.
- **Timing of Verification.** This identifies when in the process the measure needs to be implemented.
- **Responsible Party.** The party responsible for overseeing the implementation and completion of each measure.

Mitigation Program	Implementing Action(s)	Time of Verification	Responsible Party
AIR QUALITY			
AQ-1. During construction of the Project, Irvine Ranch Water District (IRWD) and its contractors shall be required to comply with regional rules, which would assist in reducing short-term air pollutant emissions. SCAQMD Rule 402 requires that air pollutant emissions not be a nuisance off site. SCAQMD Rule 403 requires that fugitive dust be controlled with the best available control measures so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source.	Verification of compliance with Rule 402 and Rule 403	Inclusion of requirements in contract specifications/ verify during construction	IRWD/Construction Contractor
BIOLOGICAL RESOURCES			
BIO-1. To the extent practicable, IRWD will plan vegetation removal efforts to occur between September 1 and January 31, which is outside the breeding season for nesting birds and raptors. If tree trimming or vegetation removal occurs during the breeding season for nesting raptors (i.e., February 1 to June 30) or nesting birds (i.e., between February 15 and August 31), IRWD will retain a qualified Biologist to conduct a pre-construction nesting bird survey within seven to ten days prior to ground disturbance activities associated with construction (i.e. site clearing, grading or excavation) to ensure that no active bird or raptor nests would be impacted. If an active nest is observed within the proposed work area, IRWD, in consultation with a qualified Biologist, will determine the appropriate construction limitations, which may include but not limited to erection of sound barriers, full-time monitoring by a qualified biologist or establishment of no-construction buffers. If necessary, limits of construction to avoid an active nest shall be established in the field with flagging, fencing or other appropriate barriers. Any nest found during survey efforts will be mapped on construction plans. If no active nests are found, no further mitigation will be required.	Limit vegetation removal between September 1 and January 31/Conduct a pre-construction nesting bird survey	Prior to initiation of ground disturbance activities associated with construction (i.e. site clearing, grading, or excavation)/ verify implementation during ground disturbances	IRWD/Construction Contractor
CULTURAL RESOURCES			
CULT-1. Archaeological Observation and Salvage. Prior to the initiation of construction, IRWD shall retain a qualified archaeologist to be available "on-call" throughout the duration of the ground-disturbing activities. The archaeologist shall be present at the pre-construction conference; shall, in consultation with IRWD, establish procedures for archaeological resource surveillance; and shall establish, in consultation with IRWD, procedures for temporarily halting or redirecting work to permit the sampling, identification, and evaluation of the artifacts as appropriate. If the archaeological resources are found to be significant, the archaeological observer shall determine appropriate actions, in consultation with IRWD, for exploration and/or salvage. Following the completion of all earth-disturbance activities, the Archaeologist's Report will be provided to IRWD.	Conduct archaeological observation and salvage during ground disturbance activities	Prior to initiation of construction/ verify implementation during ground disturbances	IRWD/Construction Contractor

Mitigation Program	Implementing Action(s)	Time of Verification	Responsible Party
CULT-2. Paleontological Observation and Salvage. Prior to the initiation of grading, IRWD shall retain a qualified paleontologist to be available "on-call" throughout the duration of grading activities that exceed five feet in depth in previously undisturbed soils. In the event that prehistoric or historic subsurface cultural resources are discovered during ground-disturbing activities, all work within 50 feet of the resources will be halted and IRWD will consult with the qualified paleontologist to assess the significance of the find according to *CEQA Guidelines* Section 15064.5. If any find is determined to be significant, IRWD and the archaeologist will meet to determine the appropriate avoidance measures or other appropriate mitigation. IRWD will make the final determination. All significant cultural materials recovered will be reviewed by the consulting paleontologist and discussed with IRWD. IRWD and the consulting Paleontologist will discuss the findings subject to scientific analysis, professional museum curation, and documentation according to current professional standards and IRWD will make the final determination. The qualified paleontologist shall be retained to review project design plans and consult with IRWD as to when and where monitoring is required during construction. Based on observations, monitoring may be reduced or discontinued if the qualified paleontologist determines that the possibility of encountering fossiliferious deposits is low. When on site, the qualified paleontologist will prepare a final monitoring report to be submitted to IRWD.	Conduct paleontological observation and salvage during grading activities	Prior to initiation of grading/ verify implementation during construction	IRWD/Construction Contractor
CULT-3. In the unlikely event that human remains are encountered, CA Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the county coroner has made a determination of origin and disposition pursuant to CA Public Resources Code Section 5097.98. The county coroner shall be notified immediately if any human remains are found. If the remains are determined to be prehistoric, the coroner will notify the Native American Heritage Commission, which will determine and notify the most likely descendant. With the permission of IRWD or an authorized representative, the most likely descendant may inspect the site of the discovery. IRWD will meet and confer with the most likely descendant regarding their recommendations prior to disturbing the site by further construction activity.	Notify County coroner if human remains are encountered	Implementation during construction	IRWD/Construction Contractor
GEOLOGY AND SOILS			
GEO-1. Prior to approval of final plans and specifications for the proposed Project, IRWD shall review the Project plans to confirm that all recommendations in the *Geotechnical Exploration Report, Irvine Ranch Water District Second Zone 1 Reservoir Project, Southerly Corner of Sand Canyon Avenue and Elysian, City of Irvine, California* (dated January 23, 2017 and prepared by Leighton Consulting, Inc.) and any future geotechnical reports have been fully and appropriately incorporated.	Incorporate all geotechnical recommendations	Prior approval of final plans and specifications/ verify implementation during construction	IRWD/Construction Contractor

Mitigation Program	Implementing Action(s)	Time of Verification	Responsible Party
HYDROLOGY AND WATER QUALITY			
HYDRO-1. Prior to initiation of construction, IRWD shall ensure that a Notice of Intent with the State Water Resources Control Board (SWRCB) has been filed in order to obtain coverage under the Construction General Permit. Pursuant to the permit requirements, the construction contractor shall develop a Storm Water Pollution Prevention Plan (SWPPP) that incorporates Best Management Practices for reducing or eliminating construction-related pollutants in the site runoff.	File Notice of Intent with State Water Resources Control Board/ Develop a SWPPP	Prior to initiation of construction/ verify implementation during construction	IRWD/Construction Contractor
TRIBAL CULTURAL RESOURCES			
TRIB CULT-1. Tribal Cultural Resource Observation and Salvage. Prior to the initiation of construction, IRWD shall retain a qualified Archaeologist, knowledgeable in Native American Tribal Resources, to be available "on-call" throughout the duration of ground-disturbing activities. The Archaeologist shall be present at the pre-construction conference; shall, in consultation with IRWD and consulting Native American tribal representative(s), establish procedures for tribal cultural resource surveillance; and shall establish, in consultation with IRWD and consulting Native American tribal representative(s), procedures for temporarily halting or redirecting work to permit the sampling, identification, and evaluation of the artifacts as appropriate. If the tribal cultural resources are found to be significant, the Archaeologist shall determine appropriate actions, in consultation with IRWD and consulting Native American tribal representative(s), for exploration and/or salvage. Following the completion of all ground-disturbance activities, the Archaeologist's Report will be provided to IRWD and consulting Native American tribal representative(s).	Conduct tribal cultural observation and salvage during ground disturbing activities	Prior to initiation of construction/ verify implementation during construction	IRWD/Construction Contractor

Appendix B

3.7 MG Zone 1 Reservoir
CalEEMod Calculations

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	18.87	1000sqft	0.43	18,869.00	0
Other Asphalt Surfaces	14.00	1000sqft	0.32	14,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - .

Land Use - Water tank- from site plan. Parking lot- estimate from site plan aerial.

Construction Phase - Based on Data Needs

Off-road Equipment - Defaults, plus crane/excavator

Off-road Equipment - Defualts, plus Crane and Excavator

Off-road Equipment - Defaults, plus crane and exc.

Off-road Equipment - Defaults, plus excavator

Off-road Equipment - Defaults, plus excavator

Trips and VMT - Default- need hauling trip numbers

Demolition - Placeholder for quantities

Grading - Placeholder for quantities

Vehicle Trips - 1 trip per day

Vehicle Emission Factors - Defaults.

Vehicle Emission Factors -

Vehicle Emission Factors -

Area Coating - defaults

Construction Off-road Equipment Mitigation -

Consumer Products - Energy considered negligible

Energy Use - Energy negligible

Water And Wastewater - defaults

Solid Waste - Defaults

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstructionPhase	NumDays	100.00	140.00
tblConstructionPhase	NumDays	100.00	84.00
tblConstructionPhase	NumDays	10.00	42.00
tblConstructionPhase	NumDays	2.00	42.00
tblConstructionPhase	NumDays	5.00	42.00
tblEnergyUse	LightingElect	3.08	0.00
tblEnergyUse	NT24E	3.83	0.00
tblEnergyUse	NT24NG	6.86	0.00
tblEnergyUse	T24E	1.71	0.00
tblEnergyUse	T24NG	14.11	0.00
tblLandUse	BuildingSpaceSquareFeet	18,870.00	18,869.00
tblLandUse	LandUseSquareFeet	18,870.00	18,869.00
tblProjectCharacteristics	OperationalYear	2018	2019
tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	SU_TR	0.68	0.00
tblVehicleTrips	WD_TR	6.97	0.05

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					
2018	3.9159	38.1347	27.9812	0.0493	0.9204	2.0272	2.4519	0.4583	1.8898	2.0025	0.0000	4,855.8764	4,855.8764	1.2232	0.0000	4,886.4560
2019	1.3029	13.1122	11.4334	0.0193	0.1884	0.7397	0.9281	0.0507	0.6806	0.7313	0.0000	1,921.1811	1,921.1811	0.5343	0.0000	1,934.5387
Maximum	**3.9159**	**38.1347**	**27.9812**	**0.0493**	**0.9204**	**2.0272**	**2.4519**	**0.4583**	**1.8898**	**2.0025**	**0.0000**	**4,855.8764**	**4,855.8764**	**1.2232**	**0.0000**	**4,886.4560**

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					
2018	3.9159	38.1347	27.9812	0.0493	0.5064	2.0272	2.4519	0.2307	1.8898	2.0025	0.0000	4,855.8764	4,855.8764	1.2232	0.0000	4,886.4560
2019	1.3029	13.1122	11.4334	0.0193	0.1884	0.7397	0.9281	0.0507	0.6806	0.7313	0.0000	1,921.1811	1,921.1811	0.5343	0.0000	1,934.5387
Maximum	**3.9159**	**38.1347**	**27.9812**	**0.0493**	**0.5064**	**2.0272**	**2.4519**	**0.2307**	**1.8898**	**2.0025**	**0.0000**	**4,855.8764**	**4,855.8764**	**1.2232**	**0.0000**	**4,886.4560**

	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	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**37.34**	**0.00**	**0.00**	**44.72**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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	0.4279	3.0000e-005	3.3900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.1900e-003	7.1900e-003	2.0000e-005		7.6800e-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	2.0600e-003	9.5500e-003	0.0300	1.1000e-004	9.3900e-003	1.2000e-004	9.5200e-003	2.5100e-003	1.2000e-004	2.6300e-003		10.8015	10.8015	4.7000e-004		10.8134
Total	**0.4299**	**9.5800e-003**	**0.0334**	**1.1000e-004**	**9.3900e-003**	**1.3000e-004**	**9.5300e-003**	**2.5100e-003**	**1.3000e-004**	**2.6400e-003**		**10.8087**	**10.8087**	**4.9000e-004**	**0.0000**	**10.8211**

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	0.4279	3.0000e-005	3.3900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.1900e-003	7.1900e-003	2.0000e-005		7.6800e-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	2.0600e-003	9.5500e-003	0.0300	1.1000e-004	9.3900e-003	1.2000e-004	9.5200e-003	2.5100e-003	1.2000e-004	2.6300e-003		10.8015	10.8015	4.7000e-004		10.8134
Total	**0.4299**	**9.5800e-003**	**0.0334**	**1.1000e-004**	**9.3900e-003**	**1.3000e-004**	**9.5300e-003**	**2.5100e-003**	**1.3000e-004**	**2.6400e-003**		**10.8087**	**10.8087**	**4.9000e-004**	**0.0000**	**10.8211**

	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	N20	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	3/13/2018	5/9/2018	5	42	
2	Access Road Construction	Paving	3/13/2018	5/9/2018	5	42	
3	Grading	Grading	5/10/2018	7/6/2018	5	42	
4	Tank Construction	Building Construction	7/9/2018	1/18/2019	5	140	
5	Vault Construciton, site improvements etc	Building Construction	1/21/2019	5/16/2019	5	84	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.32

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Cranes	1	8.00	231	0.29
Demolition	Excavators	1	8.00	158	0.38
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Access Road Construction	Cement and Mortar Mixers	4	6.00	9	0.56
Access Road Construction	Cranes	1	8.00	231	0.29
Access Road Construction	Excavators	1	8.00	158	0.38
Access Road Construction	Graders	0	0.00	187	0.41
Access Road Construction	Pavers	1	7.00	130	0.42

Access Road Construction	Rollers	1	7.00	80	0.38
Access Road Construction	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Cranes	1	8.00	231	0.29
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
Tank Construction	Cranes	1	4.00	231	0.29
Tank Construction	Excavators	1	8.00	158	0.38
Tank Construction	Forklifts	2	6.00	89	0.20
Tank Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Vault Construciton, site improvements etc	Cement and Mortar Mixers	0		9	0.56
Vault Construciton, site improvements etc	Cranes	1	4.00	231	0.29
Vault Construciton, site improvements etc	Excavators	1	8.00	158	0.38
Vault Construciton, site improvements etc	Forklifts	2	6.00	89	0.20
Vault Construciton, site improvements etc	Pavers	0		130	0.42
Vault Construciton, site improvements etc	Rollers	0		80	0.38
Vault Construciton, site improvements etc	Tractors/Loaders/Backhoes	2	8.00	97	0.37

Trips and VMT

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	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Access Road Construction	9	23.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Tank Construction	6	14.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Vault Construciton, site improvements etc	6	14.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2018

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	1.9242	19.3462	13.5738	0.0229		1.0681	1.0681		1.0040	1.0040		2,269.5332	2,269.5332	0.5679		2,283.7312
Total	**1.9242**	**19.3462**	**13.5738**	**0.0229**		**1.0681**	**1.0681**		**1.0040**	**1.0040**		**2,269.5332**	**2,269.5332**	**0.5679**		**2,283.7312**

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	0.0757	0.0502	0.5471	1.6500e-003	0.1677	1.1100e-003	0.1688	0.0445	1.0200e-003	0.0455		164.2196	164.2196	4.3700e-003		164.3288
Total	**0.0757**	**0.0502**	**0.5471**	**1.6500e-003**	**0.1677**	**1.1100e-003**	**0.1688**	**0.0445**	**1.0200e-003**	**0.0455**		**164.2196**	**164.2196**	**4.3700e-003**		**164.3288**

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	1.9242	19.3462	13.5738	0.0229		1.0681	1.0681		1.0040	1.0040	0.0000	2,269.5332	2,269.5332	0.5679		2,283.7312
Total	**1.9242**	**19.3462**	**13.5738**	**0.0229**		**1.0681**	**1.0681**		**1.0040**	**1.0040**	**0.0000**	**2,269.5332**	**2,269.5332**	**0.5679**		**2,283.7312**

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	0.0757	0.0502	0.5471	1.6500e-003	0.1677	1.1100e-003	0.1688	0.0445	1.0200e-003	0.0455		164.2196	164.2196	4.3700e-003		164.3288
Total	**0.0757**	**0.0502**	**0.5471**	**1.6500e-003**	**0.1677**	**1.1100e-003**	**0.1688**	**0.0445**	**1.0200e-003**	**0.0455**		**164.2196**	**164.2196**	**4.3700e-003**		**164.3288**

3.3 Access Road Construction - 2018

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	1.7801	18.6614	13.0215	0.0222		0.9563	0.9563		0.8832	0.8832		2,170.3202	2,170.3202	0.6442		2,186.4253
Paving	0.0200					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.8000**	**18.6614**	**13.0215**	**0.0222**		**0.9563**	**0.9563**		**0.8832**	**0.8832**		**2,170.3202**	**2,170.3202**	**0.6442**		**2,186.4253**

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	0.1160	0.0770	0.8389	2.5300e-003	0.2571	1.7000e-003	0.2588	0.0682	1.5600e-003	0.0697		251.8034	251.8034	6.6900e-003		251.9708
Total	**0.1160**	**0.0770**	**0.8389**	**2.5300e-003**	**0.2571**	**1.7000e-003**	**0.2588**	**0.0682**	**1.5600e-003**	**0.0697**		**251.8034**	**251.8034**	**6.6900e-003**		**251.9708**

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	1.7801	18.6614	13.0215	0.0222		0.9563	0.9563		0.8832	0.8832	0.0000	2,170.3202	2,170.3202	0.6442		2,186.4253
Paving	0.0200					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.8000**	**18.6614**	**13.0215**	**0.0222**		**0.9563**	**0.9563**		**0.8832**	**0.8832**	**0.0000**	**2,170.3202**	**2,170.3202**	**0.6442**		**2,186.4253**

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	0.1160	0.0770	0.8389	2.5300e-003	0.2571	1.7000e-003	0.2588	0.0682	1.5600e-003	0.0697		251.8034	251.8034	6.6900e-003		251.9708
Total	**0.1160**	**0.0770**	**0.8389**	**2.5300e-003**	**0.2571**	**1.7000e-003**	**0.2588**	**0.0682**	**1.5600e-003**	**0.0697**		**251.8034**	**251.8034**	**6.6900e-003**		**251.9708**

3.4 Grading - 2018

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					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	1.9242	19.3462	13.5738	0.0229		1.0681	1.0681		1.0040	1.0040		2,269.5332	2,269.5332	0.5679		2,283.7312
Total	**1.9242**	**19.3462**	**13.5738**	**0.0229**	**0.7528**	**1.0681**	**1.8209**	**0.4138**	**1.0040**	**1.4178**		**2,269.5332**	**2,269.5332**	**0.5679**		**2,283.7312**

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	0.0757	0.0502	0.5471	1.6500e-003	0.1677	1.1100e-003	0.1688	0.0445	1.0200e-003	0.0455		164.2196	164.2196	4.3700e-003		164.3288
Total	**0.0757**	**0.0502**	**0.5471**	**1.6500e-003**	**0.1677**	**1.1100e-003**	**0.1688**	**0.0445**	**1.0200e-003**	**0.0455**		**164.2196**	**164.2196**	**4.3700e-003**		**164.3288**

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					0.3387	0.0000	0.3387	0.1862	0.0000	0.1862			0.0000			0.0000
Off-Road	1.9242	19.3462	13.5738	0.0229		1.0681	1.0681		1.0040	1.0040	0.0000	2,269.5332	2,269.5332	0.5679		2,283.7312
Total	**1.9242**	**19.3462**	**13.5738**	**0.0229**	**0.3387**	**1.0681**	**1.4069**	**0.1862**	**1.0040**	**1.1902**	**0.0000**	**2,269.5332**	**2,269.5332**	**0.5679**		**2,283.7312**

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	0.0757	0.0502	0.5471	1.6500e-003	0.1677	1.1100e-003	0.1688	0.0445	1.0200e-003	0.0455		164.2196	164.2196	4.3700e-003		164.3288
Total	**0.0757**	**0.0502**	**0.5471**	**1.6500e-003**	**0.1677**	**1.1100e-003**	**0.1688**	**0.0445**	**1.0200e-003**	**0.0455**		**164.2196**	**164.2196**	**4.3700e-003**		**164.3288**

3.5 Tank Construction - 2018

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	1.3739	14.1275	11.0269	0.0166		0.8588	0.8588		0.7901	0.7901		1,666.1173	1,666.1173	0.5187		1,679.0844
Total	**1.3739**	**14.1275**	**11.0269**	**0.0166**		**0.8588**	**0.8588**		**0.7901**	**0.7901**		**1,666.1173**	**1,666.1173**	**0.5187**		**1,679.0844**

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	0.0211	0.5974	0.1757	1.2300e-003	0.0320	4.4900e-003	0.0364	9.1900e-003	4.3000e-003	0.0135		133.8574	133.8574	0.0126		134.1711
Worker	0.0706	0.0469	0.5106	1.5400e-003	0.1565	1.0300e-003	0.1575	0.0415	9.5000e-004	0.0425		153.2716	153.2716	4.0700e-003		153.3735
Total	**0.0918**	**0.6443**	**0.6863**	**2.7700e-003**	**0.1884**	**5.5200e-003**	**0.1940**	**0.0507**	**5.2500e-003**	**0.0559**		**287.1290**	**287.1290**	**0.0166**		**287.5446**

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	1.3739	14.1275	11.0269	0.0166		0.8588	0.8588		0.7901	0.7901	0.0000	1,666.1173	1,666.1173	0.5187		1,679.0844
Total	**1.3739**	**14.1275**	**11.0269**	**0.0166**		**0.8588**	**0.8588**		**0.7901**	**0.7901**	**0.0000**	**1,666.1173**	**1,666.1173**	**0.5187**		**1,679.0844**

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	0.0211	0.5974	0.1757	1.2300e-003	0.0320	4.4900e-003	0.0364	9.1900e-003	4.3000e-003	0.0135		133.8574	133.8574	0.0126		134.1711
Worker	0.0706	0.0469	0.5106	1.5400e-003	0.1565	1.0300e-003	0.1575	0.0415	9.5000e-004	0.0425		153.2716	153.2716	4.0700e-003		153.3735
Total	**0.0918**	**0.6443**	**0.6863**	**2.7700e-003**	**0.1884**	**5.5200e-003**	**0.1940**	**0.0507**	**5.2500e-003**	**0.0559**		**287.1290**	**287.1290**	**0.0166**		**287.5446**

3.5 Tank Construction - 2019

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	1.2183	12.5026	10.8064	0.0166		0.7347	0.7347		0.6759	0.6759		1,638.7952	1,638.7952	0.5185		1,651.7576
Total	**1.2183**	**12.5026**	**10.8064**	**0.0166**		**0.7347**	**0.7347**		**0.6759**	**0.6759**		**1,638.7952**	**1,638.7952**	**0.5185**		**1,651.7576**

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	0.0196	0.5680	0.1647	1.2300e-003	0.0320	3.9000e-003	0.0359	9.1900e-003	3.7400e-003	0.0129		133.1776	133.1776	0.0121		133.4808
Worker	0.0651	0.0416	0.4624	1.5000e-003	0.1565	1.0500e-003	0.1575	0.0415	9.6000e-004	0.0425		149.2083	149.2083	3.6800e-003		149.3002
Total	**0.0846**	**0.6096**	**0.6271**	**2.7300e-003**	**0.1884**	**4.9500e-003**	**0.1934**	**0.0507**	**4.7000e-003**	**0.0554**		**282.3859**	**282.3859**	**0.0158**		**282.7810**

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	1.2183	12.5026	10.8064	0.0166		0.7347	0.7347		0.6759	0.6759	0.0000	1,638.7952	1,638.7952	0.5185		1,651.7576
Total	**1.2183**	**12.5026**	**10.8064**	**0.0166**		**0.7347**	**0.7347**		**0.6759**	**0.6759**	**0.0000**	**1,638.7952**	**1,638.7952**	**0.5185**		**1,651.7576**

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	0.0196	0.5680	0.1647	1.2300e-003	0.0320	3.9000e-003	0.0359	9.1900e-003	3.7400e-003	0.0129		133.1776	133.1776	0.0121		133.4808
Worker	0.0651	0.0416	0.4624	1.5000e-003	0.1565	1.0500e-003	0.1575	0.0415	9.6000e-004	0.0425		149.2083	149.2083	3.6800e-003		149.3002
Total	**0.0846**	**0.6096**	**0.6271**	**2.7300e-003**	**0.1884**	**4.9500e-003**	**0.1934**	**0.0507**	**4.7000e-003**	**0.0554**		**282.3859**	**282.3859**	**0.0158**		**282.7810**

3.6 Vault Construciton, site improvements etc - 2019

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	1.2183	12.5026	10.8064	0.0166		0.7347	0.7347		0.6759	0.6759		1,638.7952	1,638.7952	0.5185		1,651.7576
Total	**1.2183**	**12.5026**	**10.8064**	**0.0166**		**0.7347**	**0.7347**		**0.6759**	**0.6759**		**1,638.7952**	**1,638.7952**	**0.5185**		**1,651.7576**

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	0.0196	0.5680	0.1647	1.2300e-003	0.0320	3.9000e-003	0.0359	9.1900e-003	3.7400e-003	0.0129		133.1776	133.1776	0.0121		133.4808
Worker	0.0651	0.0416	0.4624	1.5000e-003	0.1565	1.0500e-003	0.1575	0.0415	9.6000e-004	0.0425		149.2083	149.2083	3.6800e-003		149.3002
Total	**0.0846**	**0.6096**	**0.6271**	**2.7300e-003**	**0.1884**	**4.9500e-003**	**0.1934**	**0.0507**	**4.7000e-003**	**0.0554**		**282.3859**	**282.3859**	**0.0158**		**282.7810**

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	1.2183	12.5026	10.8064	0.0166		0.7347	0.7347		0.6759	0.6759	0.0000	1,638.7952	1,638.7952	0.5185		1,651.7576
Total	**1.2183**	**12.5026**	**10.8064**	**0.0166**		**0.7347**	**0.7347**		**0.6759**	**0.6759**	**0.0000**	**1,638.7952**	**1,638.7952**	**0.5185**		**1,651.7576**

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	0.0196	0.5680	0.1647	1.2300e-003	0.0320	3.9000e-003	0.0359	9.1900e-003	3.7400e-003	0.0129		133.1776	133.1776	0.0121		133.4808
Worker	0.0651	0.0416	0.4624	1.5000e-003	0.1565	1.0500e-003	0.1575	0.0415	9.6000e-004	0.0425		149.2083	149.2083	3.6800e-003		149.3002
Total	**0.0846**	**0.6096**	**0.6271**	**2.7300e-003**	**0.1884**	**4.9500e-003**	**0.1934**	**0.0507**	**4.7000e-003**	**0.0554**		**282.3859**	**282.3859**	**0.0158**		**282.7810**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	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	2.0600e-003	9.5500e-003	0.0300	1.1000e-004	9.3900e-003	1.2000e-004	9.5200e-003	2.5100e-003	1.2000e-004	2.6300e-003		10.8015	10.8015	4.7000e-004		10.8134
Unmitigated	2.0600e-003	9.5500e-003	0.0300	1.1000e-004	9.3900e-003	1.2000e-004	9.5200e-003	2.5100e-003	1.2000e-004	2.6300e-003		10.8015	10.8015	4.7000e-004		10.8134

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	1.00	0.00	0.00	3,163	3,163
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	1.00	0.00	0.00	3,163	3,163

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	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
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
Other 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
General Light Industry	0.552373	0.044229	0.211123	0.119112	0.017503	0.005797	0.024455	0.015685	0.001637	0.001633	0.004830	0.000583	0.001041
Other Asphalt Surfaces	0.552373	0.044229	0.211123	0.119112	0.017503	0.005797	0.024455	0.015685	0.001637	0.001633	0.004830	0.000583	0.001041

5.0 Energy Detail

Historical Energy Use: N

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					
General Light Industry	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
Other 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
Total		**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**

Mitigated

	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					
General Light Industry	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
Other 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
Total		**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**

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	0.4279	3.0000e-005	3.3900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.1900e-003	7.1900e-003	2.0000e-005		7.6800e-003
Unmitigated	0.4279	3.0000e-005	3.3900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.1900e-003	7.1900e-003	2.0000e-005		7.6800e-003

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	0.0490					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3786					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.2000e-004	3.0000e-005	3.3900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.1900e-003	7.1900e-003	2.0000e-005		7.6800e-003
Total	**0.4279**	**3.0000e-005**	**3.3900e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**7.1900e-003**	**7.1900e-003**	**2.0000e-005**		**7.6800e-003**

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	0.0490					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3786					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.2000e-004	3.0000e-005	3.3900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.1900e-003	7.1900e-003	2.0000e-005		7.6800e-003
Total	**0.4279**	**3.0000e-005**	**3.3900e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**7.1900e-003**	**7.1900e-003**	**2.0000e-005**		**7.6800e-003**

7.0 Water Detail

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	18.87	1000sqft	0.43	18,869.00	0
Other Asphalt Surfaces	14.00	1000sqft	0.32	14,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - .

Land Use - Water tank- from site plan. Parking lot- estimate from site plan aerial.

Construction Phase - Based on Data Needs

Off-road Equipment - Defaults, plus crane/excavator

Off-road Equipment - Defualts, plus Crane and Excavator

Off-road Equipment - Defaults, plus crane and exc.

Off-road Equipment - Defaults, plus excavator

Off-road Equipment - Defaults, plus excavator

Trips and VMT - Default- need hauling trip numbers

Demolition - Placeholder for quantities

Grading - Placeholder for quantities

Vehicle Trips - 1 trip per day

Vehicle Emission Factors - Defaults.

Vehicle Emission Factors -

Vehicle Emission Factors -

Area Coating - defaults

Construction Off-road Equipment Mitigation -

Consumer Products - Energy considered negligible

Energy Use - Energy negligible

Water And Wastewater - defaults

Solid Waste - Defaults

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstructionPhase	NumDays	100.00	140.00
tblConstructionPhase	NumDays	100.00	84.00
tblConstructionPhase	NumDays	10.00	42.00
tblConstructionPhase	NumDays	2.00	42.00
tblConstructionPhase	NumDays	5.00	42.00
tblEnergyUse	LightingElect	3.08	0.00
tblEnergyUse	NT24E	3.83	0.00
tblEnergyUse	NT24NG	6.86	0.00
tblEnergyUse	T24E	1.71	0.00
tblEnergyUse	T24NG	14.11	0.00
tblLandUse	BuildingSpaceSquareFeet	18,870.00	18,869.00
tblLandUse	LandUseSquareFeet	18,870.00	18,869.00
tblProjectCharacteristics	OperationalYear	2018	2019
tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	SU_TR	0.68	0.00
tblVehicleTrips	WD_TR	6.97	0.05

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					
2018	3.8943	38.1233	28.0879	0.0495	0.9204	2.0272	2.4519	0.4583	1.8898	2.0025	0.0000	4,879.3902	4,879.3902	1.2238	0.0000	4,909.9842
2019	1.2947	13.1078	11.4558	0.0194	0.1884	0.7396	0.9280	0.0507	0.6806	0.7313	0.0000	1,932.9393	1,932.9393	0.5339	0.0000	1,946.2867
Maximum	**3.8943**	**38.1233**	**28.0879**	**0.0495**	**0.9204**	**2.0272**	**2.4519**	**0.4583**	**1.8898**	**2.0025**	**0.0000**	**4,879.3902**	**4,879.3902**	**1.2238**	**0.0000**	**4,909.9842**

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					
2018	3.8943	38.1233	28.0879	0.0495	0.5064	2.0272	2.4519	0.2307	1.8898	2.0025	0.0000	4,879.3902	4,879.3902	1.2238	0.0000	4,909.9842
2019	1.2947	13.1078	11.4558	0.0194	0.1884	0.7396	0.9280	0.0507	0.6806	0.7313	0.0000	1,932.9393	1,932.9393	0.5339	0.0000	1,946.2867
Maximum	**3.8943**	**38.1233**	**28.0879**	**0.0495**	**0.5064**	**2.0272**	**2.4519**	**0.2307**	**1.8898**	**2.0025**	**0.0000**	**4,879.3902**	**4,879.3902**	**1.2238**	**0.0000**	**4,909.9842**

	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	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**37.34**	**0.00**	**0.00**	**44.72**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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	0.4279	3.0000e-005	3.3900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.1900e-003	7.1900e-003	2.0000e-005		7.6800e-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	2.0900e-003	9.2100e-003	0.0316	1.1000e-004	9.3900e-003	1.2000e-004	9.5200e-003	2.5100e-003	1.1000e-004	2.6300e-003		11.3071	11.3071	4.8000e-004		11.3191
Total	**0.4300**	**9.2400e-003**	**0.0350**	**1.1000e-004**	**9.3900e-003**	**1.3000e-004**	**9.5300e-003**	**2.5100e-003**	**1.2000e-004**	**2.6400e-003**		**11.3143**	**11.3143**	**5.0000e-004**	**0.0000**	**11.3268**

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	0.4279	3.0000e-005	3.3900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.1900e-003	7.1900e-003	2.0000e-005		7.6800e-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	2.0900e-003	9.2100e-003	0.0316	1.1000e-004	9.3900e-003	1.2000e-004	9.5200e-003	2.5100e-003	1.1000e-004	2.6300e-003		11.3071	11.3071	4.8000e-004		11.3191
Total	**0.4300**	**9.2400e-003**	**0.0350**	**1.1000e-004**	**9.3900e-003**	**1.3000e-004**	**9.5300e-003**	**2.5100e-003**	**1.2000e-004**	**2.6400e-003**		**11.3143**	**11.3143**	**5.0000e-004**	**0.0000**	**11.3268**

	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	N20	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	3/13/2018	5/9/2018	5	42	
2	Access Road Construction	Paving	3/13/2018	5/9/2018	5	42	
3	Grading	Grading	5/10/2018	7/6/2018	5	42	
4	Tank Construction	Building Construction	7/9/2018	1/18/2019	5	140	
5	Vault Construciton, site improvements etc	Building Construction	1/21/2019	5/16/2019	5	84	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.32

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Cranes	1	8.00	231	0.29
Demolition	Excavators	1	8.00	158	0.38
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Access Road Construction	Cement and Mortar Mixers	4	6.00	9	0.56
Access Road Construction	Cranes	1	8.00	231	0.29
Access Road Construction	Excavators	1	8.00	158	0.38
Access Road Construction	Graders	0	0.00	187	0.41
Access Road Construction	Pavers	1	7.00	130	0.42
Access Road Construction	Rollers	1	7.00	80	0.38
Access Road Construction	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Cranes	1	8.00	231	0.29
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
Tank Construction	Cranes	1	4.00	231	0.29
Tank Construction	Excavators	1	8.00	158	0.38
Tank Construction	Forklifts	2	6.00	89	0.20
Tank Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Vault Construciton, site improvements etc	Cement and Mortar Mixers	0		9	0.56
Vault Construciton, site improvements etc	Cranes	1	4.00	231	0.29
Vault Construciton, site improvements etc	Excavators	1	8.00	158	0.38
Vault Construciton, site improvements etc	Forklifts	2	6.00	89	0.20

Vault Construciton, site improvements etc	Pavers	0		130	0.42
Vault Construciton, site improvements etc	Rollers	0		80	0.38
Vault Construciton, site improvements etc	Tractors/Loaders/Backhoes	2	8.00	97	0.37

Trips and VMT

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	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Access Road Construction	9	23.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Tank Construction	6	14.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Vault Construciton, site improvements etc	6	14.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2018

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	1.9242	19.3462	13.5738	0.0229		1.0681	1.0681		1.0040	1.0040		2,269.5332	2,269.5332	0.5679		2,283.7312
Total	**1.9242**	**19.3462**	**13.5738**	**0.0229**		**1.0681**	**1.0681**		**1.0040**	**1.0040**		**2,269.5332**	**2,269.5332**	**0.5679**		**2,283.7312**

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	0.0672	0.0457	0.5892	1.7400e-003	0.1677	1.1100e-003	0.1688	0.0445	1.0200e-003	0.0455		173.5014	173.5014	4.5900e-003		173.6162
Total	**0.0672**	**0.0457**	**0.5892**	**1.7400e-003**	**0.1677**	**1.1100e-003**	**0.1688**	**0.0445**	**1.0200e-003**	**0.0455**		**173.5014**	**173.5014**	**4.5900e-003**		**173.6162**

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	1.9242	19.3462	13.5738	0.0229		1.0681	1.0681		1.0040	1.0040	0.0000	2,269.5332	2,269.5332	0.5679		2,283.7312
Total	**1.9242**	**19.3462**	**13.5738**	**0.0229**		**1.0681**	**1.0681**		**1.0040**	**1.0040**	**0.0000**	**2,269.5332**	**2,269.5332**	**0.5679**		**2,283.7312**

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	0.0672	0.0457	0.5892	1.7400e-003	0.1677	1.1100e-003	0.1688	0.0445	1.0200e-003	0.0455		173.5014	173.5014	4.5900e-003		173.6162
Total	**0.0672**	**0.0457**	**0.5892**	**1.7400e-003**	**0.1677**	**1.1100e-003**	**0.1688**	**0.0445**	**1.0200e-003**	**0.0455**		**173.5014**	**173.5014**	**4.5900e-003**		**173.6162**

3.3 Access Road Construction - 2018

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	1.7801	18.6614	13.0215	0.0222		0.9563	0.9563		0.8832	0.8832		2,170.3202	2,170.3202	0.6442		2,186.4253
Paving	0.0200					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.8000**	**18.6614**	**13.0215**	**0.0222**		**0.9563**	**0.9563**		**0.8832**	**0.8832**		**2,170.3202**	**2,170.3202**	**0.6442**		**2,186.4253**

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	0.1030	0.0700	0.9035	2.6700e-003	0.2571	1.7000e-003	0.2588	0.0682	1.5600e-003	0.0697		266.0354	266.0354	7.0400e-003		266.2115
Total	**0.1030**	**0.0700**	**0.9035**	**2.6700e-003**	**0.2571**	**1.7000e-003**	**0.2588**	**0.0682**	**1.5600e-003**	**0.0697**		**266.0354**	**266.0354**	**7.0400e-003**		**266.2115**

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	1.7801	18.6614	13.0215	0.0222		0.9563	0.9563		0.8832	0.8832	0.0000	2,170.3202	2,170.3202	0.6442		2,186.4253
Paving	0.0200					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.8000**	**18.6614**	**13.0215**	**0.0222**		**0.9563**	**0.9563**		**0.8832**	**0.8832**	**0.0000**	**2,170.3202**	**2,170.3202**	**0.6442**		**2,186.4253**

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	0.1030	0.0700	0.9035	2.6700e-003	0.2571	1.7000e-003	0.2588	0.0682	1.5600e-003	0.0697		266.0354	266.0354	7.0400e-003		266.2115
Total	**0.1030**	**0.0700**	**0.9035**	**2.6700e-003**	**0.2571**	**1.7000e-003**	**0.2588**	**0.0682**	**1.5600e-003**	**0.0697**		**266.0354**	**266.0354**	**7.0400e-003**		**266.2115**

3.4 Grading - 2018

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					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	1.9242	19.3462	13.5738	0.0229		1.0681	1.0681		1.0040	1.0040		2,269.5332	2,269.5332	0.5679		2,283.7312
Total	**1.9242**	**19.3462**	**13.5738**	**0.0229**	**0.7528**	**1.0681**	**1.8209**	**0.4138**	**1.0040**	**1.4178**		**2,269.5332**	**2,269.5332**	**0.5679**		**2,283.7312**

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	0.0672	0.0457	0.5892	1.7400e-003	0.1677	1.1100e-003	0.1688	0.0445	1.0200e-003	0.0455		173.5014	173.5014	4.5900e-003		173.6162
Total	**0.0672**	**0.0457**	**0.5892**	**1.7400e-003**	**0.1677**	**1.1100e-003**	**0.1688**	**0.0445**	**1.0200e-003**	**0.0455**		**173.5014**	**173.5014**	**4.5900e-003**		**173.6162**

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					0.3387	0.0000	0.3387	0.1862	0.0000	0.1862			0.0000			0.0000
Off-Road	1.9242	19.3462	13.5738	0.0229		1.0681	1.0681		1.0040	1.0040	0.0000	2,269.5332	2,269.5332	0.5679		2,283.7312
Total	**1.9242**	**19.3462**	**13.5738**	**0.0229**	**0.3387**	**1.0681**	**1.4069**	**0.1862**	**1.0040**	**1.1902**	**0.0000**	**2,269.5332**	**2,269.5332**	**0.5679**		**2,283.7312**

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	0.0672	0.0457	0.5892	1.7400e-003	0.1677	1.1100e-003	0.1688	0.0445	1.0200e-003	0.0455		173.5014	173.5014	4.5900e-003		173.6162
Total	**0.0672**	**0.0457**	**0.5892**	**1.7400e-003**	**0.1677**	**1.1100e-003**	**0.1688**	**0.0445**	**1.0200e-003**	**0.0455**		**173.5014**	**173.5014**	**4.5900e-003**		**173.6162**

3.5 Tank Construction - 2018

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	1.3739	14.1275	11.0269	0.0166		0.8588	0.8588		0.7901	0.7901		1,666.1173	1,666.1173	0.5187		1,679.0844
Total	**1.3739**	**14.1275**	**11.0269**	**0.0166**		**0.8588**	**0.8588**		**0.7901**	**0.7901**		**1,666.1173**	**1,666.1173**	**0.5187**		**1,679.0844**

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	0.0203	0.5965	0.1600	1.2600e-003	0.0320	4.4100e-003	0.0364	9.1900e-003	4.2200e-003	0.0134		137.1642	137.1642	0.0119		137.4617
Worker	0.0627	0.0426	0.5499	1.6300e-003	0.1565	1.0300e-003	0.1575	0.0415	9.5000e-004	0.0425		161.9346	161.9346	4.2900e-003		162.0418
Total	**0.0829**	**0.6391**	**0.7100**	**2.8900e-003**	**0.1884**	**5.4400e-003**	**0.1939**	**0.0507**	**5.1700e-003**	**0.0559**		**299.0988**	**299.0988**	**0.0162**		**299.5035**

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	1.3739	14.1275	11.0269	0.0166		0.8588	0.8588		0.7901	0.7901	0.0000	1,666.1173	1,666.1173	0.5187		1,679.0844
Total	**1.3739**	**14.1275**	**11.0269**	**0.0166**		**0.8588**	**0.8588**		**0.7901**	**0.7901**	**0.0000**	**1,666.1173**	**1,666.1173**	**0.5187**		**1,679.0844**

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	0.0203	0.5965	0.1600	1.2600e-003	0.0320	4.4100e-003	0.0364	9.1900e-003	4.2200e-003	0.0134		137.1642	137.1642	0.0119		137.4617
Worker	0.0627	0.0426	0.5499	1.6300e-003	0.1565	1.0300e-003	0.1575	0.0415	9.5000e-004	0.0425		161.9346	161.9346	4.2900e-003		162.0418
Total	**0.0829**	**0.6391**	**0.7100**	**2.8900e-003**	**0.1884**	**5.4400e-003**	**0.1939**	**0.0507**	**5.1700e-003**	**0.0559**		**299.0988**	**299.0988**	**0.0162**		**299.5035**

3.5 Tank Construction - 2019

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	1.2183	12.5026	10.8064	0.0166		0.7347	0.7347		0.6759	0.6759		1,638.7952	1,638.7952	0.5185		1,651.7576
Total	**1.2183**	**12.5026**	**10.8064**	**0.0166**		**0.7347**	**0.7347**		**0.6759**	**0.6759**		**1,638.7952**	**1,638.7952**	**0.5185**		**1,651.7576**

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	0.0188	0.5674	0.1500	1.2600e-003	0.0320	3.8300e-003	0.0358	9.1900e-003	3.6700e-003	0.0129		136.4844	136.4844	0.0115		136.7725
Worker	0.0577	0.0378	0.4994	1.5800e-003	0.1565	1.0500e-003	0.1575	0.0415	9.6000e-004	0.0425		157.6596	157.6596	3.8800e-003		157.7565
Total	**0.0765**	**0.6052**	**0.6494**	**2.8400e-003**	**0.1884**	**4.8800e-003**	**0.1933**	**0.0507**	**4.6300e-003**	**0.0553**		**294.1441**	**294.1441**	**0.0154**		**294.5290**

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	1.2183	12.5026	10.8064	0.0166		0.7347	0.7347		0.6759	0.6759	0.0000	1,638.7952	1,638.7952	0.5185		1,651.7576
Total	**1.2183**	**12.5026**	**10.8064**	**0.0166**		**0.7347**	**0.7347**		**0.6759**	**0.6759**	**0.0000**	**1,638.7952**	**1,638.7952**	**0.5185**		**1,651.7576**

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	0.0188	0.5674	0.1500	1.2600e-003	0.0320	3.8300e-003	0.0358	9.1900e-003	3.6700e-003	0.0129		136.4844	136.4844	0.0115		136.7725
Worker	0.0577	0.0378	0.4994	1.5800e-003	0.1565	1.0500e-003	0.1575	0.0415	9.6000e-004	0.0425		157.6596	157.6596	3.8800e-003		157.7565
Total	**0.0765**	**0.6052**	**0.6494**	**2.8400e-003**	**0.1884**	**4.8800e-003**	**0.1933**	**0.0507**	**4.6300e-003**	**0.0553**		**294.1441**	**294.1441**	**0.0154**		**294.5290**

3.6 Vault Construciton, site improvements etc - 2019

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	1.2183	12.5026	10.8064	0.0166		0.7347	0.7347		0.6759	0.6759		1,638.7952	1,638.7952	0.5185		1,651.7576
Total	**1.2183**	**12.5026**	**10.8064**	**0.0166**		**0.7347**	**0.7347**		**0.6759**	**0.6759**		**1,638.7952**	**1,638.7952**	**0.5185**		**1,651.7576**

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	0.0188	0.5674	0.1500	1.2600e-003	0.0320	3.8300e-003	0.0358	9.1900e-003	3.6700e-003	0.0129		136.4844	136.4844	0.0115		136.7725
Worker	0.0577	0.0378	0.4994	1.5800e-003	0.1565	1.0500e-003	0.1575	0.0415	9.6000e-004	0.0425		157.6596	157.6596	3.8800e-003		157.7565
Total	**0.0765**	**0.6052**	**0.6494**	**2.8400e-003**	**0.1884**	**4.8800e-003**	**0.1933**	**0.0507**	**4.6300e-003**	**0.0553**		**294.1441**	**294.1441**	**0.0154**		**294.5290**

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	1.2183	12.5026	10.8064	0.0166		0.7347	0.7347		0.6759	0.6759	0.0000	1,638.7952	1,638.7952	0.5185		1,651.7576
Total	**1.2183**	**12.5026**	**10.8064**	**0.0166**		**0.7347**	**0.7347**		**0.6759**	**0.6759**	**0.0000**	**1,638.7952**	**1,638.7952**	**0.5185**		**1,651.7576**

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	0.0188	0.5674	0.1500	1.2600e-003	0.0320	3.8300e-003	0.0358	9.1900e-003	3.6700e-003	0.0129		136.4844	136.4844	0.0115		136.7725
Worker	0.0577	0.0378	0.4994	1.5800e-003	0.1565	1.0500e-003	0.1575	0.0415	9.6000e-004	0.0425		157.6596	157.6596	3.8800e-003		157.7565
Total	**0.0765**	**0.6052**	**0.6494**	**2.8400e-003**	**0.1884**	**4.8800e-003**	**0.1933**	**0.0507**	**4.6300e-003**	**0.0553**		**294.1441**	**294.1441**	**0.0154**		**294.5290**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	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	2.0900e-003	9.2100e-003	0.0316	1.1000e-004	9.3900e-003	1.2000e-004	9.5200e-003	2.5100e-003	1.1000e-004	2.6300e-003		11.3071	11.3071	4.8000e-004		11.3191
Unmitigated	2.0900e-003	9.2100e-003	0.0316	1.1000e-004	9.3900e-003	1.2000e-004	9.5200e-003	2.5100e-003	1.1000e-004	2.6300e-003		11.3071	11.3071	4.8000e-004		11.3191

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	1.00	0.00	0.00	3,163	3,163
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	1.00	0.00	0.00	3,163	3,163

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	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
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
Other 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
General Light Industry	0.552373	0.044229	0.211123	0.119112	0.017503	0.005797	0.024455	0.015685	0.001637	0.001633	0.004830	0.000583	0.001041
Other Asphalt Surfaces	0.552373	0.044229	0.211123	0.119112	0.017503	0.005797	0.024455	0.015685	0.001637	0.001633	0.004830	0.000583	0.001041

5.0 Energy Detail

Historical Energy Use: N

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					
General Light Industry	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
Other 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
Total		**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**

Mitigated

	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					
General Light Industry	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
Other 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
Total		**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**

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	0.4279	3.0000e-005	3.3900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.1900e-003	7.1900e-003	2.0000e-005		7.6800e-003
Unmitigated	0.4279	3.0000e-005	3.3900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.1900e-003	7.1900e-003	2.0000e-005		7.6800e-003

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	0.0490					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3786					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.2000e-004	3.0000e-005	3.3900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.1900e-003	7.1900e-003	2.0000e-005		7.6800e-003
Total	**0.4279**	**3.0000e-005**	**3.3900e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**7.1900e-003**	**7.1900e-003**	**2.0000e-005**		**7.6800e-003**

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	0.0490					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3786					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.2000e-004	3.0000e-005	3.3900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.1900e-003	7.1900e-003	2.0000e-005		7.6800e-003
Total	**0.4279**	**3.0000e-005**	**3.3900e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**7.1900e-003**	**7.1900e-003**	**2.0000e-005**		**7.6800e-003**

7.0 Water Detail

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	18.87	1000sqft	0.43	18,869.00	0
Other Asphalt Surfaces	14.00	1000sqft	0.32	14,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - .

Land Use - Water tank- from site plan. Parking lot- estimate from site plan aerial.

Construction Phase - Based on Data Needs

Off-road Equipment - Defaults, plus crane/excavator

Off-road Equipment - Defualts, plus Crane and Excavator

Off-road Equipment - Defaults, plus crane and exc.

Off-road Equipment - Defaults, plus excavator

Off-road Equipment - Defaults, plus excavator

Trips and VMT - Default- need hauling trip numbers

Demolition - Placeholder for quantities

Grading - Placeholder for quantities

Vehicle Trips - 1 trip per day

Vehicle Emission Factors - Defaults.

Vehicle Emission Factors -

Vehicle Emission Factors -

Area Coating - defaults

Construction Off-road Equipment Mitigation -

Consumer Products - Energy considered negligible

Energy Use - Energy negligible

Water And Wastewater - defaults

Solid Waste - Defaults

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstructionPhase	NumDays	100.00	140.00
tblConstructionPhase	NumDays	100.00	84.00
tblConstructionPhase	NumDays	10.00	42.00
tblConstructionPhase	NumDays	2.00	42.00
tblConstructionPhase	NumDays	5.00	42.00
tblEnergyUse	LightingElect	3.08	0.00
tblEnergyUse	NT24E	3.83	0.00
tblEnergyUse	NT24NG	6.86	0.00
tblEnergyUse	T24E	1.71	0.00
tblEnergyUse	T24NG	14.11	0.00
tblLandUse	BuildingSpaceSquareFeet	18,870.00	18,869.00
tblLandUse	LandUseSquareFeet	18,870.00	18,869.00
tblProjectCharacteristics	OperationalYear	2018	2019
tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	SU_TR	0.68	0.00
tblVehicleTrips	WD_TR	6.97	0.05

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					
2018	0.2155	2.1397	1.6233	2.7700e-003	0.0397	0.1195	0.1592	0.0151	0.1109	0.1260	0.0000	250.9186	250.9186	0.0648	0.0000	252.5382
2019	0.0635	0.6431	0.5604	9.5000e-004	9.0700e-003	0.0362	0.0453	2.4400e-003	0.0334	0.0358	0.0000	85.5870	85.5870	0.0237	0.0000	86.1805
Maximum	**0.2155**	**2.1397**	**1.6233**	**2.7700e-003**	**0.0397**	**0.1195**	**0.1592**	**0.0151**	**0.1109**	**0.1260**	**0.0000**	**250.9186**	**250.9186**	**0.0648**	**0.0000**	**252.5382**

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					
2018	0.2155	2.1397	1.6233	2.7700e-003	0.0310	0.1195	0.1505	0.0103	0.1109	0.1212	0.0000	250.9183	250.9183	0.0648	0.0000	252.5380
2019	0.0635	0.6431	0.5604	9.5000e-004	9.0700e-003	0.0362	0.0453	2.4400e-003	0.0334	0.0358	0.0000	85.5869	85.5869	0.0237	0.0000	86.1804
Maximum	**0.2155**	**2.1397**	**1.6233**	**2.7700e-003**	**0.0310**	**0.1195**	**0.1505**	**0.0103**	**0.1109**	**0.1212**	**0.0000**	**250.9183**	**250.9183**	**0.0648**	**0.0000**	**252.5380**

	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	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**17.82**	**0.00**	**4.25**	**27.28**	**0.00**	**2.95**	**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)
1	1-10-2018	4-9-2018	0.2139	0.2139
2	4-10-2018	7-9-2018	0.6720	0.6720
		Highest	0.6720	0.6720

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	0.0781	0.0000	4.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.2000e-004	8.2000e-004	0.0000	0.0000	8.7000e-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	2.6000e-004	1.2600e-003	3.9600e-003	1.0000e-005	1.2000e-003	2.0000e-005	1.2200e-003	3.2000e-004	1.0000e-005	3.4000e-004	0.0000	1.2892	1.2892	6.0000e-005	0.0000	1.2906
Waste						0.0000	0.0000		0.0000	0.0000	4.7500	0.0000	4.7500	0.2807	0.0000	11.7679
Water						0.0000	0.0000		0.0000	0.0000	1.3844	18.1039	19.4883	0.1429	3.5100e-003	24.1084
Total	**0.0783**	**1.2600e-003**	**4.3800e-003**	**1.0000e-005**	**1.2000e-003**	**2.0000e-005**	**1.2200e-003**	**3.2000e-004**	**1.0000e-005**	**3.4000e-004**	**6.1344**	**19.3939**	**25.5283**	**0.4237**	**3.5100e-003**	**37.1677**

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	0.0781	0.0000	4.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.2000e-004	8.2000e-004	0.0000	0.0000	8.7000e-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	2.6000e-004	1.2600e-003	3.9600e-003	1.0000e-005	1.2000e-003	2.0000e-005	1.2200e-003	3.2000e-004	1.0000e-005	3.4000e-004	0.0000	1.2892	1.2892	6.0000e-005	0.0000	1.2906
Waste						0.0000	0.0000		0.0000	0.0000	4.7500	0.0000	4.7500	0.2807	0.0000	11.7679
Water						0.0000	0.0000		0.0000	0.0000	1.3844	18.1039	19.4883	0.1429	3.5100e-003	24.1084
Total	**0.0783**	**1.2600e-003**	**4.3800e-003**	**1.0000e-005**	**1.2000e-003**	**2.0000e-005**	**1.2200e-003**	**3.2000e-004**	**1.0000e-005**	**3.4000e-004**	**6.1344**	**19.3939**	**25.5283**	**0.4237**	**3.5100e-003**	**37.1677**

	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	N20	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	3/13/2018	5/9/2018	5	42	
2	Access Road Construction	Paving	3/13/2018	5/9/2018	5	42	
3	Grading	Grading	5/10/2018	7/6/2018	5	42	
4	Tank Construction	Building Construction	7/9/2018	1/18/2019	5	140	
5	Vault Construciton, site improvements etc	Building Construction	1/21/2019	5/16/2019	5	84	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.32

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Cranes	1	8.00	231	0.29
Demolition	Excavators	1	8.00	158	0.38
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Access Road Construction	Cement and Mortar Mixers	4	6.00	9	0.56
Access Road Construction	Cranes	1	8.00	231	0.29
Access Road Construction	Excavators	1	8.00	158	0.38
Access Road Construction	Graders	0	0.00	187	0.41
Access Road Construction	Pavers	1	7.00	130	0.42
Access Road Construction	Rollers	1	7.00	80	0.38
Access Road Construction	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Cranes	1	8.00	231	0.29
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
Tank Construction	Cranes	1	4.00	231	0.29
Tank Construction	Excavators	1	8.00	158	0.38
Tank Construction	Forklifts	2	6.00	89	0.20

Tank Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Vault Construciton, site improvements etc	Cement and Mortar Mixers	0		9	0.56
Vault Construciton, site improvements etc	Cranes	1	4.00	231	0.29
Vault Construciton, site improvements etc	Excavators	1	8.00	158	0.38
Vault Construciton, site improvements etc	Forklifts	2	6.00	89	0.20
Vault Construciton, site improvements etc	Pavers	0		130	0.42
Vault Construciton, site improvements etc	Rollers	0		80	0.38
Vault Construciton, site improvements etc	Tractors/Loaders/Backhoes	2	8.00	97	0.37

Trips and VMT

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	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Access Road Construction	9	23.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Tank Construction	6	14.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Vault Construciton, site improvements etc	6	14.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2018

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	0.0404	0.4063	0.2851	4.8000e-004		0.0224	0.0224		0.0211	0.0211	0.0000	43.2366	43.2366	0.0108	0.0000	43.5071
Total	**0.0404**	**0.4063**	**0.2851**	**4.8000e-004**		**0.0224**	**0.0224**		**0.0211**	**0.0211**	**0.0000**	**43.2366**	**43.2366**	**0.0108**	**0.0000**	**43.5071**

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	1.4300e-003	1.0800e-003	0.0118	4.0000e-005	3.4600e-003	2.0000e-005	3.4800e-003	9.2000e-004	2.0000e-005	9.4000e-004	0.0000	3.1762	3.1762	8.0000e-005	0.0000	3.1783
Total	**1.4300e-003**	**1.0800e-003**	**0.0118**	**4.0000e-005**	**3.4600e-003**	**2.0000e-005**	**3.4800e-003**	**9.2000e-004**	**2.0000e-005**	**9.4000e-004**	**0.0000**	**3.1762**	**3.1762**	**8.0000e-005**	**0.0000**	**3.1783**

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	0.0404	0.4063	0.2851	4.8000e-004		0.0224	0.0224		0.0211	0.0211	0.0000	43.2366	43.2366	0.0108	0.0000	43.5070
Total	**0.0404**	**0.4063**	**0.2851**	**4.8000e-004**		**0.0224**	**0.0224**		**0.0211**	**0.0211**	**0.0000**	**43.2366**	**43.2366**	**0.0108**	**0.0000**	**43.5070**

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	1.4300e-003	1.0800e-003	0.0118	4.0000e-005	3.4600e-003	2.0000e-005	3.4800e-003	9.2000e-004	2.0000e-005	9.4000e-004	0.0000	3.1762	3.1762	8.0000e-005	0.0000	3.1783
Total	**1.4300e-003**	**1.0800e-003**	**0.0118**	**4.0000e-005**	**3.4600e-003**	**2.0000e-005**	**3.4800e-003**	**9.2000e-004**	**2.0000e-005**	**9.4000e-004**	**0.0000**	**3.1762**	**3.1762**	**8.0000e-005**	**0.0000**	**3.1783**

3.3 Access Road Construction - 2018

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	0.0374	0.3919	0.2735	4.7000e-004		0.0201	0.0201		0.0186	0.0186	0.0000	41.3465	41.3465	0.0123	0.0000	41.6533
Paving	4.2000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0378**	**0.3919**	**0.2735**	**4.7000e-004**		**0.0201**	**0.0201**		**0.0186**	**0.0186**	**0.0000**	**41.3465**	**41.3465**	**0.0123**	**0.0000**	**41.6533**

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	2.1900e-003	1.6600e-003	0.0180	5.0000e-005	5.3000e-003	4.0000e-005	5.3400e-003	1.4100e-003	3.0000e-005	1.4400e-003	0.0000	4.8702	4.8702	1.3000e-004	0.0000	4.8734
Total	**2.1900e-003**	**1.6600e-003**	**0.0180**	**5.0000e-005**	**5.3000e-003**	**4.0000e-005**	**5.3400e-003**	**1.4100e-003**	**3.0000e-005**	**1.4400e-003**	**0.0000**	**4.8702**	**4.8702**	**1.3000e-004**	**0.0000**	**4.8734**

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	0.0374	0.3919	0.2735	4.7000e-004		0.0201	0.0201		0.0186	0.0186	0.0000	41.3465	41.3465	0.0123	0.0000	41.6533
Paving	4.2000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0378**	**0.3919**	**0.2735**	**4.7000e-004**		**0.0201**	**0.0201**		**0.0186**	**0.0186**	**0.0000**	**41.3465**	**41.3465**	**0.0123**	**0.0000**	**41.6533**

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	2.1900e-003	1.6600e-003	0.0180	5.0000e-005	5.3000e-003	4.0000e-005	5.3400e-003	1.4100e-003	3.0000e-005	1.4400e-003	0.0000	4.8702	4.8702	1.3000e-004	0.0000	4.8734
Total	**2.1900e-003**	**1.6600e-003**	**0.0180**	**5.0000e-005**	**5.3000e-003**	**4.0000e-005**	**5.3400e-003**	**1.4100e-003**	**3.0000e-005**	**1.4400e-003**	**0.0000**	**4.8702**	**4.8702**	**1.3000e-004**	**0.0000**	**4.8734**

3.4 Grading - 2018

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					0.0158	0.0000	0.0158	8.6900e-003	0.0000	8.6900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0404	0.4063	0.2851	4.8000e-004		0.0224	0.0224		0.0211	0.0211	0.0000	43.2366	43.2366	0.0108	0.0000	43.5071
Total	**0.0404**	**0.4063**	**0.2851**	**4.8000e-004**	**0.0158**	**0.0224**	**0.0382**	**8.6900e-003**	**0.0211**	**0.0298**	**0.0000**	**43.2366**	**43.2366**	**0.0108**	**0.0000**	**43.5071**

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	1.4300e-003	1.0800e-003	0.0118	4.0000e-005	3.4600e-003	2.0000e-005	3.4800e-003	9.2000e-004	2.0000e-005	9.4000e-004	0.0000	3.1762	3.1762	8.0000e-005	0.0000	3.1783
Total	**1.4300e-003**	**1.0800e-003**	**0.0118**	**4.0000e-005**	**3.4600e-003**	**2.0000e-005**	**3.4800e-003**	**9.2000e-004**	**2.0000e-005**	**9.4000e-004**	**0.0000**	**3.1762**	**3.1762**	**8.0000e-005**	**0.0000**	**3.1783**

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					7.1100e-003	0.0000	7.1100e-003	3.9100e-003	0.0000	3.9100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0404	0.4063	0.2851	4.8000e-004		0.0224	0.0224		0.0211	0.0211	0.0000	43.2366	43.2366	0.0108	0.0000	43.5070
Total	**0.0404**	**0.4063**	**0.2851**	**4.8000e-004**	**7.1100e-003**	**0.0224**	**0.0295**	**3.9100e-003**	**0.0211**	**0.0250**	**0.0000**	**43.2366**	**43.2366**	**0.0108**	**0.0000**	**43.5070**

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	1.4300e-003	1.0800e-003	0.0118	4.0000e-005	3.4600e-003	2.0000e-005	3.4800e-003	9.2000e-004	2.0000e-005	9.4000e-004	0.0000	3.1762	3.1762	8.0000e-005	0.0000	3.1783
Total	**1.4300e-003**	**1.0800e-003**	**0.0118**	**4.0000e-005**	**3.4600e-003**	**2.0000e-005**	**3.4800e-003**	**9.2000e-004**	**2.0000e-005**	**9.4000e-004**	**0.0000**	**3.1762**	**3.1762**	**8.0000e-005**	**0.0000**	**3.1783**

3.5 Tank Construction - 2018

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	0.0866	0.8900	0.6947	1.0400e-003		0.0541	0.0541		0.0498	0.0498	0.0000	95.2230	95.2230	0.0296	0.0000	95.9641
Total	**0.0866**	**0.8900**	**0.6947**	**1.0400e-003**		**0.0541**	**0.0541**		**0.0498**	**0.0498**	**0.0000**	**95.2230**	**95.2230**	**0.0296**	**0.0000**	**95.9641**

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	1.3000e-003	0.0384	0.0106	8.0000e-005	1.9800e-003	2.8000e-004	2.2600e-003	5.7000e-004	2.7000e-004	8.4000e-004	0.0000	7.7599	7.7599	7.0000e-004	0.0000	7.7773
Worker	4.0000e-003	3.0300e-003	0.0329	1.0000e-004	9.6800e-003	7.0000e-005	9.7500e-003	2.5700e-003	6.0000e-005	2.6300e-003	0.0000	8.8934	8.8934	2.4000e-004	0.0000	8.8993
Total	**5.3000e-003**	**0.0414**	**0.0435**	**1.8000e-004**	**0.0117**	**3.5000e-004**	**0.0120**	**3.1400e-003**	**3.3000e-004**	**3.4700e-003**	**0.0000**	**16.6533**	**16.6533**	**9.4000e-004**	**0.0000**	**16.6766**

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	0.0866	0.8900	0.6947	1.0400e-003		0.0541	0.0541		0.0498	0.0498	0.0000	95.2229	95.2229	0.0296	0.0000	95.9640
Total	**0.0866**	**0.8900**	**0.6947**	**1.0400e-003**		**0.0541**	**0.0541**		**0.0498**	**0.0498**	**0.0000**	**95.2229**	**95.2229**	**0.0296**	**0.0000**	**95.9640**

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	1.3000e-003	0.0384	0.0106	8.0000e-005	1.9800e-003	2.8000e-004	2.2600e-003	5.7000e-004	2.7000e-004	8.4000e-004	0.0000	7.7599	7.7599	7.0000e-004	0.0000	7.7773
Worker	4.0000e-003	3.0300e-003	0.0329	1.0000e-004	9.6800e-003	7.0000e-005	9.7500e-003	2.5700e-003	6.0000e-005	2.6300e-003	0.0000	8.8934	8.8934	2.4000e-004	0.0000	8.8993
Total	**5.3000e-003**	**0.0414**	**0.0435**	**1.8000e-004**	**0.0117**	**3.5000e-004**	**0.0120**	**3.1400e-003**	**3.3000e-004**	**3.4700e-003**	**0.0000**	**16.6533**	**16.6533**	**9.4000e-004**	**0.0000**	**16.6766**

3.5 Tank Construction - 2019

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	8.5300e-003	0.0875	0.0756	1.2000e-004		5.1400e-003	5.1400e-003		4.7300e-003	4.7300e-003	0.0000	10.4068	10.4068	3.2900e-003	0.0000	10.4892
Total	**8.5300e-003**	**0.0875**	**0.0756**	**1.2000e-004**		**5.1400e-003**	**5.1400e-003**		**4.7300e-003**	**4.7300e-003**	**0.0000**	**10.4068**	**10.4068**	**3.2900e-003**	**0.0000**	**10.4892**

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	1.3000e-004	4.0500e-003	1.1000e-003	1.0000e-005	2.2000e-004	3.0000e-005	2.5000e-004	6.0000e-005	3.0000e-005	9.0000e-005	0.0000	0.8579	0.8579	7.0000e-005	0.0000	0.8598
Worker	4.1000e-004	3.0000e-004	3.3200e-003	1.0000e-005	1.0800e-003	1.0000e-005	1.0800e-003	2.9000e-004	1.0000e-005	2.9000e-004	0.0000	0.9620	0.9620	2.0000e-005	0.0000	0.9626
Total	**5.4000e-004**	**4.3500e-003**	**4.4200e-003**	**2.0000e-005**	**1.3000e-003**	**4.0000e-005**	**1.3300e-003**	**3.5000e-004**	**4.0000e-005**	**3.8000e-004**	**0.0000**	**1.8199**	**1.8199**	**9.0000e-005**	**0.0000**	**1.8224**

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	8.5300e-003	0.0875	0.0756	1.2000e-004		5.1400e-003	5.1400e-003		4.7300e-003	4.7300e-003	0.0000	10.4068	10.4068	3.2900e-003	0.0000	10.4891
Total	**8.5300e-003**	**0.0875**	**0.0756**	**1.2000e-004**		**5.1400e-003**	**5.1400e-003**		**4.7300e-003**	**4.7300e-003**	**0.0000**	**10.4068**	**10.4068**	**3.2900e-003**	**0.0000**	**10.4891**

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	1.3000e-004	4.0500e-003	1.1000e-003	1.0000e-005	2.2000e-004	3.0000e-005	2.5000e-004	6.0000e-005	3.0000e-005	9.0000e-005	0.0000	0.8579	0.8579	7.0000e-005	0.0000	0.8598
Worker	4.1000e-004	3.0000e-004	3.3200e-003	1.0000e-005	1.0800e-003	1.0000e-005	1.0800e-003	2.9000e-004	1.0000e-005	2.9000e-004	0.0000	0.9620	0.9620	2.0000e-005	0.0000	0.9626
Total	**5.4000e-004**	**4.3500e-003**	**4.4200e-003**	**2.0000e-005**	**1.3000e-003**	**4.0000e-005**	**1.3300e-003**	**3.5000e-004**	**4.0000e-005**	**3.8000e-004**	**0.0000**	**1.8199**	**1.8199**	**9.0000e-005**	**0.0000**	**1.8224**

3.6 Vault Construciton, site improvements etc - 2019

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	0.0512	0.5251	0.4539	7.0000e-004		0.0309	0.0309		0.0284	0.0284	0.0000	62.4410	62.4410	0.0198	0.0000	62.9349
Total	**0.0512**	**0.5251**	**0.4539**	**7.0000e-004**		**0.0309**	**0.0309**		**0.0284**	**0.0284**	**0.0000**	**62.4410**	**62.4410**	**0.0198**	**0.0000**	**62.9349**

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	8.0000e-004	0.0243	6.6100e-003	5.0000e-005	1.3200e-003	1.6000e-004	1.4800e-003	3.8000e-004	1.6000e-004	5.4000e-004	0.0000	5.1474	5.1474	4.5000e-004	0.0000	5.1586
Worker	2.4600e-003	1.7900e-003	0.0199	6.0000e-005	6.4600e-003	4.0000e-005	6.5000e-003	1.7100e-003	4.0000e-005	1.7500e-003	0.0000	5.7719	5.7719	1.4000e-004	0.0000	5.7755
Total	**3.2600e-003**	**0.0261**	**0.0265**	**1.1000e-004**	**7.7800e-003**	**2.0000e-004**	**7.9800e-003**	**2.0900e-003**	**2.0000e-004**	**2.2900e-003**	**0.0000**	**10.9193**	**10.9193**	**5.9000e-004**	**0.0000**	**10.9341**

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	0.0512	0.5251	0.4539	7.0000e-004		0.0309	0.0309		0.0284	0.0284	0.0000	62.4409	62.4409	0.0198	0.0000	62.9348
Total	**0.0512**	**0.5251**	**0.4539**	**7.0000e-004**		**0.0309**	**0.0309**		**0.0284**	**0.0284**	**0.0000**	**62.4409**	**62.4409**	**0.0198**	**0.0000**	**62.9348**

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	8.0000e-004	0.0243	6.6100e-003	5.0000e-005	1.3200e-003	1.6000e-004	1.4800e-003	3.8000e-004	1.6000e-004	5.4000e-004	0.0000	5.1474	5.1474	4.5000e-004	0.0000	5.1586
Worker	2.4600e-003	1.7900e-003	0.0199	6.0000e-005	6.4600e-003	4.0000e-005	6.5000e-003	1.7100e-003	4.0000e-005	1.7500e-003	0.0000	5.7719	5.7719	1.4000e-004	0.0000	5.7755
Total	**3.2600e-003**	**0.0261**	**0.0265**	**1.1000e-004**	**7.7800e-003**	**2.0000e-004**	**7.9800e-003**	**2.0900e-003**	**2.0000e-004**	**2.2900e-003**	**0.0000**	**10.9193**	**10.9193**	**5.9000e-004**	**0.0000**	**10.9341**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	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	2.6000e-004	1.2600e-003	3.9600e-003	1.0000e-005	1.2000e-003	2.0000e-005	1.2200e-003	3.2000e-004	1.0000e-005	3.4000e-004	0.0000	1.2892	1.2892	6.0000e-005	0.0000	1.2906
Unmitigated	2.6000e-004	1.2600e-003	3.9600e-003	1.0000e-005	1.2000e-003	2.0000e-005	1.2200e-003	3.2000e-004	1.0000e-005	3.4000e-004	0.0000	1.2892	1.2892	6.0000e-005	0.0000	1.2906

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	1.00	0.00	0.00	3,163	3,163
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	1.00	0.00	0.00	3,163	3,163

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	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
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
Other 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
General Light Industry	0.552373	0.044229	0.211123	0.119112	0.017503	0.005797	0.024455	0.015685	0.001637	0.001633	0.004830	0.000583	0.001041
Other Asphalt Surfaces	0.552373	0.044229	0.211123	0.119112	0.017503	0.005797	0.024455	0.015685	0.001637	0.001633	0.004830	0.000583	0.001041

5.0 Energy Detail

Historical Energy Use: N

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	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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	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	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	tons/yr										MT/yr					
General Light Industry	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
Other 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
Total		**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**

Mitigated

	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	tons/yr										MT/yr					
General Light Industry	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
Other 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
Total		**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**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	0.0781	0.0000	4.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.2000e-004	8.2000e-004	0.0000	0.0000	8.7000e-004
Unmitigated	0.0781	0.0000	4.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.2000e-004	8.2000e-004	0.0000	0.0000	8.7000e-004

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	8.9400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0691					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.0000e-005	0.0000	4.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.2000e-004	8.2000e-004	0.0000	0.0000	8.7000e-004
Total	**0.0781**	**0.0000**	**4.2000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**8.2000e-004**	**8.2000e-004**	**0.0000**	**0.0000**	**8.7000e-004**

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	8.9400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0691					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.0000e-005	0.0000	4.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.2000e-004	8.2000e-004	0.0000	0.0000	8.7000e-004
Total	**0.0781**	**0.0000**	**4.2000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**8.2000e-004**	**8.2000e-004**	**0.0000**	**0.0000**	**8.7000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	19.4883	0.1429	3.5100e-003	24.1084
Unmitigated	19.4883	0.1429	3.5100e-003	24.1084

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	4.36369 / 0	19.4883	0.1429	3.5100e-003	24.1084
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**19.4883**	**0.1429**	**3.5100e-003**	**24.1084**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	4.36369 / 0	19.4883	0.1429	3.5100e-003	24.1084
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**19.4883**	**0.1429**	**3.5100e-003**	**24.1084**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	4.7500	0.2807	0.0000	11.7679
Unmitigated	4.7500	0.2807	0.0000	11.7679

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	23.4	4.7500	0.2807	0.0000	11.7679
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**4.7500**	**0.2807**	**0.0000**	**11.7679**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	23.4	4.7500	0.2807	0.0000	11.7679
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**4.7500**	**0.2807**	**0.0000**	**11.7679**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Appendix C

3.7 MG Zone 1 Reservoir
Cultural Resources Appendices

Resource List

Primary No.	Trinomial	Other IDs	Type	Age	Attribute codes	Recorded by	Reports
P-30-100468		Resource Name - Isolate/EMA 801; Voided - 30-100022	Other	Prehistoric	AP02 (Lithic scatter)	1988 (B. Padon, LSA)	
P-30-161866		OHP Property Number - 070070; Resource Name - Bee Canyon Wash Canal / Ditch	Structure	Historic	HP20 (Canal/aqueduct)	1990 (Hatheway, Roger, Greenwood and Associates)	OR-02108, OR-04455
P-30-161869		OHP Property Number - 070073; Resource Name - Eucalyptus Tree Windbreaks	Other	Historic	HP30 (Trees/vegetation)	1990 (Roger Hatheway, Greenwood & Associates)	OR-02108
P-30-162325		OHP Property Number - 094367; Resource Name - Spencer House; Other - zip 92620	Building	Historic	HP02 (Single family property)	1982 (R. Hatheway, R. Wlodarski, LSA)	
P-30-176663		OHP Property Number - 144278; Resource Name - Atchison, Topeka & Santa Fe RR, Burlington Northern Santa Fe RR; Other - Burlington Northern Santa Fe; Other - Metrolink Railroad; Voided - 30-176664; Other - CRM TECH 789-50H & 951-1H; Other - California Southern Railroad	Structure	Historic	HP37 (Highway/trail) - Railroad; HP39 (Other)	2002 (D. Ballester, CRM Tech); 2002 (Bai Tang and Josh Smallwood, CRM Tech); 2007 (S. McCormick); 2012 (MK Meiser, AECOM); 2016	LA-07871, LA-08158, OR-03383, OR-03517, OR-03519, OR-03551, OR-03555, OR-03573, OR-03747, OR-03797, OR-03822, OR-03835, OR-03864, OR-03866, OR-03905, OR-03910, OR-03916, OR-03919, OR-03929, OR-03942, OR-03983, OR-04020, OR-04045, OR-04058, OR-04074, OR-04096, OR-04131, OR-04154, OR-04156, OR-04169, OR-04182, OR-04186, OR-04217, OR-04229, OR-04257, OR-04290, OR-04292, OR-04331, OR-04367, OR-04374, OR-04385, OR-04404, OR-04457

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

tel 213.763.DINO
www.nhm.org

NATURAL HISTORY MUSEUM
LOS ANGELES COUNTY

Vertebrate Paleontology Section
Telephone: (213) 763-3325

e-mail: smcleod@nhm.org

20 December 2016

BonTerra Psomas
3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707-8794

Attn: David M. Smith, Senior Archaeologist / Project Manager

re: Paleontological Resources for the proposed Traveland Project, in the City of Irvine, Orange County, project area

Dear David:

I have conducted a thorough search of our Vertebrate Paleontology records for the proposed Traveland Project, in the City of Irvine, Orange County, project area as outlined on the portions of the Tustin and El Toro USGS topographic quadrangle maps that you sent to me via e-mail on 8 December 2016. We do not have any vertebrate fossil localities that lie directly within the proposed project area, but we do have vertebrate fossil localities nearby from sedimentary deposits similar to those that occur in the proposed project area.

The entire proposed project area has surface deposits composed of younger Quaternary Alluvium, primarily derived as alluvial fan deposits from the hills to the east. These deposits usually do not contain significant vertebrate fossils, at least in the uppermost layers, but they may be underlain by older Quaternary deposits. Our closest vertebrate fossil locality from these older Quaternary deposits is LACM 7867, just east of the proposed project area near the intersection of C Street and 5th Street, that produced fossil specimens of pocket gopher, *Thomomys*, at a depth of 25 feet below the surface. Our next closet vertebrate fossil from these deposits is LACM 7713, due south of the western portion of the proposed project area on the western side of the Laguna Freeway (Highway 133) at the southern end of the interchange with the San Diego Freeway (I-405), that produced a fossil specimen of ground sloth, Mylodontidae, from unstated but shallow depth.

Grading or shallow excavations in the uppermost few feet of the younger Quaternary alluvial sediments in the proposed project site area are unlikely to uncover significant fossil vertebrate remains. Deeper excavations at the proposed project site area, however, may well encounter significant vertebrate fossils in older Quaternary sediments. Any substantial excavations below the uppermost layers, therefore, should be closely monitored to quickly and professionally collect any specimens without impeding development. Sediment samples should also 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

enclosure: invoice

Irvine Ranch
WATER DISTRICT

June 16, 2017

Michael Mirelez, Cultural Resource Coordinator
Torres Martinez Desert Cahuilla Indians
P.O. Box 1160
Thermal, California 92274

Subject: Assembly Bill (AB) 52 (Public Resources Code §21080.3.1): Second Zone 1 Reservoir Project, Irvine, California

Dear Mr. Mirelez:

Irvine Ranch Water District (IRWD) is the lead agency, pursuant to the California Environmental Quality Act (CEQA), for the Second Zone 1 Reservoir Project located in the City of Irvine in Orange County. As further discussed below, this letter is intended as formal notification of the proposed project pursuant to Assembly Bill (AB) 52. This project does not require a General or Specific Plan amendment or adoption; therefore, the project is not subject to the statutory requirements of Senate Bill 18 (Tribal Consultation Guidelines). However, as part of the background cultural resources research being conducted, this letter is to inform you of the proposed project and to request any relevant information you may have regarding cultural resources on or near the project site.

Location

The project location is shown on the USGS *El Toro, CA* 7.5 Minute Quadrangle(s) in Sections 31 and 32 (Township 5 South; Range 8 West). Refer to attached Exhibit 1.

Project

Irvine Ranch Water District is planning to construct a new reservoir and associated facilities in the northwestern corner of the existing Zone 1 reservoir site. All construction and improvements related to the proposed reservoir would be conducted within the boundaries of the IRWD-owned area depicted on Exhibit 1. The existing Zone 1 reservoir and associated facilities would remain in place.

Records Search

A cultural resources records search was conducted at the South Central Coastal Information Center (SCCIC) at California State University, Fullerton on January 3, 2017 to evaluate the existing conditions of

a site in the vicinity of the proposed project. The records search for this site captured the proposed project site. A field survey of the proposed project site will be conducted in June 2017.

Your participation in this local planning process is important. If you have any additional knowledge of Native American Sacred Lands or other cultural resources on or near the study area, or would like to consult on the project, please contact me at your earliest convenience at 949-453-5300 or via email at corey@irwd.com, with a subject line referencing the "Second Zone 1 Reservoir Project".

Sincerely,

Jo Ann Corey
Environmental Compliance Specialist

Attachment: Exhibit 1, Project Location

Irvine Ranch
WATER DISTRICT

June 16, 2017

Andrew Salas, Chairperson
Gabrieleno Band of Mission Indians - Kizh Nation
P.O. Box 393
Covina, California 91723

Subject: Assembly Bill (AB) 52 (Public Resources Code §21080.3.1): Second Zone 1 Reservoir Project, Irvine, California

Dear Mr. Salas:

Irvine Ranch Water District (IRWD) is the lead agency, pursuant to the California Environmental Quality Act (CEQA), for the Second Zone 1 Reservoir Project located in the City of Irvine in Orange County. As further discussed below, this letter is intended as formal notification of the proposed project pursuant to Assembly Bill (AB) 52. This project does not require a General or Specific Plan amendment or adoption; therefore, the project is not subject to the statutory requirements of Senate Bill 18 (Tribal Consultation Guidelines). However, as part of the background cultural resources research being conducted, this letter is to inform you of the proposed project and to request any relevant information you may have regarding cultural resources on or near the project site.

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Sincerely,

Jo Ann Corey
Environmental Compliance Specialist

Attachment: Exhibit 1, Project Location

Irvine Ranch
WATER DISTRICT

June 16, 2017

Joyce Stanfield Perry, Tribal Manager
Juaneño Band of Mission Indians - Acjachemen Nation
4955 Paseo Segovia
Irvine, California 92603

Subject: Assembly Bill (AB) 52 (Public Resources Code §21080.3.1): Second Zone 1 Reservoir Project, Irvine, California

Dear Ms. Stanfield Perry:

Irvine Ranch Water District (IRWD) is the lead agency, pursuant to the California Environmental Quality Act (CEQA), for the Second Zone 1 Reservoir Project located in the City of Irvine in Orange County. As further discussed below, this letter is intended as formal notification of the proposed project pursuant to Assembly Bill (AB) 52. This project does not require a General or Specific Plan amendment or adoption; therefore, the project is not subject to the statutory requirements of Senate Bill 18 (Tribal Consultation Guidelines). However, as part of the background cultural resources research being conducted, this letter is to inform you of the proposed project and to request any relevant information you may have regarding cultural resources on or near the project site.

Location

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Project

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Records Search

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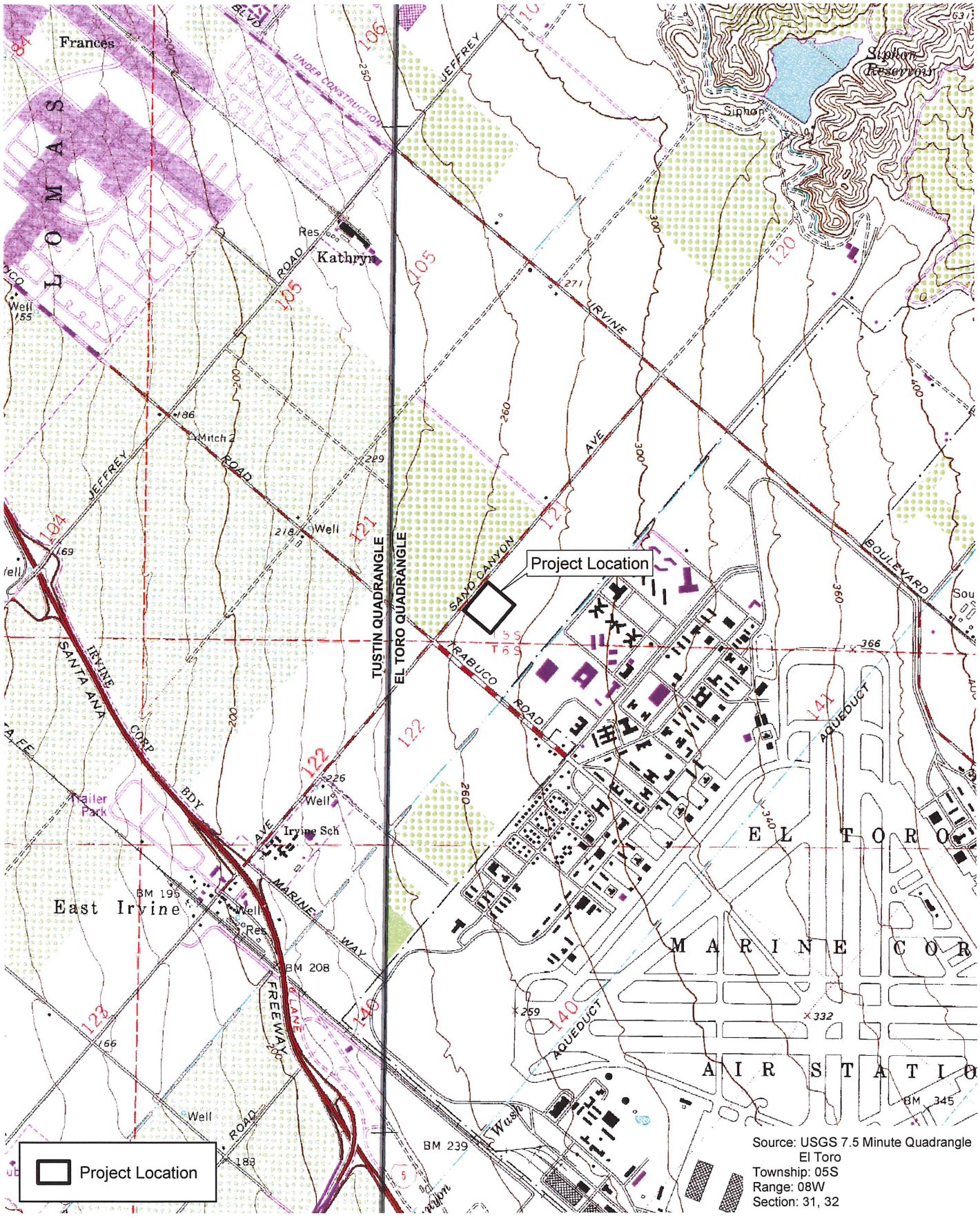
a site in the vicinity of the proposed project. The records search for this site captured the proposed project site. A field survey of the proposed project site will be conducted in June 2017.

Your participation in this local planning process is important. If you have any additional knowledge of Native American Sacred Lands or other cultural resources on or near the study area, or would like to consult on the project, please contact me at your earliest convenience at 949-453-5300 or via email at corey@irwd.com, with a subject line referencing the "Second Zone 1 Reservoir Project".

Sincerely,

Jo Ann Corey
Environmental Compliance Specialist

Attachment: Exhibit 1, Project Location



D:\Projects\3IRW0009MXDlex_ProjLoc_USGS_20170615.mxd

Project Location

Exhibit 1

Second Zone 1 Reservoir Project

N W E S

2,000 1,000 0 2,000

Feet

(Rev: 6-15-2017 MMD) R:\Projects\IRW_IRWD\3IRW000901\Graphics\ex_ProjLoc_USGS_20170615.pdf

Subject: FW: AB 52 Consultation - Second Zone 1 Reservoir Project

From: Joyce Perry [mailto:kaamalam@gmail.com]
Sent: Monday, June 19, 2017 11:08 AM
To: Ashley McCoy <ashley.mccoy@psomas.com>
Subject: Re: AB 52 Consultation - Second Zone 1 Reservoir Project

Good Afternoon Ashley,

This email will serve as our official request to engage in consultation regarding the Reservoir Project. Please provide us with the results of records search. Thank You.

Joyce Stanfield Perry
Payomkawichum Kaamalam - President
Juaneño Band of Mission Indians, Acjachemen Nation
Tribal Manager, Cultural Resource Director

On Mon, Jun 19, 2017 at 9:47 AM, Ashley McCoy <ashley.mccoy@psomas.com> wrote:

> Dear Ms. Stanfield Perry:
>
> Irvine Ranch Water District (IRWD) is the lead agency, pursuant to CEQA, for the Second Zone 1 Reservoir Project located in the City of Irvine in Orange County. The attached letter is intended as formal notification of the proposed project pursuant to AB 52. You will be receiving a hard copy of this letter in addition to the attached electronic copy.
>
> Thank you,
>
> **Ashley McCoy**
> **PSOMAS** | Balancing the Natural and Built Environment
> Environmental Planner
> Environmental Planning & Resource Management
> 3 Hutton Centre Drive, Suite 200
> Santa Ana, CA 92707 | 714.481.8029
> www.Psomas.com

GABRIELEÑO BAND OF MISSION INDIANS - KIZH NATION
Historically known as The San Gabriel Band of Mission Indians
recognized by the State of California as the aboriginal tribe of the Los Angeles basin

City of Irvine
15600 Sand Canyon Ave
Irvine, CA 92618

July 14, 2017

Re: AB52 Consultation request for Second Zone 1 Reservoir Project , Irvine CA

Dear Jo Ann Corey,

Please find this letter as a written request for consultation regarding the above-mentioned project pursuant to Public Resources Code § 21080.3.1, subd. (d). Your project lies within our ancestral tribal territory, meaning descending from, or a higher degree of kinship than traditional or cultural affiliation. Your project is located within a sensitive area and may cause a substantial adverse change in the significance of our tribal cultural resources. Most often, a records search for our tribal cultural resources will result in a "no records found" for the project area. The Native American Heritage Commission, ethnographers, historians, and professional archaeologists can only provide limited information that has been previously documented about California Native Tribes. This is the reason the Native American Heritage Commission (NAHC) will always refer the lead agency to the respective Native American Tribe of the area because the NAHC is only aware of general information and are not the experts on each California Tribe. Our Elder Committee & tribal historians are the experts for our Tribe and are able to provide a more complete history (both written and oral) regarding the location of historic villages, trade routes, cemeteries and sacred/religious sites in the project area. Therefore, to avoid adverse effects to our tribal cultural resources, we would like to consult with you and your staff to provide you with a more complete understanding of the prehistoric use(s) of the project area and the potential risks for causing a substantial adverse change to the significance of our tribal cultural resources.

Consultation appointments are available on Wednesdays and Thursdays at our offices at 901 N. Citrus Ave. Covina, CA 91722 or over the phone. Please call toll free 1-844-390-0787 or email gabrielenoindians@yahoo.com to schedule an appointment.

** Prior to the first consultation with our Tribe, we ask all those individuals participating in the consultation to view a video produced and provided by CalEPA and the NAHC for sensitivity and understanding of AB52. You can view the video at: http://nahc.ca.gov/2015/12/ab-52-tribal-training/

With Respect,

Andrew Salas, Chairman

Subject: FW: IRWD- AB52 Consult re: IRWD- Second Zone 1 Reservoir Project
Attachments: Kizh Nation Response-Irvine- Second Zone 1 Reservoir Project 071417 .pdf; AB 52 Scoping Ltr -Kizh.pdf

From: Jo Ann Corey [mailto:Corey@irwd.com]
Sent: Tuesday, July 18, 2017 10:41 AM
To: Ashley McCoy <ashley.mccoy@psomas.com>; Jennifer Marks <jennifer.marks@psomas.com>
Subject: Fwd: IRWD- AB52 Consult re: IRWD- Second Zone 1 Reservoir Project

Jen/Ashley---

I am forwarding this correspondence to you for the project file and your records.

Jo Ann

>>> Jo Ann Corey 7/18/2017 10:38 AM >>>
Hello....

Thank you for providing the attached letter indicating your interest in consultation with IRWD on its Second Zone 1 Reservoir project.

I have reviewed IRWD's staff calendars using your requested days (Wednesdays and Thursdays). Please let me know what works best with your schedule so that I can arrange for a conference call to discuss the project. I will plan for an hour to discuss this project but I can certainly arrange for more time if you feel is it is needed. As of writing this email, the following dates and times work for IRWD staff:

August 2, 2017 - anytime within 1-4 p.m.
August 3, 2017 - anytime within 10-11:30 a.m.
August 17, 2017 - 1-2 p.m.
August 23, 2017 - anytime within 1-4:00 p.m.
August 31, 2017 - anytime within 1-4 p.m.

Regards,

Irvine Ranch WATER DISTRICT

Jo Ann Corey, MPA
Environmental Compliance Specialist
Water Resources & Environmental Policy
Irvine Ranch Water District
15600 Sand Canyon Avenue
Irvine, CA 92618
(949) 453-5326 (direct)

corey@irwd.com

>>> Gabrieleno Band of Mission Indians <gabrielenoindians@yahoo.com> 7/14/2017 2:35 PM >>>
Please see attachment

Sincerely,

Brandy Salas

Andrew Salas, Chairman
Gabrieleno Band of Mission Indians - Kizh Nation
PO Box 393
Covina, CA 91723
cell: (626)926-4131
email: gabrielenoindians@yahoo.com
website: www.gabrielenoindians.org

Irvine Ranch
WATER DISTRICT

July 24, 2017

Joyce Stanfield Perry, Tribal Manager
Juaneno Band of Mission Indians - Acjachemen Nation
4955 Paseo Segovia
Irvine, California 92603

Subject: AB 52 (Public Resources Code §21080.3.1): Second Zone 1 Reservoir Project, Irvine, CA – Cultural Resources Records

Dear Ms. Stanfield Perry:

Per our June 16, 2017, letter, Irvine Ranch Water District (IRWD) is working with Psomas on IRWD's proposed Second Zone 1 Reservoir project. On behalf of IRWD, Psomas completed the cultural resources records search for the proposed project. Psomas reviewed recent cultural and paleontological records searches prepared for the City of Irvine's Planning Area (PA) 12 and PA 40 General Plan Amendment and Zone Change project, located nearby IRWD's proposed project. The COI project is located in Irvine and is approximately 0.2 mile southwest of IRWD's proposed project site; therefore, because a 1/2 mile radius was used for that records searches, the proposed Project site and adjacent areas were captured in both the cultural resources and paleontological resources records searches. The cultural resources records search was conducted by Psomas at the South Central Coastal Information Center at California State University, Fullerton (CSUF). The review consisted of an examination of the USGS' Tustin, CA 7.5-minute quadrangles to determine if any cultural resources studies had been conducted in the area and provided data on recorded archaeological and built environment resources. Sources consulted at CSUF included archaeological records, Archaeological Determinations of Eligibility, historic maps and the Historic Property Data File maintained by the CA Office of Historic Preservation.

Per your June 19, 2017 email, the attached records are presented. Upon review, you will note that there were no historic resources found on the proposed site. Additionally, no tribal cultural resources including tribal cultural resources listed or eligible for listing in the California Register of Historical Resources (CRHR) have ever been recovered or recorded on the proposed Project site. In order to keep you informed on the project, IRWD has instructed Psomas to add you to the project's distribution list; ensuring that you receive a copy of the draft Mitigated Negative Declaration when it is ready for public review.

Regards,

Jo Ann Corey
Environmental Compliance Specialist

Attachment: Cultural Resources Records – IRWD Second Zone 1 Reservoir Project

Appendix D

3.7 MG Zone 1 Reservoir
EDR Hazardous Materials Database Report

Second Zone 1 Reservoir
Sand Canyon Avenue
Irvine, CA 92618

Inquiry Number: 4964065.2s
June 12, 2017

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

SAND CANYON AVENUE
IRVINE, CA 92618

COORDINATES

Latitude (North):	33.6884430 - 33° 41' 18.39''
Longitude (West):	117.7459020 - 117° 44' 45.24''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	430864.8
UTM Y (Meters):	3727668.2
Elevation:	269 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	5636489 EL TORO, CA
Version Date:	2012
West Map:	5640942 TUSTIN, CA
Version Date:	2012

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20140515, 20140603
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
SAND CANYON AVENUE
IRVINE, CA 92618

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
Reg	EL TORO MARINE CORPS		DOD	Same	1 ft.
Reg	MARINE CORPS AIR STA	MCAS EL TORO	NPL, SEMS, CORRACTS, RCRA-TSDF, RCRA-SQG, US ENG..	Same	742, 0.141, SE
1	CHEVRON 306957	13303 SAND CANYON	RCRA NonGen / NLR	Lower	274, 0.052, WSW
2	UNOCAL #4473	14886	HIST CORTESE	Higher	988, 0.187, NNE
3	HERITAGE FIELDS (FOR	9 MILES N/E OF NEWPO	ENVIROSTOR, VCP	Higher	3861, 0.731, ESE
4	PA 40 ELEMENTARY SCH	NORTH OF FUTURE EXTE	ENVIROSTOR, SCH	Lower	4073, 0.771, 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

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

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE ---------- Superfund Enterprise Management System Archive

Federal RCRA generators list

RCRA-LQG ---------- RCRA - Large Quantity Generators
RCRA-CESQG ---------- RCRA - Conditionally Exempt Small Quantity Generator

Federal institutional controls / engineering controls registries

LUCIS ---------- Land Use Control Information System

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

EXECUTIVE SUMMARY

State and tribal leaking storage tank lists

LUST ---------- Geotracker's Leaking Underground Fuel Tank Report
INDIAN LUST ---------- Leaking Underground Storage Tanks on Indian Land
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

VCP ---------- Voluntary Cleanup Program Properties
INDIAN VCP ---------- Voluntary Cleanup Priority Listing

State and tribal Brownfields sites

BROWNFIELDS ---------- Considered Brownfieds Sites Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ---------- A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

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

US HIST CDL ---------- Delisted National Clandestine Laboratory Register
HIST Cal-Sites ---------- Historical Calsites Database
SCH ---------- School Property Evaluation Program
CDL ---------- Clandestine Drug Labs
Toxic Pits ---------- Toxic Pits Cleanup Act Sites
US CDL ---------- National Clandestine Laboratory Register

Local Lists of Registered Storage Tanks

SWEEPS UST ---------- SWEEPS UST Listing
HIST UST ---------- Hazardous Substance Storage Container Database
CA FID UST ---------- Facility Inventory Database

Local Land Records

LIENS ---------- Environmental Liens Listing

LIENS 2	CERCLA Lien Information
DEED	Deed Restriction Listing

Records of Emergency Release Reports

HMIRS	Hazardous Materials Information Reporting System
CHMIRS	California Hazardous Material Incident Report System
LDS	Land Disposal Sites Listing
MCS	Military Cleanup Sites Listing
Orange Co. Industrial Site	List of Industrial Site Cleanups
SPILLS 90	SPILLS 90 data from FirstSearch

Other Ascertainable Records

FUDS	Formerly Used Defense Sites
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
RMP	Risk Management Plans
RAATS	RCRA Administrative Action Tracking System
PRP	Potentially Responsible Parties
PADS	PCB Activity Database System
ICIS	Integrated Compliance Information System
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS	Material Licensing Tracking System
COAL ASH DOE	Steam-Electric Plant Operation Data
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER	PCB Transformer Registration Database
RADINFO	Radiation Information Database
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS	Incident and Accident Data
CONSENT	Superfund (CERCLA) Consent Decrees
INDIAN RESERV	Indian Reservations
FUSRAP	Formerly Utilized Sites Remedial Action Program
UMTRA	Uranium Mill Tailings Sites
LEAD SMELTERS	Lead Smelter Sites
US AIRS	Aerometric Information Retrieval System Facility Subsystem
US MINES	Mines Master Index File
ABANDONED MINES	Abandoned Mines
FINDS	Facility Index System/Facility Registry System
UXO	Unexploded Ordnance Sites
DOCKET HWC	Hazardous Waste Compliance Docket Listing
ECHO	Enforcement & Compliance History Information
FUELS PROGRAM	EPA Fuels Program Registered Listing
CA BOND EXP. PLAN	Bond Expenditure Plan
Cortese	"Cortese" Hazardous Waste & Substances Sites List
CUPA Listings	CUPA Resources List
DRYCLEANERS	Cleaner Facilities
EMI	Emissions Inventory Data
ENF	Enforcement Action Listing

Financial Assurance ---------- Financial Assurance Information Listing
HAZNET ---------- Facility and Manifest Data
ICE ---------- ICE
HWP ---------- EnviroStor Permitted Facilities Listing
HWT ---------- Registered Hazardous Waste Transporter Database
MINES ---------- Mines Site Location Listing
MWMP ---------- Medical Waste Management Program Listing
NPDES ---------- NPDES Permits Listing
PEST LIC ---------- Pesticide Regulation Licenses Listing
PROC ---------- Certified Processors Database
Notify 65 ---------- Proposition 65 Records
UIC ---------- UIC Listing
WASTEWATER PITS ---------- Oil Wastewater Pits Listing
WDS ---------- Waste Discharge System
WIP ---------- Well Investigation Program Case List

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP ---------- EDR Proprietary Manufactured Gas Plants
EDR Hist Auto ---------- EDR Exclusive Historic Gas Stations
EDR Hist Cleaner ---------- EDR Exclusive Historic Dry Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF ---------- Recovered Government Archive Solid Waste Facilities List
RGA LUST ---------- Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: Also known as Superfund, the National Priority List database is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund program. The source of this database is the U.S. EPA.

A review of the NPL list, as provided by EDR, and dated 04/05/2017 has revealed that there is 1 NPL

site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MARINE CORPS AIR STA	*MCAS EL TORO*	*SE 1/8 - 1/4 (0.141 mi.)*	*0*	*8*

Federal CERCLIS list

SEMS: SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

A review of the SEMS list, as provided by EDR, and dated 02/07/2017 has revealed that there is 1 SEMS site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MARINE CORPS AIR STA	*MCAS EL TORO*	*SE 1/8 - 1/4 (0.141 mi.)*	*0*	*8*

Federal RCRA CORRACTS facilities list

CORRACTS: CORRACTS is a list of handlers with RCRA Corrective Action Activity. This report shows which nationally-defined corrective action core events have occurred for every handler that has had corrective action activity.

A review of the CORRACTS list, as provided by EDR, and dated 12/12/2016 has revealed that there is 1 CORRACTS site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MARINE CORPS AIR STA	*MCAS EL TORO*	*SE 1/8 - 1/4 (0.141 mi.)*	*0*	*8*

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: 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.

A review of the RCRA-TSDF list, as provided by EDR, and dated 12/12/2016 has revealed that there is 1 RCRA-TSDF site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MARINE CORPS AIR STA	*MCAS EL TORO*	*SE 1/8 - 1/4 (0.141 mi.)*	*0*	*8*

EXECUTIVE SUMMARY

Federal RCRA generators list

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 12/12/2016 has revealed that there is 1 RCRA-SQG site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MARINE CORPS AIR STA	***MCAS EL TORO***	***SE 1/8 - 1/4 (0.141 mi.)***	***0***	***8***

Federal institutional controls / engineering controls registries

US ENG CONTROLS: A listing of sites with engineering controls in place.

A review of the US ENG CONTROLS list, as provided by EDR, and dated 02/13/2017 has revealed that there is 1 US ENG CONTROLS site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MARINE CORPS AIR STA	***MCAS EL TORO***	***SE 1/8 - 1/4 (0.141 mi.)***	***0***	***8***

US INST CONTROL: 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.

A review of the US INST CONTROL list, as provided by EDR, and dated 02/13/2017 has revealed that there is 1 US INST CONTROL site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MARINE CORPS AIR STA	***MCAS EL TORO***	***SE 1/8 - 1/4 (0.141 mi.)***	***0***	***8***

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 identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

A review of the ENVIROSTOR list, as provided by EDR, and dated 01/30/2017 has revealed that there are

2 ENVIROSTOR sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
HERITAGE FIELDS (FOR Facility Id: 60002040 Status: Active	***9 MILES N/E OF NEWPO***	***ESE 1/2 - 1 (0.731 mi.)***	***3***	***81***

Lower Elevation	Address	Direction / Distance	Map ID	Page
PA 40 ELEMENTARY SCH Facility Id: 60001597 Status: No Further Action	***NORTH OF FUTURE EXTE***	***SW 1/2 - 1 (0.771 mi.)***	***4***	***86***

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 12/12/2016 has revealed that there is 1 RCRA NonGen / NLR site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
CHEVRON 306957	13303 SAND CANYON	WSW 0 - 1/8 (0.052 mi.)	1	79

DOD: 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.

A review of the DOD list, as provided by EDR, and dated 12/31/2005 has revealed that there is 1 DOD site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
EL TORO MARINE CORPS		0 - 1/8 (0.000 mi.)	0	8

ROD: Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid the cleanup.

A review of the ROD list, as provided by EDR, and dated 11/25/2013 has revealed that there is 1 ROD site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MARINE CORPS AIR STA	***MCAS EL TORO***	***SE 1/8 - 1/4 (0.141 mi.)***	***0***	***8***

EXECUTIVE SUMMARY

HIST CORTESE: The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

A review of the HIST CORTESE list, as provided by EDR, and dated 04/01/2001 has revealed that there is 1 HIST CORTESE site within approximately 0.5 miles of the target property.

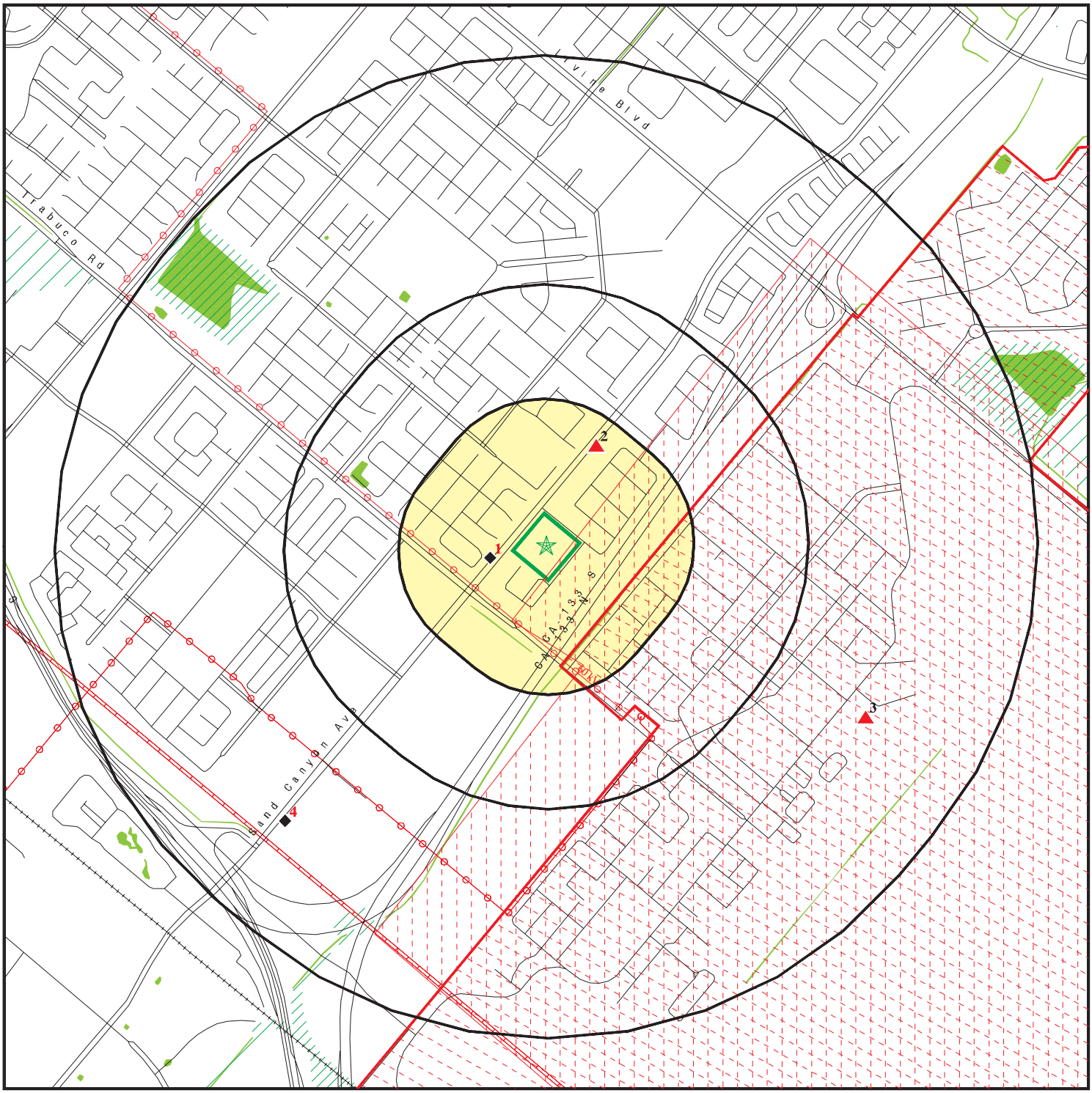
Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
UNOCAL #4473 Reg Id: 083001892T	14886	NNE 1/8 - 1/4 (0.187 mi.)	2	81

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 3 records.

Site Name	Database(s)
USMCAS EL TORO UST 273B	LUST
US MARINE CORP AIR STATION EL TORO	SLIC
PROPOSED STONEGATE ELEMENTARY SCHO	ENVIROSTOR, SCH

OVERVIEW MAP - 4964065.2S



- 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

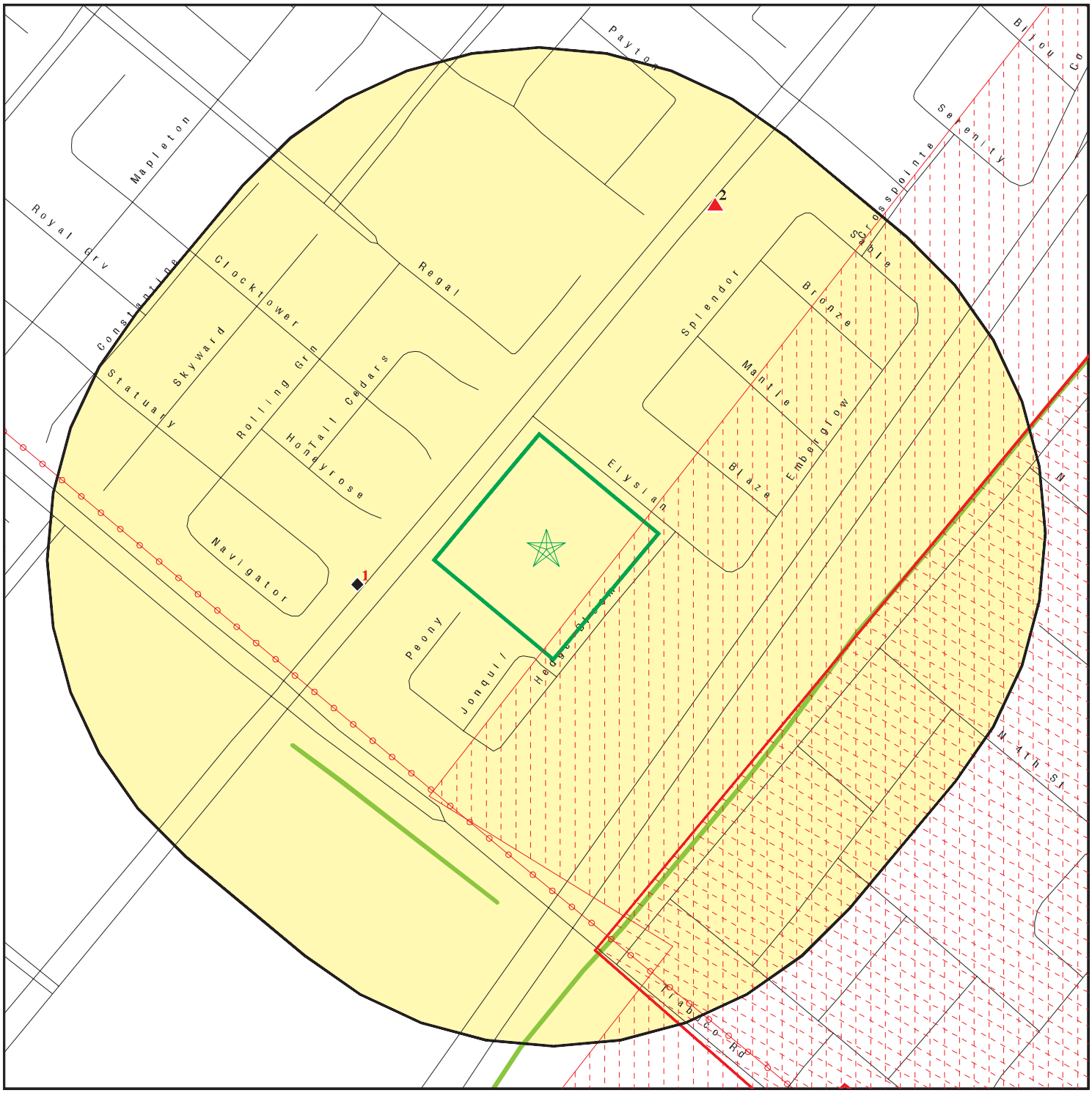
0 1/4 1/2 1 Miles

- Indian Reservations BIA
- Power transmission lines
- Pipelines
- 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: Second Zone 1 Reservoir ADDRESS: Sand Canyon Avenue Irvine CA 92618 LAT/LONG: 33.688443 / 117.745902	CLIENT: Bonterra Psomas CONTACT: Ashley Mccoy INQUIRY #: 4964065.2s DATE: June 12, 2017 6:06 pm

DETAIL MAP - 4964065.2S



- 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
- Indian Reservations BIA
- Power transmission lines
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- State Wetlands
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Second Zone 1 Reservoir ADDRESS: Sand Canyon Avenue Irvine CA 92618 LAT/LONG: 33.688443 / 117.745902	CLIENT: Bonterra Psomas CONTACT: Ashley Mccoy INQUIRY #: 4964065.2s DATE: June 12, 2017 6:08 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
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	1	0	0	NR	1
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	0.001		0	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	1	0	NR	NR	1
Federal CERCLIS NFRAP site list								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	1	0	0	NR	1
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	1	0	NR	NR	1
Federal RCRA generators list								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	1	NR	NR	NR	1
RCRA-CESQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	1	0	NR	NR	1
US INST CONTROL	0.500		0	1	0	NR	NR	1
Federal ERNS list								
ERNS	0.001		0	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
RESPONSE	1.000		0	0	0	0	NR	0
State- and tribal - equivalent CERCLIS								
ENVIROSTOR	1.000		0	0	0	2	NR	2
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST	0.500		0	0	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
SLIC	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		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
State and tribal voluntary cleanup sites								
VCP	0.500		0	0	0	NR	NR	0
INDIAN VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
WMUDS/SWAT	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	0	0	NR	NR	0
HAULERS	0.001		0	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	0.001		0	NR	NR	NR	NR	0
HIST Cal-Sites	1.000		0	0	0	0	NR	0
SCH	0.250		0	0	NR	NR	NR	0
CDL	0.001		0	NR	NR	NR	NR	0
Toxic Pits	1.000		0	0	0	0	NR	0
US CDL	0.001		0	NR	NR	NR	NR	0
Local Lists of Registered Storage Tanks								
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
Local Land Records								
LIENS	0.001		0	NR	NR	NR	NR	0
LIENS 2	0.001		0	NR	NR	NR	NR	0
DEED	0.500		0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS	0.001		0	NR	NR	NR	NR	0

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
CHMIRS	0.001		0	NR	NR	NR	NR	0
LDS	0.001		0	NR	NR	NR	NR	0
MCS	0.001		0	NR	NR	NR	NR	0
Orange Co. Industrial Site	0.001		0	NR	NR	NR	NR	0
SPILLS 90	0.001		0	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		1	0	NR	NR	NR	1
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		1	0	0	0	NR	1
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	0.001		0	NR	NR	NR	NR	0
EPA WATCH LIST	0.001		0	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	0.001		0	NR	NR	NR	NR	0
TRIS	0.001		0	NR	NR	NR	NR	0
SSTS	0.001		0	NR	NR	NR	NR	0
ROD	1.000		0	1	0	0	NR	1
RMP	0.001		0	NR	NR	NR	NR	0
RAATS	0.001		0	NR	NR	NR	NR	0
PRP	0.001		0	NR	NR	NR	NR	0
PADS	0.001		0	NR	NR	NR	NR	0
ICIS	0.001		0	NR	NR	NR	NR	0
FTTS	0.001		0	NR	NR	NR	NR	0
MLTS	0.001		0	NR	NR	NR	NR	0
COAL ASH DOE	0.001		0	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	0.001		0	NR	NR	NR	NR	0
RADINFO	0.001		0	NR	NR	NR	NR	0
HIST FTTS	0.001		0	NR	NR	NR	NR	0
DOT OPS	0.001		0	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	0.001		0	NR	NR	NR	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	0.001		0	NR	NR	NR	NR	0
US AIRS	0.001		0	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.001		0	NR	NR	NR	NR	0
FINDS	0.001		0	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
DOCKET HWC	0.001		0	NR	NR	NR	NR	0
ECHO	0.001		0	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	0	0	0	NR	0
Cortese	0.500		0	0	0	NR	NR	0
CUPA Listings	0.250		0	0	NR	NR	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
EMI	0.001		0	NR	NR	NR	NR	0
ENF	0.001		0	NR	NR	NR	NR	0
Financial Assurance	0.001		0	NR	NR	NR	NR	0

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
HAZNET	0.001		0	NR	NR	NR	NR	0
ICE	0.001		0	NR	NR	NR	NR	0
HIST CORTESE	0.500		0	1	0	NR	NR	1
HWP	1.000		0	0	0	0	NR	0
HWT	0.250		0	0	NR	NR	NR	0
MINES	0.001		0	NR	NR	NR	NR	0
MWMP	0.250		0	0	NR	NR	NR	0
NPDES	0.001		0	NR	NR	NR	NR	0
PEST LIC	0.001		0	NR	NR	NR	NR	0
PROC	0.500		0	0	0	NR	NR	0
Notify 65	1.000		0	0	0	0	NR	0
UIC	0.001		0	NR	NR	NR	NR	0
WASTEWATER PITS	0.500		0	0	0	NR	NR	0
WDS	0.001		0	NR	NR	NR	NR	0
WIP	0.250		0	0	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA LF	0.001		0	NR	NR	NR	NR	0
RGA LUST	0.001		0	NR	NR	NR	NR	0
- Totals --		0	2	9	0	2	0	13

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

DOD
Region

< 1/8
1 ft.

EL TORO MARINE CORPS AIR STATION (CLOSED)

EL TORO MARINE CORPS AIR (County), CA

DOD **CUSA143948**
N/A

DOD:
- Feature 1: Marine Corps DOD
- Feature 2: Not reported
- Feature 3: Not reported
- URL: Not reported
- Name 1: El Toro Marine Corps Air Station (Closed)
- Name 2: Not reported
- Name 3: Not reported
- State: CA
- DOD Site: Yes
- Tile name: CAORANGE

NPL
Region
SE
1/8-1/4
742 ft.

MARINE CORPS AIR STATION, EL TORO
MCAS EL TORO
EL TORO, CA 92709

NPL **1000417911**
SEMS **CA6170023208**
CORRACTS
RCRA-TSDF
RCRA-SQG
US ENG CONTROLS
US INST CONTROL
ROD
RAATS
PRP

NPL:
- EPA ID: CA6170023208
- Cerclis ID: 902770
- EPA Region: 9
- Federal: Y
- Final Date: 1990-02-20 00:00:00
- Site Score: 37.43
- Latitude: 33.676659999999998
- Longitude: -117.7176

Category Details:
- NPL Status: Currently on the Final NPL
- Category Description: Depth To Aquifer-> 50 And <= 100 Feet
- Category Value: 100

- NPL Status: Currently on the Final NPL
- Category Description: Distance To Nearest Population-> 0 And <= 1/4 Mile
- Category Value: 10

Site Details:
- Site Name: EL TORO MARINE CORPS AIR STATION
- Site Status: Final
- Site Zip: 92709
- Site City: EL TORO
- Site State: CA
- Federal Site: Yes
- Site County: ORANGE
- EPA Region: 09
- Date Proposed: 06/24/88
- Date Deleted: Not reported

MARINE CORPS AIR STATION, EL TORO (Continued) **1000417911**

Date Finalized: 02/21/90

Substance Details:

NPL Status: Currently on the Final NPL
Substance ID: Not reported
Substance: Not reported
CAS #: Not reported
Pathway: Not reported
Scoring: Not reported

NPL Status: Currently on the Final NPL
Substance ID: A046
Substance: POLYCHLORINATED BIPHENYLS
CAS #: 1336-36-3
Pathway: NO PATHWAY INDICATED
Scoring: 1

NPL Status: Currently on the Final NPL
Substance ID: D008
Substance: LEAD (PB)
CAS #: 7439-92-1
Pathway: GROUND WATER PATHWAY
Scoring: 3

NPL Status: Currently on the Final NPL
Substance ID: U044
Substance: CHLOROFORM
CAS #: 67-66-3
Pathway: GROUND WATER PATHWAY
Scoring: 4

NPL Status: Currently on the Final NPL
Substance ID: U210
Substance: TETRACHLOROETHENE
CAS #: 127-18-4
Pathway: GROUND WATER PATHWAY
Scoring: 2

NPL Status: Currently on the Final NPL
Substance ID: U211
Substance: CARBON TETRACHLORIDE
CAS #: 56-23-5
Pathway: GROUND WATER PATHWAY
Scoring: 4

NPL Status: Currently on the Final NPL
Substance ID: U228
Substance: TRICHLOROETHYLENE (TCE)
CAS #: 79-01-6
Pathway: NO PATHWAY INDICATED
Scoring: 1

Summary Details:

Conditions at proposal June 24, 1988): The El Toro Marine Corps Air Station covers approximately 4,700 acres southeast of Santa Ana in El Toro, Orange County, California. Commissioned in 1943, it supports the Fleet

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Marine Forces in the Pacific Ocean. The surrounding area, once primarily agricultural, is urbani ing rapidly. Station El Toro is participating in the Installation Restoration Program IRP), established in 1978. Under the program, the Department of Defense seeksto identify, investigate, and clean up contamination from ha ardous materials. As part of IRP, the Navy identified 21 problem areas at the station, including three landfills containing both ha ardous and solid waste; buried drums of explosivesand low-level radioactive waste; and areas where PCBs, battery acids, leaded fuels, and other ha ardous substances were dumped or spilled. In tests conducted early in 1987, the Orange County Water District found trichloroethylene and tetrachloroethylene in shallow irrigation wells on and downgradient of the site. An estimated 1,100 acres of land are irrigated by wells within 3 miles of the site. Status February 21, 1990): In April 1989, Station El Toro prepared a Perimeter Investigation Interim Report which focused on four contaminated areas. Further studies are continuing to determine the extent and sources of contamination.

Site Status Details:

NPL Status:	Final
Proposed Date:	06/24/1988
Final Date:	02/21/1990
Deleted Date:	Not reported

Narratives Details:

NPL Name:	EL TORO MARINE CORPS AIR STATION
City:	EL TORO
State:	CA

SEMS:

Site ID:	902770
EPA ID:	CA6170023208
Federal Facility:	Y
NPL:	Currently on the Final NPL
Non NPL Status:	Not reported

Following information was gathered from the prior CERCLIS update completed in 10/2013:

Site ID:	0902770
EPA ID:	CA6170023208
Facility County:	ORANGE
Short Name:	EL TORO MARINE CORPS AIR
Congressional District:	45
IFMS ID:	09H6
SMSA Number:	0360
USGC Hydro Unit:	18070204
Federal Facility:	Federal Facility
DMNSN Number:	4710.00000
Site Orphan Flag:	N
RCRA ID:	Not reported
USGS Quadrangle:	Not reported
Site Init By Prog:	Not reported
NFRAP Flag:	Not reported
Parent ID:	Not reported
RST Code:	Not reported
EPA Region:	09
Classification:	Federal Facility
Site Settings Code:	SU

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NPL Status: Currently on the Final NPL
DMNSN Unit Code: ACRE
RBRAC Code: Not reported
RResp Fed Agency Code: USNV
Non NPL Status: Not reported
Non NPL Status Date: / /
Site Fips Code: 06059
CC Concurrence Date: / /
CC Concurrence FY: Not reported
Alias EPA ID: Not reported
Site FUDS Flag: Not reported

CERCLIS Site Contact Name(s):
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Contact ID: 13004003.00000
Contact Name: Carl Brickner
Contact Tel: Not reported
Contact Title: Site Assessment Manager (SAM)
Contact Email: Not reported

Contact ID: 9270865.00000
Contact Name: Mary Aycock
Contact Tel: (415) 972-3289
Contact Title: Remedial Project Manager (RPM)
Contact Email: Not reported

CERCLIS Site Alias Name(s):
Alias ID: 101
Alias Name: MARINE CORPS AIR STA EL TORO
Alias Address: Not reported
SANTA ANA, CA
Alias ID: 102
Alias Name: EL TORO MARINE CORPS AIR STATION
Alias Address: EL TORO MARINE CORPS AIR STA
SANTA ANA, CA 92709
Alias ID: 103
Alias Name: EL TORO MARINE CORPS AIR STATION
Alias Address: EL TORO MARINE CORPS AIR STA
EL TORO, CA 92709
Alias ID: 9270159
Alias Name: FORMER MCAS EL TORO
Alias Address: EEPB FAC MGMT DEPT
SANTA ANA, CA 91702
Alias Comments: Not reported
Site Description: MCAS El Toro was commissioned in 1943 as a Marine Corps pilot fleet operation

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training facility. In 1950, the Station was selected for development as a master jet station and permanent center for Marine Corps aviation on the west coast. The Station mission has involved the operation and maintenance of military aircraft and ground-support equipment. These activities generated oils, solvents, paint residues, hydraulic fluid, used batteries, and other wastes. Wastes were placed in unlined on-Station landfills, and burned or covered with soil. Environmental remediation activities at MCAS El Toro are performed under the Installation Restoration Program (IRP). The IRP was developed in 1980 by the United States Department of Defense (DoD) to comply with federal guidelines to manage and control past hazardous waste disposal actions. The first indication of contamination at the Station occurred during routine water-quality monitoring in 1985, when the Orange County Water District discovered trichloroethene (TCE) in groundwater at an irrigation well located approximately 3,000 feet downgradient of MCAS El Toro. In 1985, the DON began to work on an Initial Assessment Study (IAS) to locate potentially contaminated sites on the Station. This work was conducted for the Naval Facilities Engineering Command under the Navy Assessment and Control of Installation Pollutants Program, which was the DON version of the DoD IRP at that time. The IAS report identified 17 sites as potential sources of contamination. The identification of potentially contaminated sites was based on the results of record searches and employee interviews. The report recommended sampling locations and sample analytical parameters to confirm the suspected contamination at the sites. In 1987, the Marine Corps contracted for a review of the IAS to produce a Site Inspection Plan of Action (SIPOA). In July 1987, while the SIPOA study was underway, (California) Regional Water Quality Control Board (RWQCB) Santa Ana Region issued a cleanup and abatement order to the Marine Corps. This order required the Station to initiate a perimeter groundwater volatile organic compound (VOC) investigation and submit a draft report. The Site Inspection Plan of Action (SIPOA) released in August 1988 included a recommendation of 19 sites for study and amended the site sampling plans proposed in the IAS report. This SIPOA report served as the basis for the Sampling and Analysis Plan for the RI/Feasibility Study (FS) sites. In June 1988, the United States Environmental Protection Agency (U.S. EPA) recommended adding MCAS El Toro to the National Priorities List (NPL) of the Superfund Program due to VOC groundwater contamination at the Station boundary and in the agricultural wells west of the Station. MCAS El Toro was added to the National Priorities List (NPL) on 15 February 1990. In October 1990, the Marine Corps/DON signed a Federal Facilities Agreement (FFA) with U.S. EPA Region IX, California Department of Health Services, and the RWQCB Santa Ana Region. The FFA is a cooperative agreement that: 1) assures environmental impacts are investigated and appropriate response actions are taken to protect human health and the environment; 2) establishes a procedural framework and schedule for developing, implementing, and monitoring appropriate response actions; 3) facilities cooperation, exchange of information, and participation of the parties; and 4) assures adequate assessment, prompt notification, and coordination between federal and state agencies. The implementation of the FFA is included as one of the responsibilities of the Base Realignment and Closure (BRAC) Cleanup Team (BCT). The BCT consists of representatives from the DON Southwest Division Naval Facilities Engineering Command (SWDIV), U.S. EPA, DTSC, and RWQCB Santa Ana Region. The team was established to manage and coordinate environmental restoration and compliance programs related to the operational closure of MCAS El Toro by July 1999. In addition, the MCAS El Toro BCT has specified in its mission and vision statements that: 1) fast-track remediation of sites is necessary to expedite reuse; and 2) restoration and reuse is to be maximized by 1999. In December 1989, the DON began to prepare a Phase I RI Work Plan and associated documents for MCAS El Toro. The DON reviewed the available reports and other documents

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pertinent to past disposal practices at the Station and concluded that 22 IRP sites would be investigated. These sites were grouped into three OU's. OU-1 comprised the regional VOC groundwater investigation (Site 18), which was conducted both on and off the Station. OU-2 included the four landfill sites (Sites 2, 3, 5, and 17) and Site 10, the Petroleum Disposal Area (this site was later moved to OU-3). The remaining 16 sites were grouped together as OU-3. These sites were considered to be potential sources for a variety of contaminants. The principal objectives of the Phase I RI were to evaluate the source(s) of contamination in regional groundwater west of the Station and determine whether contamination exists and is affecting the environment at sites in OU-2 and OU-3. The results of the Phase I RI were documented in a draft Technical Memorandum issued in July 1993, a draft RI report for OU-1 issued in July 1994, a final Soil Gas Survey Technical Memorandum issued in October 1994 and a draft final interim RI/FS Report for OU-1 issued in August 1996. A variety of contaminants in the groundwater, soil, surface water, and sediment at MCAS El Toro was identified during the Phase I RI. Contaminants in the soil and sediment consisted primarily of low concentrations of semi-volatile organic compounds (SVOCs), petroleum hydrocarbons, pesticides, herbicides, and polychlorinated biphenyls. It was also concluded during the Phase I RI that the source of contamination for regional groundwater is in the southwest quadrant of the Station, but no specific source was identified. The sampling events yielded sufficient information to warrant conducting a preliminary risk assessment of contaminants at the sites for both groundwater and soil contamination. The results of the Phase I RI provided the primary data for the Phase II RI/FS. In March 1993, MCAS El Toro was placed on the BRAC III list of military facilities considered for closure. Under the terms of the FFA, Station closure would not affect the DON's obligation to conduct the RI/FS and to comply with the other requirements of the FFA. Concurrent with the Phase I RI, the DON conducted a Resource Conservation and Recovery Act (RCRA) Facilities Assessment (RFA) at MCAS El Toro. The purpose of the RFA was to evaluate whether an additional 140 sites at MCAS El Toro would require further investigation under the Phase II RI/FS program. The final RFA report was submitted in July 1993. Base on an evaluation of the sampling results, 25 solid waste management units (SWMU's)/areas of concern (AOC's) were recommended for further action. Site 23 (Wastewater Treatment Plant Sewer Lines) was evaluated in the RFA and was recommended for no further action. The sewer lines are located within Site 24, which was added to the Phase II RI scope. Interviews with active and retired personnel form the Fuel Operations Division and Facility Management Department were held in July 1994 at MCAS El Toro. The objectives of the meeting were to confirm and supplement information obtained from past interviews and field investigations, to obtain a better understanding of current and historical operations at MCAS El Toro, and to identify new areas of potential environmental concern at MCAS El Toro. Those interviewed had knowledge of operations and procedures for storage and disposal of hazardous materials and waste. In July 1995, a final Work Plan for the Phase II RI/FS was issued. This Work Plan presented an approach to conduct the Phase II RI at 24 IRP sites including 2 new sites, Site 24 and Site 25. The objectives of the plan were to present a data quality objective-based sampling strategy to establish confidence that inferences made from the data are correct, and, ultimately, to collect sufficient information to support risk management decisions. The Phase II RI was conducted in 195 and 1996. During the same time period, DON performed an evaluation of background concentrations of metals in soils and reference levels for pesticides and herbicides in soils. This enabled site-specific analytical results of soil sampling to be compared with background and reference levels during the RI to identify potential releases. Subsequent to the Phase II RI, an evaluation of metals in groundwater was performed. The purpose of this evaluation was to determine

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whether the reported concentrations of metals in groundwater at MCAS El Toro reflect ambient conditions or are the result of anthropogenic sources associated with historical Station activities. From 1998 through 1999, the DON conducted a historical radiological assessment (HRA) of MCAS El Toro. The assessment was performed as part of the base closure process, for the release of the Station for reuse. A draft final HRA report summarizing the results of the assessments was issued in November 1999. Former Marine Corps Air Station (MCAS) El Toro lies in a semi-urban agricultural area of southern California, approximately 8 miles southeast of Santa Ana and 12 miles northeast of the city of Laguna Beach. Land northwest of the Station is used for agriculture, whereas the land to the south and northeast is used mainly for commercial, light industrial and residential purposes. Residential areas in the vicinity of Former MCAS El Toro include the cities of Lake Forest, Irvine, and Laguna Hills. Former MCAS El Toro is bordered on the south and west by the city of Irvine and on the north and east by unincorporated lands. Former MCAS El Toro was commissioned in 1943 as a Marine Corps pilot fleet operation training facility. In 1950, the Station was selected for development as a master jet station and permanent center for Marine Corps aviation on the west coast. The Station mission has involved the operation and maintenance of military aircraft and ground-support equipment. Historical activities on the Station included aircraft maintenance and repair. These activities generated oils, solvents, paint residues, hydraulic fluid, used batteries, and other wastes. Waste were placed in unlined landfills and burned or covered with soil. In some cases, wastes were released to the ground directly as the result of spills or dust-suppression activities. To support the Station's mission, facility operations were expanded over the years to include runways, aircraft maintenance and training facilities, housing, shopping facilities, and other support facilities. Former MCAS El Toro occupies 4,738 acres of land, including 580 acres that are leased for commercial farming. Approximately 1,000 acres are designated as outleased lands that are not available for development because of airfield safety clearances. The outleased lands are along the perimeter of the Station and are used for agricultural purposes, including landscape nurseries, livestock grazing, and crop production. The adjacent/surrounding land uses around Former MCAS El Toro include residential, commercial, industrial, and recreational. During operations, land use on Former MCAS El Toro consisted of a few general types. General Station land uses are described below for the following four quadrants, as defined by the bisecting north-south and east-west runways. - The northwestern quadrant consisted of the Former MCAS El Toro headquarters, administrative services, family and bachelor housing, and community support services. - The northeastern quadrant consisted of Marine Aircraft Group activities (e.g., training, maintenance, supply and storage, and airfield operations), family housing, community support services, and ordnance storage in areas isolated by topographic relief and distance from other developments. - The southeastern quadrant consisted of administrative services, maintenance facilities, ordnance storage, and the golf course. - The southwestern quadrant consisted of aircraft maintenance facilities, supply and storage facilities, and limited administrative services. Past operations and practices at Former MCAS El Toro have contributed to soil and groundwater volatile organic compound (VOC) contamination. Former MCAS El Toro was closed on 02 July 1999. Environmental compliance and restoration activities have continued since Station closure, and a caretaker staff will remain at the Station until property transfer is complete. A community reuse plan was prepared and submitted to the Department of the Navy (DON) in 1996. The reuse plan proposed to use Former MCAS El Toro for a commercial airport as well as for other public uses including schools, parks, wildlife refuges, golf courses, homeless services, and commercial/light-industrial uses. The 1996 plan was refined by the 1999 Airport

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System Master Plan, which incorporated airport planning activities that resulted in some land use areas being redefined. The DON and the Federal Aviation Administration are evaluating this proposed reuse of Former MCAS El Toro and other alternatives in their joint environmental impact statement. Former MCAS El Toro lies within the Irvine Forebay I Groundwater Subbasin (Irvine Subbasin), which has been designated by the California Regional Water Quality Control Board (RWQCB) Santa Ana Region as a public water supply source. The regional aquifer at Sites 18 and 24 is not currently a source of municipal drinking water because of widespread elevated concentrations of total dissolved solids (TDS) and nitrates that exceed water quality standards; however, groundwater near the Station is used for agriculture. On-Station irrigation well 18_TIC055, at the western end of the east-west runway, is connected to the regional irrigation distribution system. Eight other irrigation wells are located in the vicinity of the Station. Well 18JTIC055 is screened in the principal aquifer upgradient of the principal aquifer VOC plume and, because of its upgradient location, does not extract groundwater from the principal aquifer VOC plume. Well 18_ET1 extracts water from an area within the TCE plume. Although a risk assessment performed by the Orange County Water District (OCWD) in 1986 showed that the water from this well does not represent an unacceptable human health risk, the extracted groundwater is treated using air stripping to remove VOCs before it is discharged for irrigation. The nearest drinking-water well (Tustin Walnut Well) is located at the intersection of Redhill and Walnut, approximately 2.5 miles from the leading edge of the TCE plume; however, the well is not hydraulically downgradient of the plume. The nearest downgradient drinking-water well (Dyer Road Well #3) is 3.2 miles from the leading edge of the plume. In addition, the Irvine Ranch Water District (IRWD) plans to acquire well 18JTIC106, located approximately 1 mile from the leading edge of the plume, as a drinking-water well. Environmental remediation activities at Former MCAS El Toro are performed under the Installation Restoration Program (IRP). The IRP was developed in 1980 by the Department of Defense (DoD) to comply with federal guidelines to manage and control contamination from past hazardous waste disposal actions. The first indication of contamination at the Station occurred during routine water quality monitoring in 1985, when OCWD discovered TCE in groundwater at an irrigation well approximately 3,000 feet downgradient of Former MCAS El Toro. In 1985, the DON began to work on an initial assessment study (IAS) to locate potentially contaminated sites on the Station. This work was conducted for the Naval Facilities Engineering Command under the Navy Assessment and Control of Installation Pollutants Program, which was the DON version of the Department of Defense (DoD) IRP at that time. The IAS report identified 17 sites as potential sources of contamination. The report also identified potentially contaminated sites based on the results of record searches and employee interviews and recommended sampling locations and analytical parameters to assess the suspected contamination. In 1987, the Marine Corps contracted for a review of the LAS to produce a site inspection plan of action (SIPOA). The SIPOA, released in August 1988, recommended 19 sites for study and amended the site sampling plans proposed in the IAS report. This SIPOA report was the basis for a sampling and analysis plan for the remedial investigation (RI)/feasibility study (FS) sites. In July 1987, while the SIPOA study was under way, RWQCB Santa Ana Region issued a Cleanup and Abatement Order (CAO) to the Marine Corps requiring the Station to initiate a perimeter groundwater VOC investigation and submit a draft report. Because the investigation revealed VOCs in the shallow groundwater unit near the Station boundary, an interim groundwater pump and treatment system was installed at this boundary. Between June 1989 and September 1993, the system pumped and treated groundwater from three extraction wells at approximately 30 gallons per minute (gpm). Over the life of the system, reported concentrations

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of TCE in the influent were about 10 to 160 micrograms per liter (ug/L) and reported concentrations of PCE were 25 to 100 ug/L. The extracted groundwater was treated with a granular activated carbon (GAC) treatment system and used to irrigate the Station golf course. On 13 April 1993, RWQCB rescinded the CAO, because the required actions were complete and because the DON had entered into a Federal Facilities Agreement (FFA) to investigate and remediate environmental impacts associated with past and present activities at Former MCAS El Toro. In September 1993, the pump and treatment system was shut down. In June 1988, U.S. EPA recommended adding Former MCAS El Toro to the National Priorities List (NPL) because of VOC contamination at the Station boundary and in the agricultural wells west of the Station. Former MCAS El Toro was added to the NPL on 15 February 1990. In October 1990, the Marine Corps/DON signed an FFA with U.S. EPA Region 9, California Department of Health Services (now referred to as the DTSC), and RWQCB Santa Ana Region. The Base Realignment and Closure (BRAC) Cleanup Team (BCT) is responsible for implementing the FFA. The BCT consists of representatives from the DON Southwest Division Naval Facilities Engineering Command (SWDIV), U.S. EPA, DTSC, and RWQCB Santa Ana Region. The team was established to manage and coordinate environmental restoration and compliance programs related to the closure and disposal of Former MCAS El Toro by July 1999. EPA OU-01: Basewide Groundwater Site 18, the regional groundwater volatile organic compound (VOC) plume, is defined as the area where TCE concentrations are greater than 5 ug/L in the principal aquifer. Site 18 is downgradient of Site 24 and is located entirely off-Station. The contaminated groundwater of Site 18 originates in the shallow aquifer at Site 24, migrates into the principal aquifer near the southwestern Station boundary, and extends into the principal aquifer off-Station approximately 3 miles to the west beneath the city of Irvine. The average width of the off-Station VOC plume is approximately 1/2 mile. VOC contamination reaches depths of 450 feet bgs in some areas. Land above the Site 18 groundwater plume has historically been used for agricultural activities. However, recently the land use has changed to mixed-use with agricultural, residential, and commercial areas. The agricultural land use has likely contributed to the reportedly elevated concentrations of total dissolved solids (TDS) and nitrate that is found throughout the basin, but it is not responsible for the extensive VOC contamination that originated at Site 24. Groundwater from Site 18 is also used to supply two artificial surface water bodies, North Lake and South Lakes, and the childrens' wading pools associated with each lake. The lakes are used for recreation, including boating, sailing, fishing, and wading. Site 24 is located in the southwestern quadrant of Former MCAS El Toro. The site is highly industrialized and contains two large aircraft hangars (Buildings 296 and 297) and several smaller buildings that were used for aircraft and vehicle maintenance and repair. The Site 24 surface cover consists of unpaved open ground, asphalt, and concrete. Most of the site (170 acres) is paved. Asphalt-covered areas were used primarily for access roads and parking lots for military and personal vehicles. Concrete covers the areas where most of the industrial activities at Site 24 have been conducted, including slabs for Buildings 296 and 297 (the two aircraft hangars), Building 295 (the helicopter hangar), and Building 324 (the former engine test facility). A network of storm drains collects rainwater from the paved surfaces of Site 24. When industrial activities were conducted at Site 24, wastewater generated from the concrete-paved areas would also have been transported via this network. The network discharges to Agua Chinon Wash on the eastern portion of the site and Bee Canyon Wash on the western portion, near the Station boundaries in these locations. Industrial activities at Site 24, such as dust suppression with waste liquids, paint stripping, degreasing, vehicle and aircraft washing, and waste disposal practices, involved the use of solvents containing VOCs such as trichloroethylene (TCE) and tetrachloroethene

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(PCE). Waste solvents may have reached the surface or subsurface through leakage, runoff, storm drains, or direct application to the soil and are believed to be the source of VOCs in the regional groundwater. The precise origin, nature, and use of TCE released at the site and the circumstances and quantities of individual releases are not documented. TCE usage at Former MCAS El Toro is believed to have been discontinued in the mid-1970s. The shallow groundwater plume associated with Site 24 originates at this site and extends off-Station approximately to Sand Canyon Avenue. Calculations performed during the Phase II remedial investigation (RI) showed that the concentrations of VOCs present in deeper subsurface soil at Site 24 were high enough to contaminate groundwater to levels above drinking water standards. Groundwater contamination, where present beneath Sites 7, 8, 9, 10, 11, 12, 22, and 25, has its origin at Site 24. The Irvine Desalter Project (IDP) is a local project prompted by a 1984 regional groundwater study that showed inorganic constituents, mainly TDS and nitrates were migrating from the Irvine area toward the main portion of the Orange County groundwater basin. The Irvine area's relatively poor quality of groundwater is mostly attributable to local geology and agricultural practices. After later studies identified VOCs, primarily TCE, in area groundwater, the IDP was modified to address VOCs in addition to TDS and nitrates. The IDP is being designed to meet all federal and state drinking-water standards. The OCWD and IRWD have entered into an agreement that covers design, construction, operation, and funding of the project. The OCWD is responsible for the planning, right-of-way acquisition, design, and construction of project facilities, with full participation by IRWD. IRWD will operate the project facilities. In June 2001, the DON and the Department of Justice (DOJ), on behalf of the Marine Corps, OCWD, and IRWD reached an agreement on how the IDP could fulfill the DON's obligation to remediate VOCs while achieving the OCWD and IRWD objectives of treating groundwater containing high concentrations of TDS and nitrates to provide a drinking- and reclaimed-water supply from the principal aquifer. A settlement agreement apportioning costs for the IDP components was signed by the OCWD on 13 June 2001, by IRWD on 19 June 2001, by the DON on 18 July 2001, and by DOJ on 07 September 2001. A Record of Decision (ROD) addressing groundwater contamination at Sites 18 and 24 was signed in June 2002. The DON's selected remedy uses the IDP as the key component of the groundwater treatment system for VOC removal at Sites 18 and 24. The Orange County Water District (OCWD), Irvine Ranch Water District (IRWD), and the Settling Federal Agencies (SFA) comprised of the U.S. Department of Justice (DOJ) and the Department of Navy (DON) reached a Settlement Agreement regarding the Modified Irvine Desalter Project (IDP) to accept and treat groundwater from Site 24 and the PA for VOC removal. Treatment of extracted groundwater contaminated with VOCs is considered the CERCLA Component of the Modified IDP. Groundwater extracted from the SGU will be conveyed by DON to a point of connection to be located at the MCAS El Toro boundary. At the point of connection, IRWD will accept the water and transport it to the Modified IDP for treatment. This Settlement Agreement was incorporated as part of the Final Groundwater ROD. The agreement provides that the United States will bear the VOC treatment costs, and OCWD and IRWD will continue to bear the costs associated with reclaimed water supply treatment requirements, including those for total dissolved solids and nitrates. The agreement specifies the quantity and quality of contaminated water that can be treated by the Modified IDP. An Explanation of Significant Differences addressing Operable Unit 1 was completed in March 2006. The remedy for soil was implemented in accordance with the Interim Soil ROD and documented in the Closure Report submitted to the regulatory agencies. The regulatory agencies concurred with the Closure Report, which concluded that the remedial action objectives (RAOs) for soil have been fulfilled. A Final Soil ROD documenting NFA for Site 24 soils was approved by the FFA signatories and

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finalized in April 2006. An Explanation of Significant Differences addressing Operable Unit 1 was signed in December 2008. EPA OU-02: Site 24 Soil VOC Source Area Site 24 is located in the southwest quadrant of Former MCAS El Toro. Industrial activities at Site 24, such as dust suppression with waste liquids, paint stripping, degreasing, vehicle and aircraft washing, and waste disposal practices involved the use of solvents containing VOCs such as trichloroethene (TCE) and tetrachloroethene (PCE). Waste solvents may have reached the surface or subsurface through leakage, runoff, storm drain flow, or direct application to the soil. The precise origin, nature, and use of TCE released at the site and the circumstances and quantities of individual releases are not documented. TCE usage at Former MCAS El Toro is believed to have been discontinued in the mid-1970s. Site 24 encompasses approximately 200 acres. The site slopes to the west from an elevation of about 320 feet above mean sea level (MSL) at the intersection of the east-west and north south runways to approximately 240 feet above MSL near the end of the east-west runway. The site is largely industrialized and contains two large aircraft hangars (Buildings 296 and 297) and several smaller buildings that were used for aircraft and vehicle maintenance and repair. Maintenance activities (e.g., degreasing) that occurred within these buildings may have contributed to the VOC contamination present at the site. On the basis of current local zoning, the future use of Site 24 is designated as recreational and institutional. Former MCAS El Toro lies within the Irvine Groundwater Management Zone, which has been designated by Santa Ana RWQCB as a public water supply source. The regional aquifer beneath Former MCAS El Toro is not currently a source of municipal drinking water because of widespread elevated concentrations of total dissolved solids and nitrates that exceed water quality standards; however, groundwater in the vicinity of the Station is used for agricultural purposes. The horizontal and vertical extent of VOCs in the vadose zone was characterized using Phase I and Phase II soil and soil gas analytical results. The results confirmed that, at the time of the RI, a primary TCE source area was present beneath Buildings 296 and 297. This source area extended vertically to groundwater directly beneath those buildings, with the highest concentrations near the water table. The trend of increasing concentration with depth suggested a depleting source at the surface, which is consistent with the end of TCE usage in approximately 1975. The maximum concentration of TCE reported in soil during the Phase II RI was 190 micrograms per kilogram (ug/kg), compared with a concentration of 400 ug/kg during the Phase I investigation. TCE in soil gas was reported at concentrations up to 6,120 ug/L. This exceeds the concentration in equilibrium with TCE-contaminated groundwater and indicates that an active mechanism existed to transfer TCE in the vadose zone to groundwater. In addition to TCE, other chlorinated VOCs, such as PCE, carbon tetrachloride, and related organic chemicals, were also reported in soil at Site 24, but with less frequency and at much lower concentrations. 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) had a soil gas volume nearly as large as that of TCE, but was not considered a threat to groundwater due to relatively low concentrations and toxicity. Soil Vapor Extraction (SVE) was selected for vadose zone remediation in an interim ROD that was finalized in September 1997. Transfer and installation of the SVE system used at Norton AFB was completed in 1998. In January 1999, the remedial design for the SVE system was completed and operational testing of the central treatment system remediation equipment began. Actual remedial action started in March 1999 with the use of portable SVE systems to extract VOCs from existing SVE wells. The central treatment system operation and installation of the initial phase of additional SVE wells and the associated vapor conveyance piping began in May 1999. By the end of 1999, significant progress had been made in remediating the vadose zone, and vapor concentrations in all the SVE wells were below the soil gas cleanup (threshold) levels. Rebound testing of existing SVE wells and

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installation of supplemental SVE wells (to confirm that soil gas cleanup goals had been achieved throughout the soil gas plume) were completed in April 2000. In June 2001, a draft closure report for soil at Site 24 was issued. This report is expected to be finalized in spring 2002. Remediation of soil at Site 24 will be discussed further in the final ROD for the Site 24 vadose zone. At the time that the SVE system was shut down, TCE and PCE concentrations in the vadose zone source area were reduced to below the final soil gas threshold concentrations set forth in the Interim ROD. Additionally, attainment of closure goals was confirmed by closure sampling conducted 7 months after shutdown. Between the start of pilot scale testing (April 1995) through September 2000, approximately 2,000 pounds of VOCs was extracted and treated at Site 24. A Record of Decision addressing OU 2 was completed in March 2006. EPA OU-03: Soil at Site 8, 11, and 12 Site 11 is located in the southwest quadrant of the MCAS El Toro and is comprised of three units. Unit 1 is a concrete pad that is about 30 feet by 30 feet in size with a strip of ground adjacent to it. Unit 2 is an asphalt lined drainage ditch, while Unit 3 is the remainder of the unpaved fenced storage yard behind Building 369. A Record of Decision was completed for Site 11 in September 1999. The Navy Installation Restoration Program (IRP) site numbers and names for the sites addressed in this Record of Decision (ROD) are: -Site 8, Defense Reutilization and Marketing Office (DRMO) Storage Area -Site 12, Sludge Drying Beds Both these sites are within Operable Unit (OU)-3A at Former Marine Corps Air Station (MCAS) El Toro. Former MCAS El Toro is situated in south-central Orange County, California, approximately 8 miles southeast of Santa Ana and 12 miles northeast of Laguna Beach. Sites 8 and 12 are located in the southwest quadrant of Former MCAS El Toro. Former MCAS El Toro provided material and support for Marine Corps aviation activities until the Station was closed in July 1999, as a part of the Base Closure and Realignment Act. At its maximum acreage, the Station comprised about 4,740 acres. In February 2005, the Department of Navy (DON) transferred major portion of the Station via public auction to a private developer. Site 8 was formerly a Defense Reutilization and Marketing Office (DRMO) storage area for containerized liquids, and scrap and salvage materials from Former MCAS El Toro and Former MCAS Tustin. The scrap materials included mechanical and electrical components and various types of liquids. Site 8 is bounded by South Marine Way to the northeast, Q Street to the northwest, Building 360 to the southwest, and Building 800 to the southeast. Site 8 comprises two distinct but adjacent areas bisected by R Street: an old salvage yard and a main storage yard. These two areas are subdivided into the following five separate units: -Unit 1, East Storage Yard -Unit 2, West Storage Yard -Unit 3, Refuse Pile Area (the location of a former refuse pile within the West Storage Yard) -Unit 4, Polychlorinated Biphenyl (PCB) Spill Area (located within the east storage yard) -Unit 5, Old Salvage Yard Site 12 is located near Plant Road, South Marine Way, and Bee Canyon Wash. Site 12 consists of the following four units: -Unit 1, the former location of the west sludge-drying beds -Unit 2, the former location of the east sludge-drying beds -Unit 3, a drainage ditch -Unit 4, the location of former wastewater treatment plants (WWTPs) Site 8 was used as a storage yard from the early years (late 1940s) of the Station operation. During its operation as a storage area for containerized liquids and scrap, liquids such as lubrication oil, fuels, and solvents may have spilled or leaked, impacting the shallow soil at the site. Soil at the site has also been impacted by the spillage of PCB contaminated oil from scrap electrical components. The Phase I Remedial Investigation (RI) Report documented that in 1984, approximately 5 gallons of PCB-containing oil were spilled from a leaking electrical console in a small area at the east end of the main storage yard. PCB-contaminated soil in the spill area (approximately 1,500 square feet) was excavated to a depth of 1 foot below grade. A hazardous waste contractor transported the excavated soil to an

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offsite disposal facility. No other spills have been documented at the site. The Phase II RI report documented that a refuse pile (Unit 3) was observed near the center of the main storage yard on aerial photographs dating back to 1952. This refuse pile remained visible in aerial photographs through 1990. The pile was removed and disposed of prior to initiation of the Phase I RI in 1991. In December 1993, the top 2 feet of the soil beneath the refuse pile was excavated and removed from Site 8 by a paving contractor. This soil was placed in a 15-foot deep excavation (pit) at Unit 2 of IRP Site 19. The WWTP at Site 12 ceased operation in the early 1970s and was demolished a few years later. The industrial wastewater treatment plant (IWWTP) was dismantled by 1961. Data collected during the Phase II RI suggest that the aboveground concrete treatment tanks were demolished in place and then covered with approximately 5 to 7 feet of fill material. The sludge produced at this facility was dewatered in the two drying bed areas (east and west). After the plant closed, the sludge remaining in the drying beds was reportedly abandoned in place. The earthen berms surrounding the sludge beds were combined with imported fill material and graded in place. The drainage ditch (Unit 3) at Site 12 is an unimproved earthen channel that skirted both sludge-drying bed areas into a catch basin located north of Plant Road, which connects to the lower reach south of Plant Road via concrete culverts. History of non-radiological investigations Investigation activities and documents have been prepared to address non-radiological contamination including VOCs, semivolatile organic compounds (SVOCs), pesticides, PCBs, total petroleum hydrocarbons (TPH), total recoverable petroleum hydrocarbons (TRPH), herbicides, and target analyte list (TAL) metals at Sites 8 and 12. In 1992 and 1993, the remedial action evaluation process was started for Sites 8 and 12 with a Phase I RI. Subsequent to the Phase I RI, a Phase II RI was conducted from 1995 through 1997 for Sites 8 and 12 in conjunction with other OU-3A site (Site 11). The Phase II RI Report for OU-3A sites (Sites 8, 11, and 12) provided an interpretation of the nature and extent of non-radiological contamination at Sites 8 and 12 based on the review of data obtained from an aerial photograph survey, and soil sampling and analysis conducted as a part of the Phase I and Phase II RIs. The site characterization information obtained from the Phase I and Phase II RIs was used to complete a Feasibility Study (FS) for Sites 8 and 12 in July 1997. The FS identified and evaluated the alternatives that could be potentially used to remediate non-radiological chemicals of potential concern (COPCs) (e.g., PCBs and polynuclear aromatic hydrocarbons [PAHs]) at the site. Based on the results of the FS, a Proposed Plan (in conjunction with Site 11) was released for public comment for Site 8, Units 3 and 5; and Site 12, Unit 3 in May 1999. The Proposed Plan identified Alternative 3, excavation, with recycling of the excavated soil as cover material at the on-Station Sites 2 and 17 landfills, as the preferred alternative for the portions of the sites contaminated with non-radiological chemicals. Off-Station disposal of contaminated soil was also presented as a disposal option. The Proposed Plan recommended no further action at Units 1, 2, and 4 of Sites 8 and 12. Following issuance of the Proposed Plan, a Draft ROD was prepared for Sites 8 and 12 in combination with other OU-3A site (Site 11) at Former MCAS El Toro. This Draft ROD selected no further action (NFA) for Site 8, Units 1, 2, and 4 and further action for Site 8, Units 3 and 5. For Site 12, this ROD selected NFA for Site 12, Units 1, 2, and 4 and further action at Site 12, Unit 3. The selected remedy for Site 8, Units 3 and 5; and Site 12, Unit 3 noted as Alternative 3 in the Draft ROD consisted of excavation of non-radiologically contaminated soil with recycling of excavated soil as cover material at the on-Station Site 2 or 17 landfills. The remedy included confirmation sampling after excavation to ensure that the contaminated soil exceeding the residential risk-based concentrations (RBCs) for the non-radiological chemicals of concern (COCs) (e.g., PCBs and PAHs) at each area

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has been removed. The RBCs were calculated based on the risk assessment conducted as a part of the Phase II RI. As a part of activities conducted following the release of the Draft ROD, the human health risk assessment (HHRA) conducted during the Phase II RI was reviewed in detail. The review showed that several exposure factors and toxicity indices used to derive the risk estimates were not current, based on a comparison with those used by Region 9 of the U.S. EPA in the development of its preliminary remediation goal (PRG) table. It was also determined that the data from additional soil sampling conducted in May 1999 (subsequent to the Phase II RI) at Site 8, Unit 5 and Site 12, Unit 3 should also be incorporated into the risk assessment and the calculation of the RBCs. Thus, a risk reevaluation was conducted, utilizing all the available data and the California Environmental Protection Agency (Cal/EPA) and U.S. EPA Region 9 toxicity information and exposure factors for the year 2000. In general, the results of the updated HHRA indicated lower risks than the Phase II RI risk assessment values. Based on the updated cancer and noncancer risk values, the report concurred with the NFA recommendation in the Draft ROD for Units 1, 2, and 4 of both Sites 8 and 12 for non-radiological contaminants. For Site 8, Units 3 and 5; and Site 12, Unit 3, a reevaluation of the response action documented in the Draft ROD based on the updated site risks and risk management considerations was recommended. Subsequent to the preparation of the FS and Draft ROD, investigations to assess the nature and extent of potential radiological contamination were completed. The history of these investigations is presented below. History of Radiological Evaluation Subsequent to the preparation of the FS and Draft ROD, a radiological evaluation of Sites 8 and 12 was conducted as a part of the stationwide Historical Radiological Assessment (HRA) for Former MCAS El Toro in 1999 and 2000. The purpose of the HRA was to identify potential, likely, or known sources of radioactive material and radioactive contamination based on existing or derived information and to identify sites that need further action as opposed to those posing no threat to human health. As a part of HRA, interviews, records review, site inspections, and limited informal surveys were conducted at Former MCAS El Toro. Based on these investigations, the HRA recommended further investigation, including radiological surveys at Sites 8 and 12. For Site 8 this recommendation was based on an employee interview which indicated that small quantities of radium painted parts and gauges may have been stored at Site 8. Site 12 was considered potentially impacted since former IWWTP and sludge drying beds were located downstream of Building 296 (former location of radium room), and processed effluent from the Station buildings connected to the industrial waste sewer system. Subsequent to the issuance of the HRA, on-site radiological characterization surveys and sampling were conducted at Sites 8 and 12 in June through November 2001 and in March 2004. These investigations were performed in accordance with the Radiological Survey Plan and the Radiological Sampling Amendment. An analysis of data obtained from radiological surveys and soil sampling indicated that locations with radium 226 (Ra-226) concentrations greater than background levels are present at Units 1 and 4 of Site 8. However, Ra-226 concentrations were found to be consistent with the background concentrations at Site 12, and Units 2, 3, and 5 of Site 8. Therefore, a radiological release report was issued for Site 12, and Units 2, 3, and 5 of Site 8 in conjunction with IRP Site 25 (Bee Canyon Wash Outfall). Based on the statistical analyses of the Ra-226 data, and risk and dose assessments, this report concluded that the occurrence and distribution of Ra-226 at Units 2, 3, and 5 of Site 8 and Site 12 are consistent with ambient concentrations. Therefore, a Site Evaluation Accomplished (SEA) recommendation was made for Units 2, 3, and 5 of Site 8 and Site 12. The SEA recommendation denotes that the CERCLA requirement for the site evaluation of radionuclides has been accomplished, and radionuclides will be removed from the list of COPCs and further consideration under CERCLA at Units 2, 3, and 5 of Site 8 and Site

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12. However, since locations with higher than background concentrations of Ra-226 were found at Units 1 and 4 of Site 8, these units were selected for further response action under CERCLA. A ROD addressing OU 3 was completed in May 2007. EPA OU-04: Sites 2 & 17 Landfills Sites 2 and 17 are located in undeveloped areas, in the foothills of the Santa Ana Mountains, in the eastern portion of MCAS El Toro. Site 2 occupies approximately 27 acres and is situated between Borrego Canyon Wash and one of its tributaries. The site is situated at an elevation approximately 500 feet above mean sea level and is bisected by a man-made drainage channel that trends in a northeast-southwest direction. Site 2 is bounded on the west by Magazine Road and a dirt road runs along the southern and eastern boundary. The operational landfill was used from the late 1950s until about 1980. Until recently, unauthorized disposal has occurred on an intermittent basis in Areas C1, C2, and D2. During the 1970's, all solid waste from MCAS El Toro and some waste from MCAS Tustin were disposed in the Site 2 operational landfill. The suspected types of waste include construction debris, municipal waste, batteries, waste oils, hydraulic fluids, paint residues, transformers, and waste solvents. It is also possible that equipment painted with radium paint, or other low-level radiological materials consistent with Station operations, could have been disposed into the Site 2 landfill. The landfill is not being used currently and has become overgrown with shrubs and grasses, including a few individual plants of coastal sage scrub, which serves as habitat for the California gnatcatcher, a federally listed threatened species. A fill cover of unknown thickness has been placed over the landfill. Site 17 occupies approximately 11 acres in a canyon west of the Magazine Road Landfill. The site is located in a small canyon and extends beyond the canyon mouth onto a flat, weed-covered field formerly used for agriculture. At its lower end, the landfill elevation is about 440 feet above mean sea level; at its upper end in the canyon, the elevation is about 570 feet above mean sea level. The landfill is covered with sparse vegetation and varying amounts of fill. At the time of the Phase II remedial investigation (RI), refuse was visible at several locations and the former wash in the canyon was largely obscured by refuse and soil from the excavation of an adjacent hilltop. The Site 17 landfill was actively used from 1981 to 1983 as a Stationwide disposal facility. The site boundaries represent the operational area of the landfill. Aerial photographs indicate that landfilling activities were under way as early as 1970 and continued through 1986. Suspected waste types disposed at the site include domestic waste and rubble, cooking grease, oils and fuels from sumps, and empty drums. Reportedly, any type of waste generated at MCAS El Toro may have been disposed at the landfill. It is also possible that equipment painted with radium paint, or other low-level radiological materials consistent with Station operations, could have been disposed into the Site 17 landfill. From 1996 to 1997, removal actions were undertaken at Sites 2 and 17. Actions included fencing the sites, removing drums and other debris from the surface of the landfill, and constructing drainage features to reduce the erosion that had been occurring at both sides. Sites 2 and 17 were addressed in an interim ROD that was signed in July 2000. The ROD was interim because it presented the selected remedial action for only vadose zone soil at Site 2 and for vadose zone soil and groundwater at Site 17. Remediation of groundwater at Site 2 will be addressed in the final ROD. A radiological survey was conducted at Sites 2 and 17 in August through October 2001. The final ROD will also summarize the results of the survey and address radiological contamination, if any, at both Sites 2 and 17. An Explanation of Significant Differences addressing Operable Unit 4 was signed in July 2009. EPA OU-05: Sites 3 & 5 Landfills Sites 3 and 5 will be addressed in an OU-2C ROD that is expected to be issued to the public in 2002. AA 3 encompasses an area of approximately 5.14 acres (2.08 hectares) and is located in the northwestern section of the former MCAS El Toro

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facility near Pusan Way and adjacent to the Agua Chinon Wash. AA 3 has also been designated as Miscellaneous Refuse (MSCR) 1, a "former refuse disposal area" in the BRAC Business Plan update. MSCR AA 3 refers to seven aerial photograph (APHO) anomaly areas (APHOs 59, 60, 61, 62, 63, 64, and 65) identified during a review of aerial. The APHO anomalies associated with AA 3 also include features that are not contiguous with the study boundary. Historically, AA 3 was used as a source of borrow material. Records indicate that some of the borrow pits and trenches were backfilled with construction debris and later covered with five feet or more of fill soil. During previous investigations, it was confirmed that there is an average of approximately 4.5 feet of soil cover with isolated areas having as little as 2 feet of soil cover over the construction debris. Based on a review of historical aerial photographs and topographic maps, placement of construction debris occurred between 1972 and 1988. Interviews with former Station personnel indicate that construction debris generated during the construction of IRP Site 3 were placed at AA 3. Previous investigations conducted at AA 3 include: -1993 - Aerial Photograph Assessment; - 1999 to 2000 - Groundwater, soil, and soil vapor investigation, geophysical investigation, trenching, and radiological screening; - 2000 - Final Historical Radiological Assessment (HRA) - 2002 to 2005 - Removal Site Evaluation (RSE) (including eight rounds of groundwater monitoring); - 2003 - Human Health and Ecological Screening Risk Assessments (SRAs); - 2003 - Expanded Site Inspection (ESI); - 2006 - Final Radiological Release Report - 2007 to 2008 - Supplemental Groundwater Monitoring; and - 2008 to 2009 - Remedial Investigation (RI)/Feasibility Study (FS). The December 2006 Final Radiological Release Report provides radiological final status survey information, with supporting data, for AA 3. No evidence of radiological materials was noted during previous investigations or during the radiological survey and soil sampling. Results from the radiological assessment indicate that the surface of AA 3 contains only radiation levels which are present as the result of natural radioactivity contained in ground surface materials (e.g., gravel, crushed rock, etc.) and that the level of Radium-226 (Ra-226) exposure at the surface of AA 3 is in the range of the Station background for a residential receptor. AA 3 was therefore considered to meet the radiological criteria for unrestricted use. CDHS concurred that AA 3 may be released for unrestricted use. The July 2009 RI/FS Report presents a summary of all previously collected data (air, soil gas, soil, groundwater, sediment, and surface water results) and RSE findings. Significant findings are briefly summarized below. - The area of waste placement at AA 3 is approximately 5.14 acres and the volume of waste within AA 3 is approximately 230,000 cubic yards. There is an average of 4.5 feet of soil cover with isolated areas having as little as 2 feet of soil cover over the construction debris. -Air sampling results showed that surface air at AA 3 has not been impacted by wastes remaining at the site and results are consistent with ambient (background) air sample results. - Soil gas results showed that methane is confined to the central portion of the site and is not migrating to the perimeter of the site. - Surface soil (0 to 1 feet below ground surface [bgs]) results showed few exceedances (isolated SVOCs and dioxins) of residential U.S. EPA Region 9 preliminary remediation goals (PRGs). - All surface soil analytical results indicated that metal concentrations are below PRGs or are within background concentrations. - Subsurface soil analytical results indicated one isolated SVOC in exceedance of residential PRGs. Total petroleum hydrocarbons (TPH) as diesel was reported at low concentrations and metal exceedances of background and PRGs were isolated and likely attributable to natural conditions. - Groundwater analytical results indicated no conclusive evidence of a release from AA 3; volatile organic compounds (VOCs) and TPH have not been reported in groundwater and no conclusive trends could be established to determine that historical activities

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at AA 3 have impacted groundwater. -Sediment analytical results from Agua Chinon Wash indicated all metals concentrations were within the range typical of background concentrations. -Surface water analytical results from upstream and downstream locations within Agua Chinon Wash indicated maximum contaminant level (MCL) exceedances for aluminum and chromium; however, the upstream and downstream concentrations were consistent, indicating that AA 3 has not impacted surface water in the wash. - The surface of AA 3 contains only natural radioactivity (e.g. in gravel, crushed rock, etc.), and the level of exposure to Ra-226 for a potential residential receptor at AA 3 is within Station background. AA 3 was therefore reclassified as non-impacted radiologically and was accepted for unrestricted release. - Based on the RSE findings as documented in the RI/FS Report, an adequate characterization of the nature and extent of releases has been completed. The human health and ecological risks have been quantified and are within acceptable risk management ranges. However, due to the presence of construction related debris at the site, the proximity of waste to groundwater, and the presence of elevated methane concentrations in the central portion of the site, an evaluation of response actions necessary for continued protection of human health and the environment was recommended. As part of the RI/FS, groundwater sampling was conducted at AA 3 to further characterize groundwater and support the remedy selection process. Supplemental groundwater monitoring is ongoing and the results have been consistent with previous monitoring data. Former MCAS El Toro was closed on 2 July 1999. From 1994 to 2002, the County of Orange, the designated Local Reuse Authority (LRA), proposed a commercial aviation reuse for former MCAS El Toro. This proposal was submitted as a BRAC Reuse Plan. In March 2002, County voters overturned those planning efforts with the passage of Measure W, a referendum that changed the Orange County General Plan for former MCAS El Toro to a non-aviation use and recreational theme, with limited development intensities. After the March 2002 vote, the LRA decided that it would not prepare another BRAC Reuse Plan for the property. Consequently, the Navy decided not to dispose of the property with any particular reuse or redevelopment plan and that reuse would ultimately be determined by local zoning applicable at the time of sale. In November 2003, the City of Irvine annexed the former Station property. The City of Irvine has not prepared a BRAC Reuse Plan. However, a conceptual Reuse Plan titled the "Orange County Great Park" was prepared and approved by the City of Irvine; calling for mixed uses of residential, commercial, and recreational open space. In July 2005, the Navy completed the process of conveying the former Station through public sale to a private developer. Although the sale resulted in a majority of the property being transferred by deed, areas that required further environmental investigation and/or response actions were retained by the Navy. These areas, known as carve-outs (COs), were leased to the developer in accordance with the Finding of Suitability to Lease (FOSL) under a Lease in Furtherance of Conveyance (LIFOC). Upon meeting the environmentally suitable for transfer requirements, the COs are deeded to the buyer. Based on the Orange County Great Park Plan, AA 3 is zoned as low-density residential. AA 3 is located within CO II-C. Former MCAS El Toro is located within the Irvine Management Zone (formally known as Irvine Groundwater Forebay), which has been designated by the RWQCB as a public water supply source. The aquifer located directly beneath former MCAS El Toro is not currently used for municipal water supply; however, the groundwater near the Station is used for agricultural purposes. A Record of Decision (ROD) for the Operable Unit 05 was completed in August 2010. EPA OU-6: No Further Action Sites Sites 4, 6, 9, 10, 13, 15, 19, 20, 21, and 22 were investigated, found to contain no unacceptable risks to human health or the environment, and recommended for no action. These sites were addressed along with Site 25 in the signed no action ROD, dated September 1997. EPA OU-07: Sites 7 & 14 - No Further Action Sites 7 and 14 were addressed in a no

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action ROD that was signed in June 2001. EPA OU-08: Site 1 EOD Range Site 1 is a former explosive ordnance disposal (EOD) range. A site-specific perchlorate investigation at this site showed that perchlorate was present above state and federal provisional action levels (PALs) at only one well, located in approximately the center of the site. Perchlorate was also present in 4 of 42 soil samples. However, none of the reported concentrations exceeded residential or industrial preliminary remediation goals. The evaluation of radionuclides confirmed that the radionuclides in groundwater at Former MCAS El Toro are naturally occurring and are not due to historical activities conducted at the Station. Operable Unit 8: IRP Site 1 (the former Explosive Ordinance Disposal [EOD] Training Range) is located in the northeast portion of former MCAS El Toro in the foothills of the Santa Ana Mountains. IRP Site 2 (Magazine Road Landfill) is located on the eastern portion of former MCAS El Toro. IRP Site 1 IRP Site 1 is situated within a tributary canyon of Borrego Canyon Wash at elevations ranging from approximately 610 feet to 760 feet above mean sea level (msl). EOD training was conducted at IRP Site 1 from 1952 until closure of former MCAS El Toro on 2 July 1999. Military ordnance used at the Site included hand grenades, land mines, cluster bombs, smoke bombs, and rocket propelled munitions. Civilian commercial-grade explosives, such as dynamite, and plastic and gelatinous explosives have also been used at IRP Site 1. Trenches and pits were periodically excavated and munitions were detonated. The trenches and pits were then filled with soil and then subsequently re-excavated to conduct additional munitions detonation activities. Limited historical information suggests that rocket motors or Jet-Assisted Take-Off units were handled at IRP Site 1. In 1982, approximately 2,000 gallons of sulfur trioxide chlorosulfonic acid (FS smoke) were reportedly burned in trenches located in the northern portion of the Site. An estimated 300,000 gallons of petroleum fuels were burned from 1952 through 1993. In addition, there are unconfirmed reports that low-level radioactive material was handled at the Site. The potential presence of radionuclides at the Site was investigated and based on the investigation findings the site received unrestricted release from the California Department of Public Health in September 2007. IRP Site 1 includes the Northern EOD Training Range (16.9 acres), the Southern EOD Training Range (16.6 acres), a Buffer Zone (37 acres), and a Subparcel (3.3 acres), among other features, for a total area of approximately 74 acres. The majority of recent military EOD training took place at the Northern EOD Training Range. The Southern EOD Training Range was used for EOD training by the Orange County Sheriff's Department and various Federal agencies. Several demolition pits, and a range building, are present at IRP Site 1. In addition, a former observation bunker constructed from metal ammunition cans was present at IRP Site 1 prior to the 2007 Santiago Fire. In 2008, munitions characterization activities were conducted, and as part of those activities, the soil in the ammunition cans was characterized and properly disposed. The Department of Justice, Federal Bureau of Investigation (FBI) used IRP Site 1 for training purposes. The FBI's activities at IRP Site 1 included bomb technician training, post-blast investigation training, and emergency response operations. These activities involved the use of explosive devices and products. IRP 2 IRP Site 2 was used as a landfill from the late 1950s until about 1980; although some unauthorized disposal may have occurred on an intermittent basis at Areas C1, C2, and D2. During the 1970s, all solid waste from former MCAS El Toro and some waste from MCAS Tustin were disposed in this landfill. Previous reports estimate 800,000 to 1,000,000 cubic yards of waste were placed in the landfill during its operation. The suspected types of waste include construction debris, municipal waste, batteries, waste oils, hydraulic fluids, paint residues, transformers, and waste solvents. The remedial action for soil at IRP Site 2 was completed in February 2008. This remedial action included consolidation of wastes from

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Areas C1/C2, and D2, and construction of an evapotranspiration cap. The O&M of this evapotranspiration cap is currently in progress. Previous Investigations Various environmental investigations have been conducted at IRP Sites 1 and 2 as a part of the CERCLA process to characterize the physical attributes including the geology and hydrogeology, the nature and extent of contamination, potential risks to human-health and the environment, and the feasibility of potential remedial technologies. The environmental media investigated at IRP Sites 1 and 2 included soil, surface water, groundwater, and/or air. The following subsections present a summary of the investigations performed for groundwater at IRP Sites 1 and 2. The FFA signatories reviewed and concurred with the primary documents associated with these Sites. This Record of Decision (ROD) presents the selected remedial actions for groundwater associated with Installation Restoration Program (IRP) Site 1 (former Explosive Ordnance Disposal [EOD] Training Range) and IRP Site 2 (Magazine Road Landfill) at former Marine Corps Air Station (MCAS) El Toro, located in Orange County, California. A Record of Decision addressing Operable Unit 08 of the El Toro Marine Corps Air Station Site was completed in February 2012. EPA OU-09: Site 16 Burn Pits Site 16, Crash Crew Training Pit No. 2, is located in the northwest quadrant of Former MCAS El Toro. The site consists of three units. Unit 1, Pits Perimeter Area is an approximately 320- by 260-foot oval-shaped area comprising a buffer zone surrounding three pits that were used for firefighter training exercises. During the operational life of Site 16, this area was regularly tilled as a fire-control measure. Unit 2, Main Fire-Fighting Pits, consists of three unlined earthen pits situated within the boundary of Unit 1. The largest pit, which was used for most of the training exercises and is still present at the site, is roughly circular (approximately 67 feet in diameter), and 2 to 3 feet deep. The residual fluids pit, located about 40 feet south of the main pit and connected to it by a buried pipe, is approximately 12 feet wide, 35 feet long, and 4 to 5 feet deep. The smaller third pit, roughly 10 feet by 3 feet, was used for training with handheld fire extinguishers. The pits have not been used since 1985, and the residual fluids and handheld fire-fighting training pits have been filled to the surrounding grade. Unit 3, Drainage Channel, is a low drainage swale located northwest of the pits. It slopes toward and terminates at a storm drain inlet near the intersection of El Toro Boulevard and closed Runway 21. This unit was recommended for no further action in the RI Report for Site 16. The ground surface at Site 16 consists of bare soil with partial vegetation cover in the area surrounding the main burn pit and along the drainage ditch. The bottom of the burn pit itself is bare soil, discolored as a result of the historical activities at this site. The former residual fluids pit has been partially covered by the asphalt pavement surrounding the current concrete-lined crash crew training pits located immediately south of Site 16. Surface drainage from the site appears to flow northwest to a storm drain, which eventually discharges into Bee Canyon Wash. The regional aquifer beneath Former MCAS El Toro is not currently a source of municipal drinking water because of widespread elevated concentrations of total dissolved solids (TDS) and nitrates that exceed water quality standards; however, groundwater in the vicinity of the Station is used for agricultural purposes. Between 1972 and 1985, Site 16 was used by Former MCAS El Toro crash crews as a training area for firefighters. Contamination at the site originated from residual fuels and combustible fluids that were placed in fire-fighting pits, ignited, and extinguished using water or fire extinguishers during fire-fighting practice sessions. Contaminants within the unlined pits have infiltrated the soil and, eventually, migrated into the groundwater. The primary medium of concern at Site 16 is groundwater, which is found at approximately 160 feet below ground surface (bgs). The only chemical of concern in groundwater is trichloroethene (TCE). TCE is present at concentrations above drinking water standards in a

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plume extending from approximately 200 feet upgradient of the main pit to approximately 330 feet downgradient of the main pit. Although petroleum hydrocarbons are present at Site 16, evaluation and cleanup of these contaminants is not addressed in this Record of Decision (ROD). Petroleum hydrocarbons from fuels and oils burned and released at the site will be addressed in the Petroleum Corrective Action Program. Investigations conducted at Site 16 include aerial photographic surveys, employee interviews, Phase I and Phase II RIs, pre-FS report sampling, and an MPE pilot test conducted in support of the FFS. Data collected during the Site 16 RIs included results of shallow and deeper subsurface soils investigations, groundwater investigations, aerial photograph reviews, and interviews with Former MCAS El Toro personnel. Following closure of the base, the Department of Navy (DON) finalized an Environmental Impact Report/Environmental Impact Study in March 2002 to evaluate several alternatives for the reuse of the Station. The DON is currently working with the local community to determine an appropriate alternative for the Station. At this time, the most likely reuse of Site 16 is recreational (park). A ROD addressing Unit 3 of OU 9 was completed in August 2003.

CERCLIS Assessment History:

Action Code:	001
Action:	DISCOVERY
Date Started:	/ /
Date Completed:	08/01/86
Priority Level:	Not reported
Operable Unit:	SITEWIDE
Primary Responsibility:	Federal Facilities
Planning Status:	Not reported
Urgency Indicator:	Not reported
Action Anomaly:	Not reported

Action Code:	001
Action:	PRELIMINARY ASSESSMENT
Date Started:	/ /
Date Completed:	10/01/86
Priority Level:	Higher priority for further assessment
Operable Unit:	SITEWIDE
Primary Responsibility:	Federal Facilities
Planning Status:	Not reported
Urgency Indicator:	Not reported
Action Anomaly:	Not reported

Action Code:	001
Action:	SITE INSPECTION
Date Started:	/ /
Date Completed:	06/01/87
Priority Level:	Higher priority for further assessment
Operable Unit:	SITEWIDE
Primary Responsibility:	Federal Facilities
Planning Status:	Not reported
Urgency Indicator:	Not reported
Action Anomaly:	Not reported

Action Code:	001

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Action: HAZARD RANKING SYSTEM PACKAGE
Date Started: / /
Date Completed: 06/01/87
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: EPA Fund-Financed
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 001
Action: PROPOSAL TO NATIONAL PRIORITIES LIST
Date Started: / /
Date Completed: 06/24/88
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: EPA Fund-Financed
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 001
Action: FINAL LISTING ON NATIONAL PRIORITIES LIST
Date Started: / /
Date Completed: 02/21/90
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: EPA Fund-Financed
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 001
Action: Notice Letters Issued
Date Started: / /
Date Completed: 05/21/90
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: EPA Fund-Financed
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 001
Action: INTERAGENCY AGREEMENT NEGOTIATIONS
Date Started: 07/01/89
Date Completed: 09/28/90
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: Federal Enforcement
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

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Action Code: 001
Action: FEDERAL INTERAGENCY AGREEMENT
Date Started: 09/28/90
Date Completed: 09/28/90
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: Federal Enforcement
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 001
Action: FEDERAL FACILITY REMEDIAL INVESTIGATION
Date Started: 09/28/90
Date Completed: 12/17/93
Priority Level: Not reported
Operable Unit: EOD RANGE: SITE 1
Primary Responsibility: Federal Facilities
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 007
Action: FEDERAL FACILITY REMEDIAL INVESTIGATION/FEASIBILITY STUDY
Date Started: 09/28/90
Date Completed: 09/29/97
Priority Level: Not reported
Operable Unit: SOIL VOC SOURCE AREA: SITE 24
Primary Responsibility: Federal Facilities
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 006
Action: FEDERAL FACILITY REMEDIAL INVESTIGATION/FEASIBILITY STUDY
Date Started: 09/28/90
Date Completed: 09/29/97
Priority Level: Not reported
Operable Unit: NFA SITES
Primary Responsibility: Federal Facilities
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 002
Action: RECORD OF DECISION
Date Started: / /
Date Completed: 09/29/97
Priority Level: Not reported
Operable Unit: SOIL VOC SOURCE AREA: SITE 24
Primary Responsibility: Federal Facilities
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

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Action Code: 006
Action: RECORD OF DECISION
Date Started: / /
Date Completed: 09/29/97
Priority Level: Not reported
Operable Unit: NFA SITES
Primary Responsibility: Federal Facilities
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 002
Action: FEDERAL FACILITY REMEDIAL DESIGN
Date Started: 01/06/98
Date Completed: 01/20/99
Priority Level: Not reported
Operable Unit: SOIL VOC SOURCE AREA: SITE 24
Primary Responsibility: Federal Facilities
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 002
Action: FEDERAL FACILITY REMEDIAL INVESTIGATION
Date Started: 09/30/97
Date Completed: 09/07/99
Priority Level: Not reported
Operable Unit: NFA: SITES 7 & 14
Primary Responsibility: Federal Facilities
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 005
Action: RECORD OF DECISION
Date Started: / /
Date Completed: 09/30/99
Priority Level: Not reported
Operable Unit: SOIL SITES: 8, 11, 12
Primary Responsibility: Federal Facilities
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 004
Action: FEDERAL FACILITY REMEDIAL INVESTIGATION/FEASIBILITY STUDY
Date Started: 09/28/90
Date Completed: 07/12/00
Priority Level: Not reported
Operable Unit: LANDFILLS: SITES 2 & 17
Primary Responsibility: Federal Facilities
Planning Status: Primary
Urgency Indicator: Not reported

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Action Anomaly: Not reported

Action Code: 003
Action: RECORD OF DECISION
Date Started: / /
Date Completed: 07/12/00
Priority Level: Not reported
Operable Unit: LANDFILLS: SITES 2 & 17
Primary Responsibility: Federal Facilities
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 007
Action: RECORD OF DECISION
Date Started: / /
Date Completed: 06/06/01
Priority Level: Not reported
Operable Unit: NFA: SITES 7 & 14
Primary Responsibility: Federal Facilities
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 002
Action: FEDERAL FACILITY REMEDIAL INVESTIGATION/FEASIBILITY STUDY
Date Started: 09/28/90
Date Completed: 06/27/02
Priority Level: Not reported
Operable Unit: BASEWIDE GROUNDWATER
Primary Responsibility: Federal Facilities
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 001
Action: RECORD OF DECISION
Date Started: / /
Date Completed: 06/27/02
Priority Level: Not reported
Operable Unit: BASEWIDE GROUNDWATER
Primary Responsibility: Federal Facilities
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 005
Action: FEDERAL FACILITY REMEDIAL INVESTIGATION/FEASIBILITY STUDY
Date Started: 09/28/90
Date Completed: 06/30/02
Priority Level: Not reported
Operable Unit: SOIL SITES: 8, 11, 12
Primary Responsibility: Federal Facilities

MARINE CORPS AIR STATION, EL TORO (Continued) **1000417911**

Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 002
Action: FEDERAL FACILITY REMEDIAL ACTION
Date Started: 05/17/99
Date Completed: 06/30/02
Priority Level: Not reported
Operable Unit: SOIL VOC SOURCE AREA: SITE 24
Primary Responsibility: Federal Facilities
Planning Status: Primary
Urgency Indicator: Long Term Action
Action Anomaly: Not reported

Action Code: 001
Action: TREATABILITY STUDY
Date Started: 08/28/00
Date Completed: 08/28/02
Priority Level: Not reported
Operable Unit: BURN PITS: SITE 16
Primary Responsibility: Federal Facilities
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 008
Action: FEDERAL FACILITY REMEDIAL INVESTIGATION/FEASIBILITY STUDY
Date Started: 04/30/94
Date Completed: 08/30/02
Priority Level: Not reported
Operable Unit: BURN PITS: SITE 16
Primary Responsibility: Federal Facilities
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 011
Action: RECORD OF DECISION
Date Started: / /
Date Completed: 08/16/03
Priority Level: Not reported
Operable Unit: BURN PITS: SITE 16
Primary Responsibility: Federal Facilities
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 001
Action: FEDERAL FACILITY REMEDIAL INVESTIGATION/FEASIBILITY STUDY
Date Started: 09/28/90
Date Completed: 03/07/05
Priority Level: Not reported

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Operable Unit: LANDFILLS: SITES 3 & 5
Primary Responsibility: Federal Facilities
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 005
Action: FEDERAL FACILITY REMEDIAL DESIGN
Date Started: 01/13/00
Date Completed: 03/31/05
Priority Level: Not reported
Operable Unit: SOIL SITES: 8, 11, 12
Primary Responsibility: Federal Facilities
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 001
Action: FEDERAL FACILITY REMEDIAL DESIGN
Date Started: 03/01/03
Date Completed: 05/31/05
Priority Level: Not reported
Operable Unit: BASEWIDE GROUNDWATER
Primary Responsibility: Federal Facilities
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 003
Action: FEDERAL FACILITY REMEDIAL DESIGN
Date Started: 07/12/00
Date Completed: 11/22/05
Priority Level: Not reported
Operable Unit: LANDFILLS: SITES 2 & 17
Primary Responsibility: Federal Facilities
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 009
Action: FEDERAL FACILITY REMEDIAL INVESTIGATION/FEASIBILITY STUDY
Date Started: 10/25/04
Date Completed: 12/19/05
Priority Level: Not reported
Operable Unit: LANDFILLS: SITES 2 & 17
Primary Responsibility: Federal Facilities
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 009
Action: FEDERAL FACILITY REMEDIAL DESIGN
Date Started: 07/22/05

MARINE CORPS AIR STATION, EL TORO (Continued) **1000417911**

Date Completed: 01/20/06
Priority Level: Not reported
Operable Unit: BURN PITS: SITE 16
Primary Responsibility: Federal Facilities
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 005
Action: FEDERAL FACILITY REMEDIAL ACTION
Date Started: 03/24/05
Date Completed: 02/03/06
Priority Level: Final RA Report
Operable Unit: SOIL SITES: 8, 11, 12
Primary Responsibility: Federal Facilities
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 013
Action: RECORD OF DECISION
Date Started: / /
Date Completed: 03/14/06
Priority Level: Not reported
Operable Unit: SOIL VOC SOURCE AREA: SITE 24
Primary Responsibility: Federal Facilities
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 001
Action: Explanation Of Significant Differences
Date Started: / /
Date Completed: 03/14/06
Priority Level: Not reported
Operable Unit: BASEWIDE GROUNDWATER
Primary Responsibility: Federal Facilities
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 010
Action: FEDERAL FACILITY REMEDIAL INVESTIGATION/FEASIBILITY STUDY
Date Started: 12/06/05
Date Completed: 12/01/06
Priority Level: Not reported
Operable Unit: LANDFILLS: SITES 3 & 5
Primary Responsibility: Federal Facilities
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

MARINE CORPS AIR STATION, EL TORO (Continued) **1000417911**

Action Code: 003
Action: FEDERAL FACILITY REMEDIAL INVESTIGATION
Date Started: 06/03/05
Date Completed: 12/29/06
Priority Level: Not reported
Operable Unit: EOD RANGE: SITE 1
Primary Responsibility: Federal Facilities
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 009
Action: RECORD OF DECISION
Date Started: / /
Date Completed: 05/08/07
Priority Level: Not reported
Operable Unit: SOIL SITES: 8, 11, 12
Primary Responsibility: Federal Facilities
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 009
Action: FEDERAL FACILITY REMEDIAL ACTION
Date Started: 01/20/06
Date Completed: 10/09/07
Priority Level: Interim RA Report
Operable Unit: BURN PITS: SITE 16
Primary Responsibility: Federal Facilities
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 010
Action: RECORD OF DECISION
Date Started: / /
Date Completed: 03/06/08
Priority Level: Not reported
Operable Unit: LANDFILLS: SITES 3 & 5
Primary Responsibility: Federal Facilities
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 001
Action: FEDERAL FACILITY REMEDIAL ACTION
Date Started: 03/21/05
Date Completed: 03/27/08
Priority Level: Interim RA Report
Operable Unit: BASEWIDE GROUNDWATER
Primary Responsibility: Federal Facilities
Planning Status: Primary
Urgency Indicator: Long Term Action

MARINE CORPS AIR STATION, EL TORO (Continued) **1000417911**

Action Anomaly: Not reported

Action Code: 001
Action: FEDERAL FACILITY FEASIBILITY STUDY
Date Started: 01/29/07
Date Completed: 08/29/08
Priority Level: Not reported
Operable Unit: EOD RANGE: SITE 1
Primary Responsibility: Federal Facilities
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 002
Action: Explanation Of Significant Differences
Date Started: / /
Date Completed: 12/15/08
Priority Level: Not reported
Operable Unit: BASEWIDE GROUNDWATER
Primary Responsibility: Federal Facilities
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 008
Action: FEDERAL FACILITY REMEDIAL DESIGN
Date Started: 09/12/07
Date Completed: 12/30/08
Priority Level: Not reported
Operable Unit: SOIL SITES: 8, 11, 12
Primary Responsibility: Federal Facilities
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 003
Action: FEDERAL FACILITY REMEDIAL ACTION
Date Started: 08/25/05
Date Completed: 03/05/09
Priority Level: Not reported
Operable Unit: LANDFILLS: SITES 2 & 17
Primary Responsibility: Federal Facilities
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 003
Action: Explanation Of Significant Differences
Date Started: / /
Date Completed: 07/29/09
Priority Level: Not reported
Operable Unit: LANDFILLS: SITES 2 & 17

MARINE CORPS AIR STATION, EL TORO (Continued) **1000417911**

Primary Responsibility: Federal Facilities
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 004
Action: FEDERAL FACILITY REMEDIAL DESIGN
Date Started: 09/01/08
Date Completed: 08/13/09
Priority Level: Not reported
Operable Unit: LANDFILLS: SITES 3 & 5
Primary Responsibility: Federal Facilities
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 002
Action: FEDERAL FACILITY FIVE YEAR REVIEW
Date Started: / /
Date Completed: 09/28/09
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: Federal Facilities
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 015
Action: RECORD OF DECISION
Date Started: / /
Date Completed: 08/09/10
Priority Level: Not reported
Operable Unit: LANDFILLS: SITES 3 & 5
Primary Responsibility: Federal Facilities
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 002
Action: FEDERAL FACILITY FEASIBILITY STUDY
Date Started: 01/29/07
Date Completed: 04/13/11
Priority Level: Not reported
Operable Unit: EOD RANGE: SITE 1
Primary Responsibility: Federal Facilities
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 012
Action: FEDERAL FACILITY REMEDIAL DESIGN
Date Started: 07/01/11

MARINE CORPS AIR STATION, EL TORO (Continued) **1000417911**

Date Completed: 07/19/11
Priority Level: Not reported
Operable Unit: LANDFILLS: SITES 3 & 5
Primary Responsibility: Federal Facilities
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 008
Action: RECORD OF DECISION
Date Started: / /
Date Completed: 02/09/12
Priority Level: Not reported
Operable Unit: EOD RANGE: SITE 1
Primary Responsibility: Federal Facilities
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 008
Action: FEDERAL FACILITY REMEDIAL ACTION
Date Started: 01/22/09
Date Completed: 04/30/12
Priority Level: Not reported
Operable Unit: SOIL SITES: 8, 11, 12
Primary Responsibility: Federal Facilities
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 007
Action: FEDERAL FACILITY REMEDIAL DESIGN
Date Started: 01/03/12
Date Completed: 12/19/12
Priority Level: Not reported
Operable Unit: EOD RANGE: SITE 1
Primary Responsibility: Federal Facilities
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 011
Action: FEDERAL FACILITY REMEDIAL ACTION
Date Started: 07/19/11
Date Completed: 01/22/13
Priority Level: Not reported
Operable Unit: LANDFILLS: SITES 3 & 5
Primary Responsibility: Federal Facilities
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

MARINE CORPS AIR STATION, EL TORO (Continued) **1000417911**

Action Code: 004
Action: FEDERAL FACILITY REMEDIAL ACTION
Date Started: 08/17/09
Date Completed: 06/10/13
Priority Level: Not reported
Operable Unit: LANDFILLS: SITES 3 & 5
Primary Responsibility: Federal Facilities
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 001
Action: Restoration Advisory Board
Date Started: 04/01/94
Date Completed: / /
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: Federal Facilities
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 001
Action: OPERATIONS AND MAINTENANCE
Date Started: 10/09/07
Date Completed: / /
Priority Level: Not reported
Operable Unit: BURN PITS: SITE 16
Primary Responsibility: Federal Facilities
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 002
Action: OPERATIONS AND MAINTENANCE
Date Started: 03/27/08
Date Completed: / /
Priority Level: Not reported
Operable Unit: BASEWIDE GROUNDWATER
Primary Responsibility: Federal Facilities
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Federal Register Details:
Fed Register Date: 02/21/90
Fed Register Volume: 55
Page Number: 6154

Fed Register Date: 06/24/88
Fed Register Volume: 53
Page Number: 23988

MARINE CORPS AIR STATION, EL TORO (Continued) **1000417911**

CORRACTS:

EPA ID:	CA6170023208
EPA Region:	9
Area Name:	ENTIRE FACILITY
Actual Date:	19960501
Action:	CA050 - RFA Completed
NAICS Code(s):	92811 National Security
Original schedule date:	19960501
Schedule end date:	Not reported

EPA ID:	CA6170023208
EPA Region:	9
Area Name:	ENTIRE FACILITY
Actual Date:	19960501
Action:	CA070YE - RFA Determination Of Need For An RFI, RFI is Necessary
NAICS Code(s):	92811 National Security
Original schedule date:	19960501
Schedule end date:	Not reported

EPA ID:	CA6170023208
EPA Region:	9
Area Name:	ENTIRE FACILITY
Actual Date:	19980617
Action:	CA725NO - Current Human Exposures Under Control, Current human exposures are NOT under control
NAICS Code(s):	92811 National Security
Original schedule date:	19980617
Schedule end date:	Not reported

EPA ID:	CA6170023208
EPA Region:	9
Area Name:	ENTIRE FACILITY
Actual Date:	19980617
Action:	CA750NO - Migration of Contaminated Groundwater under Control, Unacceptable migration of contaminated groundwater is observed or expected
NAICS Code(s):	92811 National Security
Original schedule date:	19980617
Schedule end date:	Not reported

EPA ID:	CA6170023208
EPA Region:	9
Area Name:	OU2A - VADOSE ZONE SOILS
Actual Date:	19970123
Action:	CA300 - CMS Workplan Approved
NAICS Code(s):	92811 National Security
Original schedule date:	Not reported
Schedule end date:	Not reported

EPA ID:	CA6170023208

MARINE CORPS AIR STATION, EL TORO (Continued) **1000417911**

EPA Region: 9
Area Name: OU2A - VADOSE ZONE SOILS
Actual Date: 19970123
Action: CA200 - RFI Approved
NAICS Code(s): 92811
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA6170023208
EPA Region: 9
Area Name: OU2A - VADOSE ZONE SOILS
Actual Date: 19970123
Action: CA150 - RFI Workplan Approved
NAICS Code(s): 92811
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA6170023208
EPA Region: 9
Area Name: OU2A - VADOSE ZONE SOILS
Actual Date: 19970123
Action: CA350 - CMS Approved
NAICS Code(s): 92811
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA6170023208
EPA Region: 9
Area Name: OU2A - VADOSE ZONE SOILS
Actual Date: 20040723
Action: CA999 - Corrective Action Process Terminated
NAICS Code(s): 92811
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA6170023208
EPA Region: 9
Area Name: FOST 1
Actual Date: 20040723
Action: CA999RM - Corrective Action Process Terminated, Remedial Activities Completed
NAICS Code(s): 92811
National Security
Original schedule date: 20040723
Schedule end date: Not reported

EPA ID: CA6170023208
EPA Region: 9
Area Name: FOST 1
Actual Date: 20040723
Action: CA999 - Corrective Action Process Terminated
NAICS Code(s): 92811
National Security

MARINE CORPS AIR STATION, EL TORO (Continued) **1000417911**

Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA6170023208
EPA Region: 9
Area Name: FOST 2
Actual Date: 20050829
Action: CA999 - Corrective Action Process Terminated
NAICS Code(s): 92811
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA6170023208
EPA Region: 9
Area Name: OU2A - VADOSE ZONE SOILS
Actual Date: 19970930
Action: CA400 - Date For Remedy Selection (CM Imposed)
NAICS Code(s): 92811
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA6170023208
EPA Region: 9
Area Name: ENTIRE FACILITY
Actual Date: 19970930
Action: CA400 - Date For Remedy Selection (CM Imposed)
NAICS Code(s): 92811
National Security
Original schedule date: 19970930
Schedule end date: Not reported

RCRA-TSDF:
Date form received by agency: 01/29/2002
Facility name: MARINE CORPS AIR STATION, EL TORO
Facility address: MCAS EL TORO
EL TORO, CA 92709
EPA ID: CA6170023208
Mailing address: CARETAKER SITE OFFICE
PO BOX 444
EAST IRVINE, CA 92650
Contact: EDWARD L NUNN
Contact address: Not reported
Not reported
Contact country: US
Contact telephone: (619) 572-1404
Contact email: Not reported
EPA Region: 09
Land type: Federal
Classification: TSDF
Description: Handler is engaged in the treatment, storage or disposal of hazardous waste

Owner/Operator Summary:
Owner/operator name: U.S. MARINE CORPS

MARINE CORPS AIR STATION, EL TORO (Continued) **1000417911**

Owner/operator address: Not reported
Not reported
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Federal
Owner/Operator Type: Owner
Owner/Op start date: 03/17/1943
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/29/2002
Site name: MARINE CORPS AIR STATION, EL TORO
Classification: Large Quantity Generator

. Waste code: D040
. Waste name: TRICHLORETHYLENE

Date form received by agency: 10/12/2000
Site name: MCAS EL TORO
Classification: Large Quantity Generator

Date form received by agency: 04/15/1999
Site name: MCAS EL TORO
Classification: Large Quantity Generator

Date form received by agency: 09/01/1996
Site name: USMC AIR STATION EL TORO
Classification: Large Quantity Generator

Date form received by agency: 01/31/1996
Site name: USMC MCAS EL TORO
Classification: Large Quantity Generator

Date form received by agency: 03/30/1994
Site name: USMC MCAS EL TORO
Classification: Large Quantity Generator

Date form received by agency: 10/26/1993
Site name: USMC AIR STATION EL TORO

MARINE CORPS AIR STATION, EL TORO (Continued) **1000417911**

Classification: Large Quantity Generator

Date form received by agency: 02/29/1992
Site name: MCAS EL TORO FMD 1JG B.368
Classification: Large Quantity Generator

Corrective Action Summary:

Event date: 10/01/1986
Event: CA029SF

Event date: 10/01/1986
Event: CA049PA

Event date: 06/01/1987
Event: CA049SI

Event date: 10/24/1990
Event: RFI Imposition

Event date: 10/24/1990
Event: CMS Imposition

Event date: 04/20/1991
Event: CA Prioritization, Facility or area was assigned a medium corrective action priority.

Event date: 01/01/1996
Event: CA Responsibility Referred To A Non-RCRA Federal Authority, Corrective Action at the facility or area referred to CERCLA.

Event date: 05/01/1996
Event: RFA Determination Of Need For An RFI, RFI is Necessary;

Event date: 05/01/1996
Event: RFA Completed

Event date: 05/01/1996
Event: RFA Completed, Assessment was an RFA.

Event date: 01/23/1997
Event: CMS Workplan Approved

Event date: 01/23/1997
Event: RFI Workplan Approved

Event date: 01/23/1997
Event: CMS Approved

Event date: 01/23/1997
Event: RFI Approved

Event date: 09/30/1997
Event: Date For Remedy Selection (CM Imposed)

Event date: 09/30/1997
Event: Date For Remedy Selection (CM Imposed)

MARINE CORPS AIR STATION, EL TORO (Continued) **1000417911**

Event date: 06/17/1998
Event: CA Responsibility Referred To A Non-RCRA Federal Authority

Event date: 06/17/1998
Event: Stabilization Measures Evaluation,This facility is amenable to stabilization activity based on the status of corrective action work at the facility, technical factors, the degree of risk, timing considerations and administrative considerations.

Event date: 06/17/1998
Event: Igration of Contaminated Groundwater under Control, Unacceptable migration of contaminated groundwater is observed or expected.

Event date: 06/17/1998
Event: Igration of Contaminated Groundwater under Control, Unacceptable migration of contaminated groundwater is observed or expected.

Event date: 06/17/1998
Event: Current Human Exposures under Control, Current human exposures are NOT under control.

Event date: 06/17/1998
Event: Current Human Exposures under Control, Current human exposures are NOT under control.

Event date: 07/23/2004
Event: Corrective Action Process Terminated

Event date: 07/23/2004
Event: Corrective Action Process Terminated, Remedial Activities Completed

Event date: 08/29/2005
Event: Corrective Action Process Terminated

Facility Has Received Notices of Violations:
Regulation violated: FR - 262.50-60
Area of violation: Generators - General
Date violation determined: 05/20/1997
Date achieved compliance: 01/14/1998
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 05/20/1997
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 264.10-18.B
Area of violation: TSD - General
Date violation determined: 05/20/1997
Date achieved compliance: 01/14/1998
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 05/20/1997
Enf. disposition status: Not reported

MARINE CORPS AIR STATION, EL TORO (Continued) **1000417911**

Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 264.170-177.I
Area of violation: TSD - General
Date violation determined: 05/20/1997
Date achieved compliance: 01/14/1998
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 05/20/1997
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 262.30-34.C
Area of violation: Generators - General
Date violation determined: 05/20/1997
Date achieved compliance: 01/14/1998
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 05/20/1997
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 261.5
Area of violation: Generators - General
Date violation determined: 03/27/1996
Date achieved compliance: 09/27/1996
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 03/27/1996
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 262.50-60
Area of violation: Generators - General
Date violation determined: 03/27/1996
Date achieved compliance: 09/27/1996
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 03/27/1996
Enf. disposition status: Not reported
Enf. disp. status date: Not reported

MARINE CORPS AIR STATION, EL TORO (Continued) **1000417911**

Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 262.40-43.D
Area of violation: Generators - General
Date violation determined: 03/27/1996
Date achieved compliance: 09/27/1996
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 03/27/1996
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 262.20-23.B
Area of violation: Generators - General
Date violation determined: 03/27/1996
Date achieved compliance: 09/27/1996
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 03/27/1996
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 262.30-34.C
Area of violation: Generators - General
Date violation determined: 03/26/1996
Date achieved compliance: 09/27/1996
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 03/27/1996
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 264.30-37.C
Area of violation: TSD - General
Date violation determined: 04/19/1995
Date achieved compliance: 05/01/1995
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/19/1995
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State

MARINE CORPS AIR STATION, EL TORO (Continued) **1000417911**

Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 264.50-56.D
Area of violation: TSD - General
Date violation determined: 04/19/1995
Date achieved compliance: 05/01/1995
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/19/1995
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 264.10-18.B
Area of violation: TSD - General
Date violation determined: 04/19/1995
Date achieved compliance: 05/01/1995
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/19/1995
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 264.170-177.I
Area of violation: TSD - General
Date violation determined: 04/19/1995
Date achieved compliance: 05/01/1995
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/19/1995
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 264.30-37.C
Area of violation: TSD - General
Date violation determined: 12/28/1993
Date achieved compliance: 01/17/1994
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 12/28/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported

MARINE CORPS AIR STATION, EL TORO (Continued) **1000417911**

Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 268 ALL
Area of violation: LDR - General
Date violation determined: 12/09/1992
Date achieved compliance: 09/26/1994
Violation lead agency: State
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 03/10/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 80500
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 264.10-18.B
Area of violation: TSD - General
Date violation determined: 12/09/1992
Date achieved compliance: 09/26/1994
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 12/09/1992
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 264.70-77.E
Area of violation: TSD - General
Date violation determined: 12/09/1992
Date achieved compliance: 09/26/1994
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 12/09/1992
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 264.70-77.E
Area of violation: TSD - General
Date violation determined: 12/09/1992
Date achieved compliance: 09/26/1994
Violation lead agency: State
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date: 04/26/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: 42000

MARINE CORPS AIR STATION, EL TORO (Continued) **1000417911**

Paid penalty amount: 42000

Regulation violated: FR - 270
Area of violation: TSD - General
Date violation determined: 12/09/1992
Date achieved compliance: 09/26/1994
Violation lead agency: State
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date: 04/26/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: 42000
Paid penalty amount: 42000

Regulation violated: FR - 262.40-43.D
Area of violation: Generators - General
Date violation determined: 12/09/1992
Date achieved compliance: 09/26/1994
Violation lead agency: State
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 03/10/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 80500
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 264.10-18.B
Area of violation: TSD - General
Date violation determined: 12/09/1992
Date achieved compliance: 09/26/1994
Violation lead agency: State
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 03/10/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 80500
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 262.40-43.D
Area of violation: Generators - General
Date violation determined: 12/09/1992
Date achieved compliance: 09/26/1994
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 12/09/1992
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

MARINE CORPS AIR STATION, EL TORO (Continued) **1000417911**

Regulation violated: FR - 264.30-37.C
Area of violation: TSD - General
Date violation determined: 12/09/1992
Date achieved compliance: 09/26/1994
Violation lead agency: State
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date: 04/26/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: 42000
Paid penalty amount: 42000

Regulation violated: FR - 264.70-77.E
Area of violation: TSD - General
Date violation determined: 12/09/1992
Date achieved compliance: 09/26/1994
Violation lead agency: State
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 03/10/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 80500
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 262.40-43.D
Area of violation: Generators - General
Date violation determined: 12/09/1992
Date achieved compliance: 09/26/1994
Violation lead agency: State
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date: 04/26/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: 42000
Paid penalty amount: 42000

Regulation violated: FR - 270
Area of violation: TSD - General
Date violation determined: 12/09/1992
Date achieved compliance: 09/26/1994
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 12/09/1992
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 268 ALL

MARINE CORPS AIR STATION, EL TORO (Continued) **1000417911**

Area of violation: LDR - General
Date violation determined: 12/09/1992
Date achieved compliance: 09/26/1994
Violation lead agency: State
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date: 04/26/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: 42000
Paid penalty amount: 42000

Regulation violated: FR - 264.30-37.C
Area of violation: TSD - General
Date violation determined: 12/09/1992
Date achieved compliance: 09/26/1994
Violation lead agency: State
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 03/10/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 80500
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 264.10-18.B
Area of violation: TSD - General
Date violation determined: 12/09/1992
Date achieved compliance: 09/26/1994
Violation lead agency: State
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date: 04/26/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: 42000
Paid penalty amount: 42000

Regulation violated: FR - 264.30-37.C
Area of violation: TSD - General
Date violation determined: 12/09/1992
Date achieved compliance: 09/26/1994
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 12/09/1992
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 270
Area of violation: TSD - General

MARINE CORPS AIR STATION, EL TORO (Continued) **1000417911**

Date violation determined: 12/09/1992
Date achieved compliance: 09/26/1994
Violation lead agency: State
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 03/10/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 80500
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 268 ALL
Area of violation: LDR - General
Date violation determined: 12/09/1992
Date achieved compliance: 09/26/1994
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 12/09/1992
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 264.170-177.I
Area of violation: TSD - General
Date violation determined: 10/05/1992
Date achieved compliance: 12/09/1992
Violation lead agency: EPA
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 10/09/1992
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 270
Area of violation: TSD - General
Date violation determined: 10/05/1992
Date achieved compliance: 12/09/1992
Violation lead agency: EPA
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 10/09/1992
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 262.30-34.C
Area of violation: Generators - General
Date violation determined: 09/30/1991

MARINE CORPS AIR STATION, EL TORO (Continued) **1000417911**

Date achieved compliance: 11/25/1991
Violation lead agency: EPA
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 10/21/1991
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 264.30-37.C
Area of violation: TSD - General
Date violation determined: 09/30/1991
Date achieved compliance: 11/25/1991
Violation lead agency: EPA
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 10/21/1991
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 264.10-18.B
Area of violation: TSD - General
Date violation determined: 09/30/1991
Date achieved compliance: 11/25/1991
Violation lead agency: EPA
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 10/21/1991
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 262.20-23.B
Area of violation: Generators - General
Date violation determined: 09/30/1991
Date achieved compliance: 11/25/1991
Violation lead agency: EPA
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 10/21/1991
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 262.50-60
Area of violation: Generators - General
Date violation determined: 09/30/1991
Date achieved compliance: 11/25/1991

MARINE CORPS AIR STATION, EL TORO (Continued) **1000417911**

Violation lead agency: EPA
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 10/21/1991
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 264.170-177.I
Area of violation: TSD - General
Date violation determined: 09/30/1991
Date achieved compliance: 11/25/1991
Violation lead agency: EPA
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 10/21/1991
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 262.40-43.D
Area of violation: Generators - General
Date violation determined: 09/30/1991
Date achieved compliance: 11/25/1991
Violation lead agency: EPA
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 10/21/1991
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 270
Area of violation: TSD - General
Date violation determined: 09/30/1991
Date achieved compliance: 11/25/1991
Violation lead agency: EPA
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 10/21/1991
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 270
Area of violation: TSD - General
Date violation determined: 06/13/1990
Date achieved compliance: 11/25/1991
Violation lead agency: EPA

MARINE CORPS AIR STATION, EL TORO (Continued) **1000417911**

Enforcement action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date: 09/28/1990
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 270
Area of violation: TSD - General
Date violation determined: 06/13/1990
Date achieved compliance: 11/25/1991
Violation lead agency: EPA
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 08/06/1990
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 268.7
Area of violation: LDR - General
Date violation determined: 07/11/1989
Date achieved compliance: 06/13/1990
Violation lead agency: EPA
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 268 ALL
Area of violation: LDR - General
Date violation determined: 07/11/1989
Date achieved compliance: 06/13/1990
Violation lead agency: EPA
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 264.110-120.G
Area of violation: TSD - Closure/Post-Closure
Date violation determined: 07/11/1989
Date achieved compliance: 06/13/1990
Violation lead agency: EPA
Enforcement action: WRITTEN INFORMAL

MARINE CORPS AIR STATION, EL TORO (Continued) **1000417911**

Enforcement action date: 08/17/1989
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 268 ALL
Area of violation: LDR - General
Date violation determined: 07/11/1989
Date achieved compliance: 06/13/1990
Violation lead agency: EPA
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 08/17/1989
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 268.7
Area of violation: LDR - General
Date violation determined: 07/11/1989
Date achieved compliance: 06/13/1990
Violation lead agency: EPA
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 08/06/1990
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 268.7
Area of violation: LDR - General
Date violation determined: 07/11/1989
Date achieved compliance: 06/13/1990
Violation lead agency: EPA
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date: 09/28/1990
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 270
Area of violation: TSD - General
Date violation determined: 07/11/1989
Date achieved compliance: 11/25/1991
Violation lead agency: EPA
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 08/06/1990

MARINE CORPS AIR STATION, EL TORO (Continued) **1000417911**

Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 270
Area of violation: TSD - General
Date violation determined: 07/11/1989
Date achieved compliance: 11/25/1991
Violation lead agency: EPA
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 270
Area of violation: TSD - General
Date violation determined: 07/11/1989
Date achieved compliance: 11/25/1991
Violation lead agency: EPA
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date: 09/28/1990
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 264.110-120.G
Area of violation: TSD - Closure/Post-Closure
Date violation determined: 07/11/1989
Date achieved compliance: 06/13/1990
Violation lead agency: EPA
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 264.110-120.G
Area of violation: TSD - Closure/Post-Closure
Date violation determined: 07/11/1989
Date achieved compliance: 06/13/1990
Violation lead agency: EPA
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date: 09/28/1990
Enf. disposition status: Not reported

MARINE CORPS AIR STATION, EL TORO (Continued) **1000417911**

Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 268.7
Area of violation: LDR - General
Date violation determined: 07/11/1989
Date achieved compliance: 06/13/1990
Violation lead agency: EPA
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 08/17/1989
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 264.110-120.G
Area of violation: TSD - Closure/Post-Closure
Date violation determined: 07/11/1989
Date achieved compliance: 06/13/1990
Violation lead agency: EPA
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 08/06/1990
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 270
Area of violation: TSD - General
Date violation determined: 07/11/1989
Date achieved compliance: 11/25/1991
Violation lead agency: EPA
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 08/17/1989
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 268 ALL
Area of violation: LDR - General
Date violation determined: 07/11/1989
Date achieved compliance: 06/13/1990
Violation lead agency: EPA
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date: 09/28/1990
Enf. disposition status: Not reported
Enf. disp. status date: Not reported

MARINE CORPS AIR STATION, EL TORO (Continued) **1000417911**

Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 268 ALL
Area of violation: LDR - General
Date violation determined: 07/11/1989
Date achieved compliance: 06/13/1990
Violation lead agency: EPA
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 08/06/1990
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 270
Area of violation: TSD - General
Date violation determined: 08/17/1988
Date achieved compliance: 07/11/1989
Violation lead agency: EPA
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 11/17/1988
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 270
Area of violation: TSD - General
Date violation determined: 08/17/1988
Date achieved compliance: 07/11/1989
Violation lead agency: EPA
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 270
Area of violation: TSD - General
Date violation determined: 08/17/1988
Date achieved compliance: 07/11/1989
Violation lead agency: EPA
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 08/06/1990
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA

MARINE CORPS AIR STATION, EL TORO (Continued) **1000417911**

Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 264.110-120.G
Area of violation: TSD - Closure/Post-Closure
Date violation determined: 08/17/1988
Date achieved compliance: 07/11/1989
Violation lead agency: EPA
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 11/17/1988
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 270
Area of violation: TSD - General
Date violation determined: 08/17/1988
Date achieved compliance: 07/11/1989
Violation lead agency: EPA
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date: 09/28/1990
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 264.110-120.G
Area of violation: TSD - Closure/Post-Closure
Date violation determined: 08/17/1988
Date achieved compliance: 07/11/1989
Violation lead agency: EPA
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 264.110-120.G
Area of violation: TSD - Closure/Post-Closure
Date violation determined: 08/17/1988
Date achieved compliance: 07/11/1989
Violation lead agency: EPA
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date: 09/28/1990
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported

MARINE CORPS AIR STATION, EL TORO (Continued) **1000417911**

Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 264.110-120.G
Area of violation: TSD - Closure/Post-Closure
Date violation determined: 08/17/1988
Date achieved compliance: 07/11/1989
Violation lead agency: EPA
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 08/06/1990
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 270
Area of violation: TSD - General
Date violation determined: 03/05/1987
Date achieved compliance: 08/17/1988
Violation lead agency: EPA
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 268.7
Area of violation: LDR - General
Date violation determined: 03/05/1987
Date achieved compliance: 08/17/1988
Violation lead agency: EPA
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 268 ALL
Area of violation: LDR - General
Date violation determined: 03/05/1987
Date achieved compliance: 08/17/1988
Violation lead agency: EPA
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported

MARINE CORPS AIR STATION, EL TORO (Continued) **1000417911**

Paid penalty amount: Not reported

Evaluation Action Summary:

Evaluation date: 01/14/1998
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 05/20/1997
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 01/14/1998
Evaluation lead agency: State

Evaluation date: 05/20/1997
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 01/14/1998
Evaluation lead agency: State

Evaluation date: 03/26/1996
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 09/27/1996
Evaluation lead agency: State

Evaluation date: 03/30/1995
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 05/01/1995
Evaluation lead agency: State

Evaluation date: 11/17/1993
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 01/17/1994
Evaluation lead agency: State

Evaluation date: 10/26/1992
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 09/26/1994
Evaluation lead agency: State

Evaluation date: 10/26/1992
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 09/26/1994
Evaluation lead agency: State

Evaluation date: 10/26/1992
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: LDR - General
Date achieved compliance: 09/26/1994
Evaluation lead agency: State

MARINE CORPS AIR STATION, EL TORO (Continued) **1000417911**

Evaluation date: 09/17/1992
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: EPA

Evaluation date: 06/17/1992
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 12/09/1992
Evaluation lead agency: EPA Contractor/Grantee

Evaluation date: 06/17/1991
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 11/25/1991
Evaluation lead agency: EPA

Evaluation date: 06/17/1991
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 11/25/1991
Evaluation lead agency: EPA

Evaluation date: 06/13/1990
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 11/25/1991
Evaluation lead agency: EPA

Evaluation date: 07/11/1989
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - Closure/Post-Closure
Date achieved compliance: 06/13/1990
Evaluation lead agency: EPA

Evaluation date: 07/11/1989
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: LDR - General
Date achieved compliance: 06/13/1990
Evaluation lead agency: EPA

Evaluation date: 07/11/1989
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 11/25/1991
Evaluation lead agency: EPA

Evaluation date: 08/17/1988
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 07/11/1989
Evaluation lead agency: EPA

Evaluation date: 08/17/1988
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - Closure/Post-Closure

MARINE CORPS AIR STATION, EL TORO (Continued) **1000417911**

Date achieved compliance: 07/11/1989
Evaluation lead agency: EPA

Evaluation date: 03/05/1987
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: LDR - General
Date achieved compliance: 08/17/1988
Evaluation lead agency: EPA

Evaluation date: 03/05/1987
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 08/17/1988
Evaluation lead agency: EPA

US ENG CONTROLS:
EPA ID: CA6170023208
Site ID: 0902770
Name: EL TORO MARINE CORPS AIR STATION
Address: EL TORO MARINE CORPS AIR STA
EL TORO M C A S
EL TORO, CA 92709
EPA Region: 09
County: ORANGE
Event Code: Not reported
Actual Date: 02/28/2012
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 001
Action Name: Explanation Of Significant Differences
Action Completion date: 03/14/2006
Operable Unit: 01
Contaminated Media : Groundwater
Engineering Control: Discharge
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 001
Action Name: Explanation Of Significant Differences
Action Completion date: 03/14/2006
Operable Unit: 01
Contaminated Media : Groundwater
Engineering Control: Reinjection
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 002
Action Name: Explanation Of Significant Differences
Action Completion date: 12/15/2008
Operable Unit: 01
Contaminated Media : Soil Gas
Engineering Control: Sampling
Contact Name: Not reported
Contact Phone and Ext: Not reported

MARINE CORPS AIR STATION, EL TORO (Continued) **1000417911**

Event Code Description: Not reported

Action ID: 003
Action Name: Explanation Of Significant Differences
Action Completion date: 07/29/2009
Operable Unit: 04
Contaminated Media : Groundwater
Engineering Control: Non-fundamental change (ESD)
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 003
Action Name: Explanation Of Significant Differences
Action Completion date: 07/29/2009
Operable Unit: 04
Contaminated Media : Soil
Engineering Control: Non-fundamental change (ESD)
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 06/27/2002
Operable Unit: 01
Contaminated Media : Groundwater
Engineering Control: Air Stripping
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 06/27/2002
Operable Unit: 01
Contaminated Media : Groundwater
Engineering Control: Carbon Adsorption
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 06/27/2002
Operable Unit: 01
Contaminated Media : Groundwater
Engineering Control: Extraction
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 06/27/2002
Operable Unit: 01
Contaminated Media : Groundwater

MARINE CORPS AIR STATION, EL TORO (Continued) **1000417911**

Engineering Control: Monitoring
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 002
Action Name: RECORD OF DECISION
Action Completion date: 09/29/1997
Operable Unit: 02
Contaminated Media : Soil
Engineering Control: Carbon Adsorption
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 002
Action Name: RECORD OF DECISION
Action Completion date: 09/29/1997
Operable Unit: 02
Contaminated Media : Soil
Engineering Control: Monitoring
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 002
Action Name: RECORD OF DECISION
Action Completion date: 09/29/1997
Operable Unit: 02
Contaminated Media : Soil
Engineering Control: Soil Vapor Extraction (in-situ)
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 003
Action Name: RECORD OF DECISION
Action Completion date: 07/12/2000
Operable Unit: 04
Contaminated Media : Groundwater
Engineering Control: Leachate Control
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 003
Action Name: RECORD OF DECISION
Action Completion date: 07/12/2000
Operable Unit: 04
Contaminated Media : Groundwater
Engineering Control: Monitoring
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 003
Action Name: RECORD OF DECISION

MARINE CORPS AIR STATION, EL TORO (Continued) **1000417911**

Action Completion date: 07/12/2000
Operable Unit: 04
Contaminated Media : Soil
Engineering Control: Cap
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 006
Action Name: RECORD OF DECISION
Action Completion date: 09/29/1997
Operable Unit: 06
Contaminated Media : Sediment
Engineering Control: No Action
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 006
Action Name: RECORD OF DECISION
Action Completion date: 09/29/1997
Operable Unit: 06
Contaminated Media : Soil
Engineering Control: No Action
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 006
Action Name: RECORD OF DECISION
Action Completion date: 09/29/1997
Operable Unit: 06
Contaminated Media : Surface Water
Engineering Control: No Action
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 007
Action Name: RECORD OF DECISION
Action Completion date: 06/06/2001
Operable Unit: 07
Contaminated Media : Soil
Engineering Control: No Action
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 008
Action Name: RECORD OF DECISION
Action Completion date: 02/09/2012
Operable Unit: 08
Contaminated Media : Groundwater
Engineering Control: Bioremediation (In-Situ)
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

MARINE CORPS AIR STATION, EL TORO (Continued) **1000417911**

Action ID: 008
Action Name: RECORD OF DECISION
Action Completion date: 02/09/2012
Operable Unit: 08
Contaminated Media : Groundwater
Engineering Control: Monitoring
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 008
Action Name: RECORD OF DECISION
Action Completion date: 02/09/2012
Operable Unit: 08
Contaminated Media : Groundwater
Engineering Control: Natural Attenuation
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 009
Action Name: RECORD OF DECISION
Action Completion date: 05/08/2007
Operable Unit: 03
Contaminated Media : Soil
Engineering Control: Disposal
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 009
Action Name: RECORD OF DECISION
Action Completion date: 05/08/2007
Operable Unit: 03
Contaminated Media : Soil
Engineering Control: Excavation
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 009
Action Name: RECORD OF DECISION
Action Completion date: 05/08/2007
Operable Unit: 03
Contaminated Media : Soil
Engineering Control: Monitoring
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 009
Action Name: RECORD OF DECISION
Action Completion date: 05/08/2007
Operable Unit: 03
Contaminated Media : Soil
Engineering Control: No Action
Contact Name: Not reported

MARINE CORPS AIR STATION, EL TORO (Continued) **1000417911**

Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 009
Action Name: RECORD OF DECISION
Action Completion date: 05/08/2007
Operable Unit: 03
Contaminated Media : Soil
Engineering Control: Sampling
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 010
Action Name: RECORD OF DECISION
Action Completion date: 03/06/2008
Operable Unit: 05
Contaminated Media : Groundwater
Engineering Control: Monitoring
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 010
Action Name: RECORD OF DECISION
Action Completion date: 03/06/2008
Operable Unit: 05
Contaminated Media : Groundwater
Engineering Control: No Action
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 010
Action Name: RECORD OF DECISION
Action Completion date: 03/06/2008
Operable Unit: 05
Contaminated Media : Landfill Gas
Engineering Control: Active Gas Collection System
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 010
Action Name: RECORD OF DECISION
Action Completion date: 03/06/2008
Operable Unit: 05
Contaminated Media : Landfill Gas
Engineering Control: Monitoring
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 010
Action Name: RECORD OF DECISION
Action Completion date: 03/06/2008
Operable Unit: 05

MARINE CORPS AIR STATION, EL TORO (Continued) **1000417911**

Contaminated Media : Landfill Gas
Engineering Control: Passive Gas Collection System
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 010
Action Name: RECORD OF DECISION
Action Completion date: 03/06/2008
Operable Unit: 05
Contaminated Media : Soil
Engineering Control: Cap
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 010
Action Name: RECORD OF DECISION
Action Completion date: 03/06/2008
Operable Unit: 05
Contaminated Media : Soil
Engineering Control: No Action
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 010
Action Name: RECORD OF DECISION
Action Completion date: 03/06/2008
Operable Unit: 05
Contaminated Media : Solid Waste
Engineering Control: Cap
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 010
Action Name: RECORD OF DECISION
Action Completion date: 03/06/2008
Operable Unit: 05
Contaminated Media : Solid Waste
Engineering Control: Consolidate
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 010
Action Name: RECORD OF DECISION
Action Completion date: 03/06/2008
Operable Unit: 05
Contaminated Media : Solid Waste
Engineering Control: Engineering Control, (N.O.S.)
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 010

MARINE CORPS AIR STATION, EL TORO (Continued) **1000417911**

Action Name: RECORD OF DECISION
Action Completion date: 03/06/2008
Operable Unit: 05
Contaminated Media : Solid Waste
Engineering Control: Operations & Maintenance (O&M)
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 011
Action Name: RECORD OF DECISION
Action Completion date: 08/16/2003
Operable Unit: 09
Contaminated Media : Groundwater
Engineering Control: Liquid Phase Carbon Adsorption
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 011
Action Name: RECORD OF DECISION
Action Completion date: 08/16/2003
Operable Unit: 09
Contaminated Media : Groundwater
Engineering Control: Monitoring
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 011
Action Name: RECORD OF DECISION
Action Completion date: 08/16/2003
Operable Unit: 09
Contaminated Media : Groundwater
Engineering Control: Natural Attenuation
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 011
Action Name: RECORD OF DECISION
Action Completion date: 08/16/2003
Operable Unit: 09
Contaminated Media : Soil
Engineering Control: Monitoring
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 011
Action Name: RECORD OF DECISION
Action Completion date: 08/16/2003
Operable Unit: 09
Contaminated Media : Soil
Engineering Control: Surface Drainage Control
Contact Name: Not reported
Contact Phone and Ext: Not reported

MARINE CORPS AIR STATION, EL TORO (Continued) **1000417911**

Event Code Description: Not reported

Action ID: 013
Action Name: RECORD OF DECISION
Action Completion date: 03/14/2006
Operable Unit: 02
Contaminated Media : Soil
Engineering Control: No Further Action
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 015
Action Name: RECORD OF DECISION
Action Completion date: 08/09/2010
Operable Unit: 05
Contaminated Media : Groundwater
Engineering Control: Monitoring
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 015
Action Name: RECORD OF DECISION
Action Completion date: 08/09/2010
Operable Unit: 05
Contaminated Media : Landfill Gas
Engineering Control: Active Gas Collection System
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 015
Action Name: RECORD OF DECISION
Action Completion date: 08/09/2010
Operable Unit: 05
Contaminated Media : Landfill Gas
Engineering Control: Operations & Maintenance (O&M)
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 015
Action Name: RECORD OF DECISION
Action Completion date: 08/09/2010
Operable Unit: 05
Contaminated Media : Landfill Gas
Engineering Control: Passive Gas Collection System
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 015
Action Name: RECORD OF DECISION
Action Completion date: 08/09/2010
Operable Unit: 05
Contaminated Media : Soil

MARINE CORPS AIR STATION, EL TORO (Continued) **1000417911**

Engineering Control: Consolidate
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 015
Action Name: RECORD OF DECISION
Action Completion date: 08/09/2010
Operable Unit: 05
Contaminated Media : Soil
Engineering Control: Impermeable Barrier
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 015
Action Name: RECORD OF DECISION
Action Completion date: 08/09/2010
Operable Unit: 05
Contaminated Media : Soil
Engineering Control: Operations & Maintenance (O&M)
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 015
Action Name: RECORD OF DECISION
Action Completion date: 08/09/2010
Operable Unit: 05
Contaminated Media : Soil
Engineering Control: Slope Stabilization
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 015
Action Name: RECORD OF DECISION
Action Completion date: 08/09/2010
Operable Unit: 05
Contaminated Media : Solid Waste
Engineering Control: Consolidate
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 015
Action Name: RECORD OF DECISION
Action Completion date: 08/09/2010
Operable Unit: 05
Contaminated Media : Solid Waste
Engineering Control: Dike/Berm
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 015
Action Name: RECORD OF DECISION

MARINE CORPS AIR STATION, EL TORO (Continued) **1000417911**

Action Completion date: 08/09/2010
Operable Unit: 05
Contaminated Media : Solid Waste
Engineering Control: Operations & Maintenance (O&M)
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

Action ID: 015
Action Name: RECORD OF DECISION
Action Completion date: 08/09/2010
Operable Unit: 05
Contaminated Media : Solid Waste
Engineering Control: Slope Stabilization
Contact Name: Not reported
Contact Phone and Ext: Not reported
Event Code Description: Not reported

US INST CONTROL:
EPA ID: CA6170023208
Site ID: 0902770
Name: EL TORO MARINE CORPS AIR STATION
Action Name: RECORD OF DECISION
Address: EL TORO MARINE CORPS AIR STA
EL TORO, CA 92709
EPA Region: 09
County: ORANGE
Event Code: Not reported
Inst. Control: Covenant
Actual Date: 06/02/2002
Complet. Date: 06/27/2002
Operable Unit: 01
Contaminated Media : Groundwater
Contact Name : Not reported
Contact Phone and Ext : Not reported
Event Code Description: Not reported

EPA ID: CA6170023208
Site ID: 0902770
Name: EL TORO MARINE CORPS AIR STATION
Action Name: RECORD OF DECISION
Address: EL TORO MARINE CORPS AIR STA
EL TORO, CA 92709
EPA Region: 09
County: ORANGE
Event Code: Not reported
Inst. Control: Institutional Controls, (N.O.S.)
Actual Date: 06/30/2000
Complet. Date: 07/12/2000
Operable Unit: 04
Contaminated Media : Groundwater
Contact Name : Not reported
Contact Phone and Ext : Not reported
Event Code Description: Not reported

EPA ID: CA6170023208

MARINE CORPS AIR STATION, EL TORO (Continued) **1000417911**

Site ID: 0902770
Name: EL TORO MARINE CORPS AIR STATION
Action Name: RECORD OF DECISION
Address: EL TORO MARINE CORPS AIR STA
EL TORO, CA 92709
EPA Region: 09
County: ORANGE
Event Code: Not reported
Inst. Control: Land Use Restriction
Actual Date: 06/30/2000
Complet. Date: 07/12/2000
Operable Unit: 04
Contaminated Media : Soil
Contact Name : Not reported
Contact Phone and Ext : Not reported
Event Code Description: Not reported

EPA ID: CA6170023208
Site ID: 0902770
Name: EL TORO MARINE CORPS AIR STATION
Action Name: RECORD OF DECISION
Address: EL TORO MARINE CORPS AIR STA
EL TORO, CA 92709
EPA Region: 09
County: ORANGE
Event Code: Not reported
Inst. Control: Access Restriction
Actual Date: 02/28/2012
Complet. Date: 02/09/2012
Operable Unit: 08
Contaminated Media : Groundwater
Contact Name : Not reported
Contact Phone and Ext : Not reported
Event Code Description: Not reported

EPA ID: CA6170023208
Site ID: 0902770
Name: EL TORO MARINE CORPS AIR STATION
Action Name: RECORD OF DECISION
Address: EL TORO MARINE CORPS AIR STA
EL TORO, CA 92709
EPA Region: 09
County: ORANGE
Event Code: Not reported
Inst. Control: Groundwater use/well drilling regulation
Actual Date: 02/28/2012
Complet. Date: 02/09/2012
Operable Unit: 08
Contaminated Media : Groundwater
Contact Name : Not reported
Contact Phone and Ext : Not reported
Event Code Description: Not reported

EPA ID: CA6170023208
Site ID: 0902770
Name: EL TORO MARINE CORPS AIR STATION
Action Name: RECORD OF DECISION

MARINE CORPS AIR STATION, EL TORO (Continued) **1000417911**

Address: EL TORO MARINE CORPS AIR STA
EL TORO, CA 92709
EPA Region: 09
County: ORANGE
Event Code: Not reported
Inst. Control: Institutional Controls, (N.O.S.)
Actual Date: 02/28/2012
Complet. Date: 02/09/2012
Operable Unit: 08
Contaminated Media : Groundwater
Contact Name : Not reported
Contact Phone and Ext : Not reported
Event Code Description: Not reported

EPA ID: CA6170023208
Site ID: 0902770
Name: EL TORO MARINE CORPS AIR STATION
Action Name: RECORD OF DECISION
Address: EL TORO MARINE CORPS AIR STA
EL TORO, CA 92709
EPA Region: 09
County: ORANGE
Event Code: Not reported
Inst. Control: Building, demolition, or excavation regulation
Actual Date: 03/31/2008
Complet. Date: 03/06/2008
Operable Unit: 05
Contaminated Media : Soil
Contact Name : Not reported
Contact Phone and Ext : Not reported
Event Code Description: Not reported

EPA ID: CA6170023208
Site ID: 0902770
Name: EL TORO MARINE CORPS AIR STATION
Action Name: RECORD OF DECISION
Address: EL TORO MARINE CORPS AIR STA
EL TORO, CA 92709
EPA Region: 09
County: ORANGE
Event Code: Not reported
Inst. Control: Deed Notices
Actual Date: 03/31/2008
Complet. Date: 03/06/2008
Operable Unit: 05
Contaminated Media : Soil
Contact Name : Not reported
Contact Phone and Ext : Not reported
Event Code Description: Not reported

EPA ID: CA6170023208
Site ID: 0902770
Name: EL TORO MARINE CORPS AIR STATION
Action Name: RECORD OF DECISION
Address: EL TORO MARINE CORPS AIR STA
EL TORO, CA 92709
EPA Region: 09

MARINE CORPS AIR STATION, EL TORO (Continued) **1000417911**

County: ORANGE
Event Code: Not reported
Inst. Control: Zoning regulation
Actual Date: 03/31/2008
Complet. Date: 03/06/2008
Operable Unit: 05
Contaminated Media : Soil
Contact Name : Not reported
Contact Phone and Ext : Not reported
Event Code Description: Not reported

EPA ID: CA6170023208
Site ID: 0902770
Name: EL TORO MARINE CORPS AIR STATION
Action Name: RECORD OF DECISION
Address: EL TORO MARINE CORPS AIR STA
EL TORO, CA 92709
EPA Region: 09
County: ORANGE
Event Code: Not reported
Inst. Control: Building, demolition, or excavation regulation
Actual Date: 03/31/2008
Complet. Date: 03/06/2008
Operable Unit: 05
Contaminated Media : Solid Waste
Contact Name : Not reported
Contact Phone and Ext : Not reported
Event Code Description: Not reported

EPA ID: CA6170023208
Site ID: 0902770
Name: EL TORO MARINE CORPS AIR STATION
Action Name: RECORD OF DECISION
Address: EL TORO MARINE CORPS AIR STA
EL TORO, CA 92709
EPA Region: 09
County: ORANGE
Event Code: Not reported
Inst. Control: Zoning regulation
Actual Date: 03/31/2008
Complet. Date: 03/06/2008
Operable Unit: 05
Contaminated Media : Solid Waste
Contact Name : Not reported
Contact Phone and Ext : Not reported
Event Code Description: Not reported

EPA ID: CA6170023208
Site ID: 0902770
Name: EL TORO MARINE CORPS AIR STATION
Action Name: RECORD OF DECISION
Address: EL TORO MARINE CORPS AIR STA
EL TORO, CA 92709
EPA Region: 09
County: ORANGE
Event Code: Not reported
Inst. Control: Covenant

MARINE CORPS AIR STATION, EL TORO (Continued) **1000417911**

Actual Date: 09/30/2010
Complet. Date: 08/09/2010
Operable Unit: 05
Contaminated Media : Soil
Contact Name : Not reported
Contact Phone and Ext : Not reported
Event Code Description: Not reported

EPA ID: CA6170023208
Site ID: 0902770
Name: EL TORO MARINE CORPS AIR STATION
Action Name: RECORD OF DECISION
Address: EL TORO MARINE CORPS AIR STA
EL TORO, CA 92709
EPA Region: 09
County: ORANGE
Event Code: Not reported
Inst. Control: Covenant
Actual Date: 09/30/2010
Complet. Date: 08/09/2010
Operable Unit: 05
Contaminated Media : Solid Waste
Contact Name : Not reported
Contact Phone and Ext : Not reported
Event Code Description: Not reported

ROD:
Full-text of USEPA Record of Decision(s) is available from EDR.

PRP:
PRP name: NAVAL FACILITIES ENGINEERING COMMAND
STATE OF CALIFORNIA/DEPT. OF HEALTH SERVICES
STATE OF CALIFORNIA/DEPT. OF HEALTH SERVICES
STATE OF CALIFORNIA/DEPT. OF WATER QUALITY
STATE OF CALIFORNIA/DEPT. OF WATER QUALITY
USM CORP.
USM CORP.

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1 **CHEVRON 306957** **RCRA NonGen / NLR** **1010313667**
WSW **13303 SAND CANYON** **CAR000176388**
< 1/8 **IRVINE, CA 92620**
0.052 mi.
274 ft.

Relative:
Lower

Actual:
259 ft.

RCRA NonGen / NLR:
Date form received by agency: 10/02/2008
Facility name: CHEVRON 306957
Facility address: 13303 SAND CANYON
IRVINE, CA 92620
EPA ID: CAR000176388
Mailing address: PO BOX 6004
SAN RAMON, CA 94583
Contact: KATHY L NORRIS
Contact address: PO BOX 6004
SAN RAMON, CA 94583
Contact country: US
Contact telephone: 925-842-5931

CHEVRON 306957 (Continued) **1010313667**

Contact email: KNORRIS@CHEVRON.COM
EPA Region: 09
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: CHEVRON
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 07/26/2006
Owner/Op end date: Not reported

Owner/operator name: CHEVRON
Owner/operator address: PO BOX 6004
SAN RAMON, CA 94583
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 07/26/2006
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 07/26/2006
Site name: CHEVRON 306957
Classification: Large Quantity Generator

. Waste code: D018
. Waste name: BENZENE

Violation Status: No violations found

2
NNE
1/8-1/4
0.187 mi.
988 ft.

UNOCAL #4473
14886
IRVINE, CA 92714

HIST CORTESE **S101299767**
N/A

Relative:
Higher

Actual:
274 ft.

HIST CORTESE:
Region: CORTESE
Facility County Code: 30
Reg By: LTNKA
Reg Id: 083001892T

3
ESE
1/2-1
0.731 mi.
3861 ft.

HERITAGE FIELDS (FORMER MCAS EL TORO)
9 MILES N/E OF NEWPORT BEACH, CA
IRVINE, CA 92709

ENVIROSTOR **S117038686**
VCP **N/A**

Relative:
Higher

Actual:
334 ft.

ENVIROSTOR:
Facility ID: 60002040
Status: Active
Status Date: 07/24/2014
Site Code: 401681
Site Type: Voluntary Cleanup
Site Type Detailed: Voluntary Cleanup
Acres: 3791
NPL: NO
Regulatory Agencies: SMBRP
Lead Agency: SMBRP
Program Manager: Jennifer Rich
Supervisor: Eileen Mananian
Division Branch: Cleanup Cypress
Assembly: 68
Senate: 37
Special Program: Not reported
Restricted Use: NO
Site Mgmt Req: NONE SPECIFIED
Funding: Responsible Party
Latitude: 33.68305
Longitude: -117.7338
APN: NONE SPECIFIED
Past Use: AIRCRAFT MAINTENANCE, AIRFIELD OPERATIONS, EQUIPMENT/INSTRUMENT REPAIR, FIRE TRAINING AREAS
Potential COC: Perchlorate Tetrachloroethylene (PCE Trichloroethylene (TCE
Confirmed COC: Perchlorate Tetrachloroethylene (PCE Trichloroethylene (TCE
Potential Description: OTH, SOIL, SV
Alias Name: 401681
Alias Type: Project Code (Site Code)
Alias Name: 60002040
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 08/12/2014
Comments: DTSC has no objections to the work to be performed as outlined in the document.

Completed Area Name: PROJECT WIDE

HERITAGE FIELDS (FORMER MCAS EL TORO) (Continued) **S117038686**

Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 07/23/2014
Comments: DTSC has no objections to the work to be performed as outlined in the document.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction Monitoring Report
Completed Date: 01/20/2015
Comments: Documentation complete. The submission covers the City of Irvine owned portion of IRP Site 16 as indicated on Figure 1.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction Monitoring Report
Completed Date: 01/21/2015
Comments: Documentation complete.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction Monitoring Report
Completed Date: 01/21/2015
Comments: Documentation complete.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 03/25/2015
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 05/27/2015
Comments: DTSC concurred via email.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 12/08/2015
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 01/28/2016
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 03/11/2016
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported

HERITAGE FIELDS (FORMER MCAS EL TORO) (Continued) **S117038686**

Completed Document Type: Technical Workplan
Completed Date: 04/28/2016
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Technical Workplan
Completed Date: 05/31/2016
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 08/12/2016
Comments: No further comments.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 08/17/2016
Comments: DTSC sent approval via email on 8/17/16.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 09/28/2016
Comments: Project manager and project geologist had no objections to the work proposed in Addendum 1.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 01/12/2017
Comments: Emailed to Jim Werkmeister on 1/12/2017. Hard-copy will go out on 1/13/2017.

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
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

VCP:
Facility ID: 60002040
Site Type: Voluntary Cleanup
Site Type Detail: Voluntary Cleanup
Site Mgmt. Req.: NONE SPECIFIED
Acres: 3791
National Priorities List: NO
Cleanup Oversight Agencies: SMBRP
Lead Agency: SMBRP
Lead Agency Description: DTSC - Site Cleanup Program
Project Manager: Jennifer Rich

HERITAGE FIELDS (FORMER MCAS EL TORO) (Continued) **S117038686**

Supervisor:	Eileen Mananian
Division Branch:	Cleanup Cypress
Site Code:	401681
Assembly:	68
Senate:	37
Special Programs Code:	Not reported
Status:	Active
Status Date:	07/24/2014
Restricted Use:	NO
Funding:	Responsible Party
Lat/Long:	33.68305 / -117.7338
APN:	NONE SPECIFIED
Past Use:	AIRCRAFT MAINTENANCE, AIRFIELD OPERATIONS, EQUIPMENT/INSTRUMENT REPAIR, FIRE TRAINING AREAS
Potential COC:	30017, 30022, 30027
Confirmed COC:	30017,30022,30027
Potential Description:	OTH, SOIL, SV
Alias Name:	401681
Alias Type:	Project Code (Site Code)
Alias Name:	60002040
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Technical Report
Completed Date:	08/12/2014
Comments:	DTSC has no objections to the work to be performed as outlined in the document.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Technical Report
Completed Date:	07/23/2014
Comments:	DTSC has no objections to the work to be performed as outlined in the document.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Land Use Restriction Monitoring Report
Completed Date:	01/20/2015
Comments:	Documentation complete. The submission covers the City of Irvine owned portion of IRP Site 16 as indicated on Figure 1.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Land Use Restriction Monitoring Report
Completed Date:	01/21/2015
Comments:	Documentation complete.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Land Use Restriction Monitoring Report
Completed Date:	01/21/2015
Comments:	Documentation complete.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported

HERITAGE FIELDS (FORMER MCAS EL TORO) (Continued) **S117038686**

Completed Document Type: Technical Report
Completed Date: 03/25/2015
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 05/27/2015
Comments: DTSC concurred via email.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 12/08/2015
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 01/28/2016
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 03/11/2016
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Technical Workplan
Completed Date: 04/28/2016
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Technical Workplan
Completed Date: 05/31/2016
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 08/12/2016
Comments: No further comments.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 08/17/2016
Comments: DTSC sent approval via email on 8/17/16.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 09/28/2016
Comments: Project manager and project geologist had no objections to the work

HERITAGE FIELDS (FORMER MCAS EL TORO) (Continued) **S117038686**

proposed in Addendum 1.

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Annual Oversight Cost Estimate
Completed Date:	01/12/2017
Comments:	Emailed to Jim Werkmeister on 1/12/2017. Hard-copy will go out on 1/13/2017.
Future Area Name:	Not reported
Future Sub Area Name:	Not reported
Future Document Type:	Not reported
Future Due Date:	Not reported
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

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4 SW 1/2-1 0.771 mi. 4073 ft.

PA 40 ELEMENTARY SCHOOL **ENVIROSTOR SCH** **S111345517 N/A**
NORTH OF FUTURE EXTENSION OF NIGHTMIST, W/IN LOT 23 OF TRACT
IRVINE, CA 92620

Relative: Lower

Actual: 219 ft.

ENVIROSTOR:

Facility ID:	60001597
Status:	No Further Action
Status Date:	02/27/2012
Site Code:	404873
Site Type:	School Investigation
Site Type Detailed:	School
Acres:	10
NPL:	NO
Regulatory Agencies:	SMBRP
Lead Agency:	SMBRP
Program Manager:	Johnson Abraham
Supervisor:	Shahir Haddad
Division Branch:	Southern California Schools & Brownfields Outreach
Assembly:	68
Senate:	37
Special Program:	Not reported
Restricted Use:	NO
Site Mgmt Req:	NONE SPECIFIED
Funding:	Responsible Party
Latitude:	33.67976
Longitude:	-117.7558
APN:	NONE SPECIFIED
Past Use:	AGRICULTURAL - ROW CROPS
Potential COC:	Arsenic Chlordane DDD DDE DDT Lead
Confirmed COC:	30001-NO 30004-NO 30006-NO 30007-NO 30008-NO 30013-NO
Potential Description:	SOIL
Alias Name:	404873
Alias Type:	Project Code (Site Code)
Alias Name:	60001597
Alias Type:	Envirostor ID Number

Completed Info:

PA 40 ELEMENTARY SCHOOL (Continued) **S111345517**

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Cost Recovery Closeout Memo
Completed Date:	03/23/2012
Comments:	Not reported

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Environmental Oversight Agreement
Completed Date:	01/09/2012
Comments:	Sent fully executed EOA (FedEx) to District.

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Preliminary Endangerment Assessment Report
Completed Date:	02/27/2012
Comments:	DTSC approved the PEA with a No Further Action determination

Future Area Name:	Not reported
Future Sub Area Name:	Not reported
Future Document Type:	Not reported
Future Due Date:	Not reported
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

SCH:

Facility ID:	60001597
Site Type:	School Investigation
Site Type Detail:	School
Site Mgmt. Req.:	NONE SPECIFIED
Acres:	10
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:	404873
Assembly:	68
Senate:	37
Special Program Status:	Not reported
Status:	No Further Action
Status Date:	02/27/2012
Restricted Use:	NO
Funding:	Responsible Party
Latitude:	33.67976
Longitude:	-117.7558
APN:	NONE SPECIFIED
Past Use:	AGRICULTURAL - ROW CROPS
Potential COC:	Arsenic, Chlordane, DDD, DDE, DDT, Lead
Confirmed COC:	30001-NO, 30004-NO, 30006-NO, 30007-NO, 30008-NO, 30013-NO
Potential Description:	SOIL

PA 40 ELEMENTARY SCHOOL (Continued) **S111345517**

Alias Name: 404873
Alias Type: Project Code (Site Code)
Alias Name: 60001597
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 03/23/2012
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Environmental Oversight Agreement
Completed Date: 01/09/2012
Comments: Sent fully executed EOA (FedEx) to District.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 02/27/2012
Comments: DTSC approved the PEA with a No Further Action determination

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
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

Count: 3 records. ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
IRVINE	S106784729	USMCAS EL TORO UST 273B	NORTH 6TH STREET	92618	LUST
IRVINE	S108407585	PROPOSED STONEGATE ELEMENTARY SCHO	IRVINE BOULEVARD/GROVELAND	92618	ENVIROSTOR, SCH
IRVINE	S108985891	US MARINE CORP AIR STATION EL TORO	TRABUCO		SLIC

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: 04/05/2017
Date Data Arrived at EDR: 04/21/2017
Date Made Active in Reports: 05/12/2017
Number of Days to Update: 21

Source: EPA
Telephone: N/A
Last EDR Contact: 06/08/2017
Next Scheduled EDR Contact: 07/17/2017
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 3
Telephone 215-814-5418

EPA Region 4
Telephone 404-562-8033

EPA Region 5
Telephone 312-886-6686

EPA Region 6
Telephone: 214-655-6659

EPA Region 7
Telephone: 913-551-7247

EPA Region 8
Telephone: 303-312-6774

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: 04/05/2017
Date Data Arrived at EDR: 04/21/2017
Date Made Active in Reports: 05/12/2017
Number of Days to Update: 21

Source: EPA
Telephone: N/A
Last EDR Contact: 06/09/2017
Next Scheduled EDR Contact: 07/17/2017
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 04/05/2017
Date Data Arrived at EDR: 04/21/2017
Date Made Active in Reports: 05/12/2017
Number of Days to Update: 21

Source: EPA
Telephone: N/A
Last EDR Contact: 06/09/2017
Next Scheduled EDR Contact: 07/17/2017
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: 11/07/2016
Date Data Arrived at EDR: 01/05/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 92

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 04/07/2017
Next Scheduled EDR Contact: 07/17/2017
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 02/07/2017
Date Data Arrived at EDR: 04/19/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 16

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 06/08/2017
Next Scheduled EDR Contact: 07/31/2017
Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 02/07/2017
Date Data Arrived at EDR: 04/19/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 16

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 06/08/2017
Next Scheduled EDR Contact: 07/31/2017
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: 12/12/2016
Date Data Arrived at EDR: 12/28/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 44

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 05/02/2017
Next Scheduled EDR Contact: 04/10/2017
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: 12/12/2016
Date Data Arrived at EDR: 12/28/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 44

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 05/02/2017
Next Scheduled EDR Contact: 04/10/2017
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: 12/12/2016
Date Data Arrived at EDR: 12/28/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 44

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 05/02/2017
Next Scheduled EDR Contact: 04/10/2017
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 12/12/2016
Date Data Arrived at EDR: 12/28/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 44

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 05/02/2017
Next Scheduled EDR Contact: 04/10/2017
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: 12/12/2016
Date Data Arrived at EDR: 12/28/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 44

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 05/02/2017
Next Scheduled EDR Contact: 04/10/2017
Data Release Frequency: Varies

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: 12/28/2016
Date Data Arrived at EDR: 01/04/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 93

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 05/15/2017
Next Scheduled EDR Contact: 08/28/2017
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 02/13/2017
Date Data Arrived at EDR: 02/28/2017
Date Made Active in Reports: 06/09/2017
Number of Days to Update: 101

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 05/31/2017
Next Scheduled EDR Contact: 09/11/2017
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: 02/13/2017
Date Data Arrived at EDR: 02/28/2017
Date Made Active in Reports: 06/09/2017
Number of Days to Update: 101

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 05/31/2017
Next Scheduled EDR Contact: 09/11/2017
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 09/26/2016
Date Data Arrived at EDR: 09/29/2016
Date Made Active in Reports: 11/11/2016
Number of Days to Update: 43

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 03/29/2017
Next Scheduled EDR Contact: 07/10/2017
Data Release Frequency: Annually

State- and tribal - equivalent NPL

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 01/30/2017
Date Data Arrived at EDR: 01/31/2017
Date Made Active in Reports: 05/23/2017
Number of Days to Update: 112

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/02/2017
Next Scheduled EDR Contact: 08/14/2017
Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 01/30/2017
Date Data Arrived at EDR: 01/31/2017
Date Made Active in Reports: 05/23/2017
Number of Days to Update: 112

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/02/2017
Next Scheduled EDR Contact: 08/14/2017
Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 02/13/2017
Date Data Arrived at EDR: 02/15/2017
Date Made Active in Reports: 05/02/2017
Number of Days to Update: 76

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 05/17/2017
Next Scheduled EDR Contact: 08/28/2017
Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 03/13/2017
Date Data Arrived at EDR: 03/14/2017
Date Made Active in Reports: 05/02/2017
Number of Days to Update: 49
Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 03/14/2017
Next Scheduled EDR Contact: 06/26/2017
Data Release Frequency: Quarterly

LUST REG 6V: Leaking Underground Storage Tank Case Listing
Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22
Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 4: Underground Storage Tank Leak List
Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35
Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

LUST REG 3: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14
Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List
Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30
Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-622-2433
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

LUST REG 1: Active Toxic Site Investigation
Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29
Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-570-3769
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 6L: Leaking Underground Storage Tank Case Listing
For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

LUST REG 7: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 8: Leaking Underground Storage Tanks

California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Varies

LUST REG 9: Leaking Underground Storage Tank Report

Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: No Update Planned

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: 11/14/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 04/28/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 10/14/2016
Date Data Arrived at EDR: 01/27/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 98

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 04/28/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Semi-Annually

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 10/07/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 04/28/2017
Next Scheduled EDR Contact: 08/07/2017
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: 10/06/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 04/28/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Quarterly

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 10/01/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 04/28/2017
Next Scheduled EDR Contact: 08/07/2017
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: 11/14/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99

Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 04/28/2017
Next Scheduled EDR Contact: 08/07/2017
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: 10/17/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 04/28/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Quarterly

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 09/01/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 04/28/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Varies

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: 03/13/2017
Date Data Arrived at EDR: 03/14/2017
Date Made Active in Reports: 05/02/2017
Number of Days to Update: 49

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/14/2017
Next Scheduled EDR Contact: 06/26/2017
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

SLIC REG 1: Active Toxic Site Investigations
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: Semi-Annually

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: Varies

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Semi-Annually

SLIC REG 6L: SLIC Sites
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35
Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36
Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11
Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17
Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: Annually

State and tribal registered storage tank lists

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 01/01/2010
Date Data Arrived at EDR: 02/16/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 55
Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 04/11/2017
Next Scheduled EDR Contact: 07/24/2017
Data Release Frequency: Varies

UST: Active UST Facilities
Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 03/12/2017
Date Data Arrived at EDR: 03/16/2017
Date Made Active in Reports: 05/12/2017
Number of Days to Update: 57
Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 03/16/2017
Next Scheduled EDR Contact: 06/26/2017
Data Release Frequency: Semi-Annually

AST: Aboveground Petroleum Storage Tank Facilities
A listing of aboveground storage tank petroleum storage tank locations.

Date of Government Version: 07/06/2016
Date Data Arrived at EDR: 07/12/2016
Date Made Active in Reports: 09/19/2016
Number of Days to Update: 69
Source: California Environmental Protection Agency
Telephone: 916-327-5092
Last EDR Contact: 03/24/2017
Next Scheduled EDR Contact: 07/10/2017
Data Release Frequency: Quarterly

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: 01/14/2017
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99
Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 04/28/2017
Next Scheduled EDR Contact: 08/07/2017
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: 10/01/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99
Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 04/28/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Semi-Annually

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: 09/01/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 04/28/2017
Next Scheduled EDR Contact: 08/07/2017
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: 10/17/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99
Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 04/28/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Quarterly

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: 10/06/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99
Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 04/28/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Quarterly

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: 11/14/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 04/28/2017
Next Scheduled EDR Contact: 08/07/2017
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: 10/14/2016
Date Data Arrived at EDR: 01/27/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 98

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 04/28/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Semi-Annually

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: 10/07/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 04/28/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Quarterly

State and tribal voluntary cleanup sites

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 03/27/2017
Next Scheduled EDR Contact: 07/10/2017
Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

VCP: Voluntary Cleanup Program Properties

Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 01/30/2017
Date Data Arrived at EDR: 01/31/2017
Date Made Active in Reports: 05/23/2017
Number of Days to Update: 112

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/02/2017
Next Scheduled EDR Contact: 08/14/2017
Data Release Frequency: Quarterly

State and tribal Brownfields sites

BROWNFIELDS: Considered Brownfieds Sites Listing
A listing of sites the SWRCB considers to be Brownfields since these are sites have come to them through the MOA Process.

Date of Government Version: 01/03/2017
Date Data Arrived at EDR: 01/04/2017
Date Made Active in Reports: 03/02/2017
Number of Days to Update: 57
Source: State Water Resources Control Board
Telephone: 916-323-7905
Last EDR Contact: 03/29/2017
Next Scheduled EDR Contact: 07/10/2017
Data Release Frequency: Varies

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: 03/02/2017
Date Data Arrived at EDR: 03/02/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 36
Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 03/02/2017
Next Scheduled EDR Contact: 07/03/2017
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT: Waste Management Unit Database
Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30
Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 05/05/2017
Next Scheduled EDR Contact: 08/21/2017
Data Release Frequency: No Update Planned

SWRCY: Recycler Database
A listing of recycling facilities in California.

Date of Government Version: 03/13/2017
Date Data Arrived at EDR: 03/14/2017
Date Made Active in Reports: 05/03/2017
Number of Days to Update: 50
Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 03/14/2017
Next Scheduled EDR Contact: 06/26/2017
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing
A listing of registered waste tire haulers.

Date of Government Version: 01/13/2017
Date Data Arrived at EDR: 01/17/2017
Date Made Active in Reports: 05/31/2017
Number of Days to Update: 134

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 05/15/2017
Next Scheduled EDR Contact: 08/28/2017
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 05/01/2017
Next Scheduled EDR Contact: 08/14/2017
Data Release Frequency: Varies

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 04/24/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land

A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176

Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 05/05/2017
Next Scheduled EDR Contact: 08/14/2017
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: 02/09/2017
Date Data Arrived at EDR: 03/08/2017
Date Made Active in Reports: 06/09/2017
Number of Days to Update: 93

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 02/28/2017
Next Scheduled EDR Contact: 06/12/2017
Data Release Frequency: No Update Planned

HIST CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21

Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 01/30/2017
Date Data Arrived at EDR: 01/31/2017
Date Made Active in Reports: 05/23/2017
Number of Days to Update: 112

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/02/2017
Next Scheduled EDR Contact: 08/14/2017
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: 12/31/2016
Date Data Arrived at EDR: 03/17/2017
Date Made Active in Reports: 05/10/2017
Number of Days to Update: 54

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 04/10/2017
Next Scheduled EDR Contact: 07/24/2017
Data Release Frequency: Varies

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: No Update Planned

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: 02/09/2017
Date Data Arrived at EDR: 03/08/2017
Date Made Active in Reports: 06/09/2017
Number of Days to Update: 93

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 05/31/2017
Next Scheduled EDR Contact: 09/11/2017
Data Release Frequency: Quarterly

Local Lists of Registered Storage Tanks

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

UST MENDOCINO: Mendocino County UST Database
A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 03/09/2017
Date Data Arrived at EDR: 03/17/2017
Date Made Active in Reports: 05/23/2017
Number of Days to Update: 67

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 05/24/2017
Next Scheduled EDR Contact: 09/11/2017
Data Release Frequency: Annually

HIST UST: Hazardous Substance Storage Container Database
The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

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

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: 03/06/2017
Date Data Arrived at EDR: 03/07/2017
Date Made Active in Reports: 04/21/2017
Number of Days to Update: 45

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 06/02/2017
Next Scheduled EDR Contact: 09/18/2017
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: 02/18/2014
Date Data Arrived at EDR: 03/18/2014
Date Made Active in Reports: 04/24/2014
Number of Days to Update: 37

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 06/09/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Varies

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 03/06/2017
Date Data Arrived at EDR: 03/07/2017
Date Made Active in Reports: 05/23/2017
Number of Days to Update: 77

Source: DTSC and SWRCB
Telephone: 916-323-3400
Last EDR Contact: 06/06/2017
Next Scheduled EDR Contact: 09/18/2017
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: 12/28/2016
Date Data Arrived at EDR: 12/28/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 37

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 03/29/2017
Next Scheduled EDR Contact: 07/10/2017
Data Release Frequency: Annually

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: 12/06/2016
Date Data Arrived at EDR: 01/25/2017
Date Made Active in Reports: 05/10/2017
Number of Days to Update: 105

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 04/28/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Varies

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: 03/13/2017
Date Data Arrived at EDR: 03/14/2017
Date Made Active in Reports: 05/02/2017
Number of Days to Update: 49

Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/14/2017
Next Scheduled EDR Contact: 06/26/2017
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: 03/13/2017
Date Data Arrived at EDR: 03/14/2017
Date Made Active in Reports: 05/02/2017
Number of Days to Update: 49

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/14/2017
Next Scheduled EDR Contact: 06/26/2017
Data Release Frequency: Quarterly

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 06/06/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/22/2013
Number of Days to Update: 50

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 12/12/2016
Date Data Arrived at EDR: 12/28/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 44

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 05/02/2017
Next Scheduled EDR Contact: 04/10/2017
Data Release Frequency: Varies

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: 01/31/2015
Date Data Arrived at EDR: 07/08/2015
Date Made Active in Reports: 10/13/2015
Number of Days to Update: 97

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 02/24/2017
Next Scheduled EDR Contact: 06/05/2017
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 04/14/2017
Next Scheduled EDR Contact: 07/24/2017
Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 04/14/2017
Next Scheduled EDR Contact: 07/24/2017
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 05/19/2017
Next Scheduled EDR Contact: 08/28/2017
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: 02/13/2017
Date Data Arrived at EDR: 02/15/2017
Date Made Active in Reports: 05/12/2017
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 05/17/2017
Next Scheduled EDR Contact: 08/28/2017
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: 05/08/2017
Next Scheduled EDR Contact: 08/21/2017
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: 04/22/2013
Date Data Arrived at EDR: 03/03/2015
Date Made Active in Reports: 03/09/2015
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 05/05/2017
Next Scheduled EDR Contact: 08/21/2017
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: 12/31/2012
Date Data Arrived at EDR: 01/15/2015
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 14

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 03/24/2017
Next Scheduled EDR Contact: 07/03/2017
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 11/24/2015
Date Made Active in Reports: 04/05/2016
Number of Days to Update: 133

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 05/26/2017
Next Scheduled EDR Contact: 09/04/2017
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: 04/26/2017
Next Scheduled EDR Contact: 08/07/2017
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: 11/25/2013
Date Data Arrived at EDR: 12/12/2013
Date Made Active in Reports: 02/24/2014
Number of Days to Update: 74

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 06/09/2017
Next Scheduled EDR Contact: 09/18/2017
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: 02/01/2017
Date Data Arrived at EDR: 02/09/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 04/21/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties
A listing of verified Potentially Responsible Parties

Date of Government Version: 10/25/2013
Date Data Arrived at EDR: 10/17/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 3
Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 06/06/2017
Next Scheduled EDR Contact: 08/21/2017
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: 01/20/2016
Date Data Arrived at EDR: 04/28/2016
Date Made Active in Reports: 09/02/2016
Number of Days to Update: 127
Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 04/10/2017
Next Scheduled EDR Contact: 07/24/2017
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System
The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 04/10/2017
Next Scheduled EDR Contact: 07/24/2017
Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 05/19/2017
Next Scheduled EDR Contact: 09/04/2017
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 05/19/2017
Next Scheduled EDR Contact: 09/04/2017
Data Release Frequency: Quarterly

MLTS: Material Licensing Tracking System
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 08/30/2016
Date Data Arrived at EDR: 09/08/2016
Date Made Active in Reports: 10/21/2016
Number of Days to Update: 43
Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 05/08/2017
Next Scheduled EDR Contact: 08/21/2017
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

COAL ASH DOE: Steam-Electric Plant Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76

Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 06/05/2017
Next Scheduled EDR Contact: 09/18/2017
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 07/01/2014
Date Data Arrived at EDR: 09/10/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 06/05/2017
Next Scheduled EDR Contact: 09/18/2017
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: 02/01/2011
Date Data Arrived at EDR: 10/19/2011
Date Made Active in Reports: 01/10/2012
Number of Days to Update: 83

Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 04/28/2017
Next Scheduled EDR Contact: 08/07/2017
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: 01/04/2017
Date Data Arrived at EDR: 01/06/2017
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 35

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 04/06/2017
Next Scheduled EDR Contact: 07/17/2017
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/31/2012
Date Data Arrived at EDR: 08/07/2012
Date Made Active in Reports: 09/18/2012
Number of Days to Update: 42

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 05/02/2017
Next Scheduled EDR Contact: 08/14/2017
Data Release Frequency: Varies

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: 09/30/2016
Date Data Arrived at EDR: 11/18/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 77

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 03/27/2017
Next Scheduled EDR Contact: 07/10/2017
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: 12/31/2013
Date Data Arrived at EDR: 02/24/2015
Date Made Active in Reports: 09/30/2015
Number of Days to Update: 218

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 05/26/2017
Next Scheduled EDR Contact: 09/04/2017
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 04/14/2017
Next Scheduled EDR Contact: 07/24/2017
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: 12/23/2016
Date Data Arrived at EDR: 12/27/2016
Date Made Active in Reports: 02/17/2017
Number of Days to Update: 52

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 05/05/2017
Next Scheduled EDR Contact: 08/21/2017
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 09/14/2010
Date Data Arrived at EDR: 10/07/2011
Date Made Active in Reports: 03/01/2012
Number of Days to Update: 146

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 05/22/2017
Next Scheduled EDR Contact: 09/04/2017
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 12/05/2016
Date Data Arrived at EDR: 01/05/2017
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 36

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 06/09/2017
Next Scheduled EDR Contact: 07/17/2017
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 03/07/2017
Next Scheduled EDR Contact: 07/10/2017
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: 03/07/2017
Next Scheduled EDR Contact: 04/10/2017
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: 02/08/2017
Date Data Arrived at EDR: 02/28/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 38

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 05/31/2017
Next Scheduled EDR Contact: 09/11/2017
Data Release Frequency: Semi-Annually

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 12/05/2005
Date Data Arrived at EDR: 02/29/2008
Date Made Active in Reports: 04/18/2008
Number of Days to Update: 49

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 05/31/2017
Next Scheduled EDR Contact: 09/11/2017
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: 06/02/2017
Next Scheduled EDR Contact: 09/11/2017
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: 03/14/2017
Date Data Arrived at EDR: 03/17/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 21

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 06/09/2017
Next Scheduled EDR Contact: 09/25/2017
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: 04/04/2017
Date Data Arrived at EDR: 04/07/2017
Date Made Active in Reports: 05/12/2017
Number of Days to Update: 35

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 06/07/2017
Next Scheduled EDR Contact: 09/18/2017
Data Release Frequency: Quarterly

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 03/19/2017
Date Data Arrived at EDR: 03/21/2017
Date Made Active in Reports: 05/12/2017
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 06/07/2017
Next Scheduled EDR Contact: 09/18/2017
Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 10/25/2015
Date Data Arrived at EDR: 01/29/2016
Date Made Active in Reports: 04/05/2016
Number of Days to Update: 67

Source: Department of Defense
Telephone: 571-373-0407
Last EDR Contact: 05/22/2017
Next Scheduled EDR Contact: 07/31/2017
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

DOCKET HWC: Hazardous Waste Compliance Docket Listing
A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 06/02/2016
Date Data Arrived at EDR: 06/03/2016
Date Made Active in Reports: 09/02/2016
Number of Days to Update: 91
Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 05/24/2017
Next Scheduled EDR Contact: 09/11/2017
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: 02/22/2017
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 05/12/2017
Number of Days to Update: 79
Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 05/24/2017
Next Scheduled EDR Contact: 09/04/2017
Data Release Frequency: Quarterly

CA BOND EXP. PLAN: Bond Expenditure Plan
Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6
Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CORTESE: "Cortese" Hazardous Waste & Substances Sites List
The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 12/28/2016
Date Data Arrived at EDR: 12/28/2016
Date Made Active in Reports: 03/02/2017
Number of Days to Update: 64
Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 03/29/2017
Next Scheduled EDR Contact: 07/10/2017
Data Release Frequency: Quarterly

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: 03/09/2017
Date Data Arrived at EDR: 04/11/2017
Date Made Active in Reports: 05/23/2017
Number of Days to Update: 42
Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 06/02/2017
Next Scheduled EDR Contact: 09/18/2017
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: 12/31/2014
Date Data Arrived at EDR: 09/23/2016
Date Made Active in Reports: 10/24/2016
Number of Days to Update: 31
Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 03/21/2017
Next Scheduled EDR Contact: 07/03/2017
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 01/23/2017
Date Data Arrived at EDR: 01/27/2017
Date Made Active in Reports: 05/25/2017
Number of Days to Update: 118

Source: State Water Resoruces Control Board
Telephone: 916-445-9379
Last EDR Contact: 04/24/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing

Financial Assurance information

Date of Government Version: 04/25/2016
Date Data Arrived at EDR: 04/29/2016
Date Made Active in Reports: 06/21/2016
Number of Days to Update: 53

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 06/02/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information Listing

A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 02/14/2017
Date Data Arrived at EDR: 02/17/2017
Date Made Active in Reports: 05/25/2017
Number of Days to Update: 97

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 05/15/2017
Next Scheduled EDR Contact: 08/28/2017
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: 12/31/2015
Date Data Arrived at EDR: 10/12/2016
Date Made Active in Reports: 12/15/2016
Number of Days to Update: 64

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 04/14/2017
Next Scheduled EDR Contact: 07/24/2017
Data Release Frequency: Annually

ICE: ICE

Contains data pertaining to the Permitted Facilities with Inspections / Enforcements sites tracked in Envirostor.

Date of Government Version: 11/21/2016
Date Data Arrived at EDR: 11/22/2016
Date Made Active in Reports: 01/23/2017
Number of Days to Update: 62

Source: Department of Toxic Subsances Control
Telephone: 877-786-9427
Last EDR Contact: 05/24/2017
Next Scheduled EDR Contact: 09/04/2017
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: 11/21/2016
Date Data Arrived at EDR: 11/22/2016
Date Made Active in Reports: 01/23/2017
Number of Days to Update: 62
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/24/2017
Next Scheduled EDR Contact: 09/04/2017
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: 04/11/2017
Date Data Arrived at EDR: 04/13/2017
Date Made Active in Reports: 04/26/2017
Number of Days to Update: 13
Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 04/13/2017
Next Scheduled EDR Contact: 07/24/2017
Data Release Frequency: Quarterly

MINES: Mines Site Location Listing
A listing of mine site locations from the Office of Mine Reclamation.

Date of Government Version: 09/12/2016
Date Data Arrived at EDR: 09/14/2016
Date Made Active in Reports: 10/14/2016
Number of Days to Update: 30
Source: Department of Conservation
Telephone: 916-322-1080
Last EDR Contact: 03/13/2017
Next Scheduled EDR Contact: 06/26/2017
Data Release Frequency: Varies

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: 12/02/2016
Date Data Arrived at EDR: 12/06/2016
Date Made Active in Reports: 03/02/2017
Number of Days to Update: 86
Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 06/06/2017
Next Scheduled EDR Contact: 09/18/2017
Data Release Frequency: Varies

NPDES: NPDES Permits Listing
A listing of NPDES permits, including stormwater.

Date of Government Version: 11/14/2016
Date Data Arrived at EDR: 11/15/2016
Date Made Active in Reports: 03/02/2017
Number of Days to Update: 107
Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 05/17/2017
Next Scheduled EDR Contact: 08/28/2017
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: 12/06/2016
Date Data Arrived at EDR: 12/06/2016
Date Made Active in Reports: 03/03/2017
Number of Days to Update: 87
Source: Department of Pesticide Regulation
Telephone: 916-445-4038
Last EDR Contact: 06/07/2017
Next Scheduled EDR Contact: 09/18/2017
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

PROC: Certified Processors Database
A listing of certified processors.

Date of Government Version: 03/13/2017
Date Data Arrived at EDR: 03/14/2017
Date Made Active in Reports: 05/03/2017
Number of Days to Update: 50

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 03/14/2017
Next Scheduled EDR Contact: 06/26/2017
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: 12/16/2016
Date Data Arrived at EDR: 12/22/2016
Date Made Active in Reports: 03/02/2017
Number of Days to Update: 70

Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 04/03/2017
Next Scheduled EDR Contact: 07/03/2017
Data Release Frequency: No Update Planned

UIC: UIC Listing
A listing of wells identified as underground injection wells, in the California Oil and Gas Wells database.

Date of Government Version: 01/20/2017
Date Data Arrived at EDR: 03/14/2017
Date Made Active in Reports: 05/03/2017
Number of Days to Update: 50

Source: Deaprtment of Conservation
Telephone: 916-445-2408
Last EDR Contact: 03/14/2017
Next Scheduled EDR Contact: 06/26/2017
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 board?s review found that more than one-third of the region?s active disposal pits are operating without permission.

Date of Government Version: 04/15/2015
Date Data Arrived at EDR: 04/17/2015
Date Made Active in Reports: 06/23/2015
Number of Days to Update: 67

Source: RWQCB, Central Valley Region
Telephone: 559-445-5577
Last EDR Contact: 04/14/2017
Next Scheduled EDR Contact: 07/24/2017
Data Release Frequency: Varies

WDS: Waste Discharge System
Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9

Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 05/22/2017
Next Scheduled EDR Contact: 09/04/2017
Data Release Frequency: Quarterly

WIP: Well Investigation Program Case List
Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009
Date Data Arrived at EDR: 07/21/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 13

Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 03/24/2017
Next Scheduled EDR Contact: 07/10/2017
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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 Historic Gas Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historic Dry Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Resources Recycling and Recovery in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/13/2014
Number of Days to Update: 196

Source: Department of Resources Recycling and Recovery
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the State Water Resources Control Board in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/30/2013
Number of Days to Update: 182

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

COUNTY RECORDS

ALAMEDA COUNTY:

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: 04/10/2017
Date Data Arrived at EDR: 04/11/2017
Date Made Active in Reports: 05/12/2017
Number of Days to Update: 31

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 04/10/2017
Next Scheduled EDR Contact: 07/24/2017
Data Release Frequency: Semi-Annually

Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 04/10/2017
Date Data Arrived at EDR: 04/11/2017
Date Made Active in Reports: 05/02/2017
Number of Days to Update: 21

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 04/10/2017
Next Scheduled EDR Contact: 04/24/2047
Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA Facility List

Cupa Facility List

Date of Government Version: 03/06/2017
Date Data Arrived at EDR: 03/08/2017
Date Made Active in Reports: 04/14/2017
Number of Days to Update: 37

Source: Amador County Environmental Health
Telephone: 209-223-6439
Last EDR Contact: 06/02/2017
Next Scheduled EDR Contact: 09/18/2017
Data Release Frequency: Varies

BUTTE COUNTY:

CUPA Facility Listing

Cupa facility list.

Date of Government Version: 01/31/2017
Date Data Arrived at EDR: 02/07/2017
Date Made Active in Reports: 05/12/2017
Number of Days to Update: 94

Source: Public Health Department
Telephone: 530-538-7149
Last EDR Contact: 04/10/2017
Next Scheduled EDR Contact: 07/24/2017
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA Facility Listing
Cupa Facility Listing

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: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 03/27/2017
Next Scheduled EDR Contact: 07/10/2017
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 02/23/2017
Date Data Arrived at EDR: 02/24/2017
Date Made Active in Reports: 05/12/2017
Number of Days to Update: 77

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 06/02/2017
Next Scheduled EDR Contact: 08/21/2017
Data Release Frequency: Varies

CONTRA COSTA COUNTY:

Site List
List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 11/17/2016
Date Data Arrived at EDR: 11/22/2016
Date Made Active in Reports: 01/26/2017
Number of Days to Update: 65

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 05/01/2017
Next Scheduled EDR Contact: 08/14/2017
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA Facility List
Cupa Facility list

Date of Government Version: 01/31/2017
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 04/14/2017
Number of Days to Update: 70

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 05/01/2017
Next Scheduled EDR Contact: 08/14/2017
Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 02/24/2017
Date Data Arrived at EDR: 02/28/2017
Date Made Active in Reports: 05/12/2017
Number of Days to Update: 73

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 05/01/2017
Next Scheduled EDR Contact: 08/14/2017
Data Release Frequency: Varies

FRESNO COUNTY:

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: 04/06/2017
Date Data Arrived at EDR: 04/07/2017
Date Made Active in Reports: 05/17/2017
Number of Days to Update: 40

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 03/31/2017
Next Scheduled EDR Contact: 07/17/2017
Data Release Frequency: Semi-Annually

GLENN COUNTY:

CUPA Facility List

Cupa facility list

Date of Government Version: 12/02/2016
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 05/25/2017
Number of Days to Update: 111

Source: Glenn County Air Pollution Control District
Telephone: 830-934-6500
Last EDR Contact: 04/24/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Varies

HUMBOLDT COUNTY:

CUPA Facility List

CUPA facility list.

Date of Government Version: 03/20/2017
Date Data Arrived at EDR: 03/21/2017
Date Made Active in Reports: 05/17/2017
Number of Days to Update: 57

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 05/22/2017
Next Scheduled EDR Contact: 09/04/2017
Data Release Frequency: Varies

IMPERIAL COUNTY:

CUPA Facility List

Cupa facility list.

Date of Government Version: 01/23/2017
Date Data Arrived at EDR: 01/25/2017
Date Made Active in Reports: 03/02/2017
Number of Days to Update: 36

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 04/24/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Varies

INYO COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 03/09/2017
Date Data Arrived at EDR: 03/09/2017
Date Made Active in Reports: 05/25/2017
Number of Days to Update: 77

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 06/02/2017
Next Scheduled EDR Contact: 09/04/2017
Data Release Frequency: Varies

KERN COUNTY:

Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 02/07/2017
Date Data Arrived at EDR: 02/10/2017
Date Made Active in Reports: 05/02/2017
Number of Days to Update: 81

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 05/05/2017
Next Scheduled EDR Contact: 08/21/2017
Data Release Frequency: Quarterly

KINGS COUNTY:

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: 03/06/2017
Date Data Arrived at EDR: 03/07/2017
Date Made Active in Reports: 05/17/2017
Number of Days to Update: 71

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 05/22/2017
Next Scheduled EDR Contact: 09/04/2017
Data Release Frequency: Varies

LAKE COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 01/18/2017
Date Data Arrived at EDR: 01/20/2017
Date Made Active in Reports: 03/02/2017
Number of Days to Update: 41

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 04/17/2017
Next Scheduled EDR Contact: 07/31/2017
Data Release Frequency: Varies

LASSEN COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 11/30/2016
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 05/25/2017
Number of Days to Update: 111

Source: Lassen County Environmental Health
Telephone: 530-251-8528
Last EDR Contact: 11/30/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Varies

LOS ANGELES COUNTY:

San Gabriel Valley Areas of Concern
San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office.

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: EPA Region 9
Telephone: 415-972-3178
Last EDR Contact: 03/20/2017
Next Scheduled EDR Contact: 07/03/2017
Data Release Frequency: No Update Planned

HMS: Street Number List
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 11/14/2016
Date Data Arrived at EDR: 11/18/2016
Date Made Active in Reports: 01/23/2017
Number of Days to Update: 66
Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 04/10/2017
Next Scheduled EDR Contact: 07/24/2017
Data Release Frequency: Semi-Annually

List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 04/17/2017
Date Data Arrived at EDR: 04/18/2017
Date Made Active in Reports: 05/02/2017
Number of Days to Update: 14
Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 04/18/2017
Next Scheduled EDR Contact: 07/31/2017
Data Release Frequency: Varies

City of Los Angeles Landfills
Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 01/01/2016
Date Data Arrived at EDR: 01/26/2016
Date Made Active in Reports: 03/22/2016
Number of Days to Update: 56
Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 04/17/2017
Next Scheduled EDR Contact: 07/31/2017
Data Release Frequency: Varies

Site Mitigation List
Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 03/29/2016
Date Data Arrived at EDR: 04/06/2016
Date Made Active in Reports: 06/13/2016
Number of Days to Update: 68
Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 04/17/2017
Next Scheduled EDR Contact: 07/31/2017
Data Release Frequency: Annually

City of El Segundo Underground Storage Tank
Underground storage tank sites located in El Segundo city.

Date of Government Version: 01/17/2017
Date Data Arrived at EDR: 01/18/2017
Date Made Active in Reports: 05/10/2017
Number of Days to Update: 112
Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 04/17/2017
Next Scheduled EDR Contact: 07/31/2017
Data Release Frequency: Semi-Annually

City of Long Beach Underground Storage Tank
Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 03/09/2017
Date Data Arrived at EDR: 03/10/2017
Date Made Active in Reports: 05/03/2017
Number of Days to Update: 54
Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 04/24/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Annually

City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 01/10/2017
Date Data Arrived at EDR: 01/13/2017
Date Made Active in Reports: 05/03/2017
Number of Days to Update: 110

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 04/10/2017
Next Scheduled EDR Contact: 07/24/2017
Data Release Frequency: Semi-Annually

MADERA COUNTY:

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: 03/03/2017
Date Data Arrived at EDR: 03/07/2017
Date Made Active in Reports: 05/17/2017
Number of Days to Update: 71

Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 05/22/2017
Next Scheduled EDR Contact: 09/04/2017
Data Release Frequency: Varies

MARIN COUNTY:

Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 03/31/2017
Date Data Arrived at EDR: 04/06/2017
Date Made Active in Reports: 05/03/2017
Number of Days to Update: 27

Source: Public Works Department Waste Management
Telephone: 415-499-6647
Last EDR Contact: 03/31/2017
Next Scheduled EDR Contact: 07/17/2017
Data Release Frequency: Semi-Annually

MERCED COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 02/22/2017
Date Data Arrived at EDR: 02/23/2017
Date Made Active in Reports: 05/17/2017
Number of Days to Update: 83

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 06/02/2017
Next Scheduled EDR Contact: 09/04/2017
Data Release Frequency: Varies

MONO COUNTY:

CUPA Facility List
CUPA Facility List

Date of Government Version: 02/21/2017
Date Data Arrived at EDR: 03/02/2017
Date Made Active in Reports: 05/17/2017
Number of Days to Update: 76

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 05/24/2017
Next Scheduled EDR Contact: 09/11/2017
Data Release Frequency: Varies

MONTEREY COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA Facility Listing
CUPA Program listing from the Environmental Health Division.

Date of Government Version: 06/24/2016
Date Data Arrived at EDR: 06/27/2016
Date Made Active in Reports: 08/09/2016
Number of Days to Update: 43

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 05/22/2017
Next Scheduled EDR Contact: 09/04/2017
Data Release Frequency: Varies

NAPA COUNTY:

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: 05/24/2017
Next Scheduled EDR Contact: 09/11/2017
Data Release Frequency: No Update Planned

Closed and Operating Underground Storage Tank Sites
Underground storage tank sites located in Napa county.

Date of Government Version: 03/15/2017
Date Data Arrived at EDR: 03/16/2017
Date Made Active in Reports: 05/09/2017
Number of Days to Update: 54

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 05/24/2017
Next Scheduled EDR Contact: 09/11/2017
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 02/09/2017
Date Data Arrived at EDR: 02/10/2017
Date Made Active in Reports: 05/17/2017
Number of Days to Update: 96

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 05/01/2017
Next Scheduled EDR Contact: 08/14/2017
Data Release Frequency: Varies

ORANGE COUNTY:

List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 02/06/2017
Date Data Arrived at EDR: 02/10/2017
Date Made Active in Reports: 04/21/2017
Number of Days to Update: 70

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 05/08/2017
Next Scheduled EDR Contact: 08/21/2017
Data Release Frequency: Annually

List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 11/04/2016
Date Data Arrived at EDR: 11/11/2016
Date Made Active in Reports: 01/23/2017
Number of Days to Update: 73

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 05/08/2017
Next Scheduled EDR Contact: 08/21/2017
Data Release Frequency: Quarterly

List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 02/06/2017
Date Data Arrived at EDR: 02/07/2017
Date Made Active in Reports: 05/03/2017
Number of Days to Update: 85
Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 05/09/2017
Next Scheduled EDR Contact: 08/21/2017
Data Release Frequency: Quarterly

PLACER COUNTY:

Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 09/02/2016
Date Data Arrived at EDR: 09/06/2016
Date Made Active in Reports: 10/14/2016
Number of Days to Update: 38
Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 06/02/2017
Next Scheduled EDR Contact: 09/18/2017
Data Release Frequency: Semi-Annually

PLUMAS COUNTY:

CUPA Facility List
Plumas County CUPA Program facilities.

Date of Government Version: 01/31/2017
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 05/25/2017
Number of Days to Update: 111
Source: Plumas County Environmental Health
Telephone: 530-283-6355
Last EDR Contact: 06/02/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Varies

RIVERSIDE COUNTY:

Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 04/18/2017
Date Data Arrived at EDR: 04/20/2017
Date Made Active in Reports: 04/21/2017
Number of Days to Update: 1
Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 03/20/2017
Next Scheduled EDR Contact: 07/03/2017
Data Release Frequency: Quarterly

Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 01/19/2017
Date Data Arrived at EDR: 01/25/2017
Date Made Active in Reports: 05/03/2017
Number of Days to Update: 98
Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 03/20/2017
Next Scheduled EDR Contact: 07/03/2017
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

Toxic Site Clean-Up List
List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 11/07/2016
Date Data Arrived at EDR: 01/05/2017
Date Made Active in Reports: 03/02/2017
Number of Days to Update: 56

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 04/04/2017
Next Scheduled EDR Contact: 07/17/2017
Data Release Frequency: Quarterly

Master Hazardous Materials Facility List

Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 11/08/2016
Date Data Arrived at EDR: 01/05/2017
Date Made Active in Reports: 03/02/2017
Number of Days to Update: 56

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 04/04/2017
Next Scheduled EDR Contact: 07/17/2017
Data Release Frequency: Quarterly

SAN BENITO COUNTY:

CUPA Facility List

Cupa facility list

Date of Government Version: 11/30/2016
Date Data Arrived at EDR: 02/09/2017
Date Made Active in Reports: 05/25/2017
Number of Days to Update: 105

Source: San Benito County Environmental Health
Telephone: N/A
Last EDR Contact: 05/05/2017
Next Scheduled EDR Contact: 08/21/2017
Data Release Frequency: Varies

SAN BERNARDINO COUNTY:

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: 12/09/2016
Date Data Arrived at EDR: 12/13/2016
Date Made Active in Reports: 03/03/2017
Number of Days to Update: 80

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 05/08/2017
Next Scheduled EDR Contact: 08/21/2017
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

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: 10/05/2016
Date Data Arrived at EDR: 12/06/2016
Date Made Active in Reports: 03/02/2017
Number of Days to Update: 86

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 06/07/2017
Next Scheduled EDR Contact: 09/18/2017
Data Release Frequency: Quarterly

Solid Waste Facilities
San Diego County Solid Waste Facilities.

Date of Government Version: 10/31/2015
Date Data Arrived at EDR: 11/07/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 58
Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 04/24/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Varies

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: 06/05/2017
Next Scheduled EDR Contact: 09/18/2017
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

Local Oversite Facilities
A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10
Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 05/05/2017
Next Scheduled EDR Contact: 08/21/2017
Data Release Frequency: Quarterly

Underground Storage Tank Information
Underground storage tank sites located in San Francisco county.

Date of Government Version: 02/28/2017
Date Data Arrived at EDR: 03/02/2017
Date Made Active in Reports: 05/03/2017
Number of Days to Update: 62
Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 05/05/2017
Next Scheduled EDR Contact: 08/21/2017
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

San Joaquin Co. UST
A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 03/21/2017
Date Data Arrived at EDR: 03/23/2017
Date Made Active in Reports: 05/09/2017
Number of Days to Update: 47
Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 03/20/2017
Next Scheduled EDR Contact: 07/03/2017
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA Facility List
Cupa Facility List.

Date of Government Version: 02/21/2017
Date Data Arrived at EDR: 02/21/2017
Date Made Active in Reports: 05/23/2017
Number of Days to Update: 91
Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 06/02/2017
Next Scheduled EDR Contact: 09/04/2017
Data Release Frequency: Varies

SAN MATEO COUNTY:

Business Inventory
List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 03/15/2017
Date Data Arrived at EDR: 04/07/2017
Date Made Active in Reports: 05/10/2017
Number of Days to Update: 33
Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 06/09/2017
Next Scheduled EDR Contact: 09/25/2017
Data Release Frequency: Annually

Fuel Leak List
A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 03/15/2017
Date Data Arrived at EDR: 04/07/2017
Date Made Active in Reports: 04/21/2017
Number of Days to Update: 14
Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 06/09/2017
Next Scheduled EDR Contact: 09/25/2017
Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

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: 05/22/2017
Next Scheduled EDR Contact: 09/04/2017
Data Release Frequency: Varies

SANTA CLARA COUNTY:

Cupa Facility List
Cupa facility list

Date of Government Version: 02/22/2017
Date Data Arrived at EDR: 02/23/2017
Date Made Active in Reports: 05/23/2017
Number of Days to Update: 89
Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 05/22/2017
Next Scheduled EDR Contact: 09/04/2017
Data Release Frequency: Varies

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

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: 05/24/2017
Next Scheduled EDR Contact: 09/11/2017
Data Release Frequency: Annually

Hazardous Material Facilities
Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 11/07/2016
Date Data Arrived at EDR: 11/10/2016
Date Made Active in Reports: 01/24/2017
Number of Days to Update: 75

Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 05/05/2017
Next Scheduled EDR Contact: 08/21/2017
Data Release Frequency: Annually

SANTA CRUZ COUNTY:

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: 05/22/2017
Next Scheduled EDR Contact: 09/04/2017
Data Release Frequency: Varies

SHASTA COUNTY:

CUPA Facility List
Cupa Facility List.

Date of Government Version: 03/14/2017
Date Data Arrived at EDR: 03/17/2017
Date Made Active in Reports: 05/23/2017
Number of Days to Update: 67

Source: Shasta County Department of Resource Management
Telephone: 530-225-5789
Last EDR Contact: 05/22/2017
Next Scheduled EDR Contact: 09/04/2017
Data Release Frequency: Varies

SOLANO COUNTY:

Leaking Underground Storage Tanks
A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 11/29/2016
Date Data Arrived at EDR: 12/21/2016
Date Made Active in Reports: 12/22/2016
Number of Days to Update: 1

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 06/09/2017
Next Scheduled EDR Contact: 09/25/2017
Data Release Frequency: Quarterly

Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 03/15/2017
Date Data Arrived at EDR: 03/17/2017
Date Made Active in Reports: 05/03/2017
Number of Days to Update: 47

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 06/09/2017
Next Scheduled EDR Contact: 09/25/2017
Data Release Frequency: Quarterly

SONOMA COUNTY:

Cupa Facility List
Cupa Facility list

Date of Government Version: 03/01/2017
Date Data Arrived at EDR: 03/30/2017
Date Made Active in Reports: 05/23/2017
Number of Days to Update: 54

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 03/27/2017
Next Scheduled EDR Contact: 07/10/2017
Data Release Frequency: Varies

Leaking Underground Storage Tank Sites

A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 01/04/2017
Date Data Arrived at EDR: 01/06/2017
Date Made Active in Reports: 03/02/2017
Number of Days to Update: 55

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 03/27/2017
Next Scheduled EDR Contact: 07/10/2017
Data Release Frequency: Quarterly

STANISLAUS COUNTY:

CUPA Facility List

Cupa facility list

Date of Government Version: 01/20/2017
Date Data Arrived at EDR: 01/24/2017
Date Made Active in Reports: 05/18/2017
Number of Days to Update: 114

Source: Stanislaus County Department of Ennvironmental Protection
Telephone: 209-525-6751
Last EDR Contact: 11/30/2017
Next Scheduled EDR Contact: 07/31/2017
Data Release Frequency: Varies

SUTTER COUNTY:

Underground Storage Tanks

Underground storage tank sites located in Sutter county.

Date of Government Version: 12/02/2016
Date Data Arrived at EDR: 12/06/2016
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 35

Source: Sutter County Department of Agriculture
Telephone: 530-822-7500
Last EDR Contact: 06/02/2017
Next Scheduled EDR Contact: 09/18/2017
Data Release Frequency: Semi-Annually

TEHAMA COUNTY:

CUPA Facility List

Cupa facilities

Date of Government Version: 01/05/2017
Date Data Arrived at EDR: 02/10/2017
Date Made Active in Reports: 05/25/2017
Number of Days to Update: 104

Source: Tehama County Department of Environmental Health
Telephone: 530-527-8020
Last EDR Contact: 05/05/2017
Next Scheduled EDR Contact: 08/21/2017
Data Release Frequency: Varies

TRINITY COUNTY:

CUPA Facility List

Cupa facility list

Date of Government Version: 01/23/2017
Date Data Arrived at EDR: 01/25/2017
Date Made Active in Reports: 05/18/2017
Number of Days to Update: 113

Source: Department of Toxic Substances Control
Telephone: 760-352-0381
Last EDR Contact: 04/24/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Varies

TULARE COUNTY:

CUPA Facility List
Cupa program facilities

Date of Government Version: 01/05/2017
Date Data Arrived at EDR: 02/10/2017
Date Made Active in Reports: 05/25/2017
Number of Days to Update: 104

Source: Tulare County Environmental Health Services Division
Telephone: 559-624-7400
Last EDR Contact: 06/02/2017
Next Scheduled EDR Contact: 08/21/2017
Data Release Frequency: Varies

TUOLUMNE COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 01/25/2017
Date Data Arrived at EDR: 01/27/2017
Date Made Active in Reports: 03/02/2017
Number of Days to Update: 34

Source: Divison of Environmental Health
Telephone: 209-533-5633
Last EDR Contact: 04/24/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Varies

VENTURA COUNTY:

Business Plan, Hazardous Waste Producers, and Operating Underground Tanks
The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 12/27/2016
Date Data Arrived at EDR: 01/27/2017
Date Made Active in Reports: 05/10/2017
Number of Days to Update: 103

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 04/24/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Quarterly

Inventory of Illegal Abandoned and Inactive Sites
Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 12/01/2011
Date Data Arrived at EDR: 12/01/2011
Date Made Active in Reports: 01/19/2012
Number of Days to Update: 49

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 03/31/2017
Next Scheduled EDR Contact: 07/17/2017
Data Release Frequency: Annually

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: 05/15/2017
Next Scheduled EDR Contact: 08/28/2017
Data Release Frequency: Quarterly

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: 09/26/2016
Date Data Arrived at EDR: 10/27/2016
Date Made Active in Reports: 01/24/2017
Number of Days to Update: 89

Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 04/24/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Quarterly

Underground Tank Closed Sites List
Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 02/27/2017
Date Data Arrived at EDR: 03/15/2017
Date Made Active in Reports: 05/03/2017
Number of Days to Update: 49

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 03/15/2017
Next Scheduled EDR Contact: 06/26/2017
Data Release Frequency: Quarterly

YOLO COUNTY:

Underground Storage Tank Comprehensive Facility Report
Underground storage tank sites located in Yolo county.

Date of Government Version: 03/31/2017
Date Data Arrived at EDR: 04/06/2017
Date Made Active in Reports: 05/03/2017
Number of Days to Update: 27

Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 03/31/2017
Next Scheduled EDR Contact: 07/17/2017
Data Release Frequency: Annually

YUBA COUNTY:

CUPA Facility List
CUPA facility listing for Yuba County.

Date of Government Version: 01/30/2017
Date Data Arrived at EDR: 01/31/2017
Date Made Active in Reports: 05/23/2017
Number of Days to Update: 112

Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 05/01/2017
Next Scheduled EDR Contact: 08/14/2017
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: 07/30/2013
Date Data Arrived at EDR: 08/19/2013
Date Made Active in Reports: 10/03/2013
Number of Days to Update: 45

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 05/15/2017
Next Scheduled EDR Contact: 08/28/2017
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2015
Date Data Arrived at EDR: 09/29/2016
Date Made Active in Reports: 01/03/2017
Number of Days to Update: 96

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 04/11/2017
Next Scheduled EDR Contact: 07/24/2017
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: 01/30/2017
Date Data Arrived at EDR: 02/01/2017
Date Made Active in Reports: 02/13/2017
Number of Days to Update: 12

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 05/03/2017
Next Scheduled EDR Contact: 08/14/2017
Data Release Frequency: Annually

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2015
Date Data Arrived at EDR: 07/22/2016
Date Made Active in Reports: 11/22/2016
Number of Days to Update: 123

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 04/18/2017
Next Scheduled EDR Contact: 07/31/2017
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 06/19/2015
Date Made Active in Reports: 07/15/2015
Number of Days to Update: 26

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 05/22/2017
Next Scheduled EDR Contact: 09/04/2017
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2015
Date Data Arrived at EDR: 04/14/2016
Date Made Active in Reports: 06/03/2016
Number of Days to Update: 50

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 03/13/2017
Next Scheduled EDR Contact: 06/26/2017
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
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.

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.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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 & Game
Telephone: 916-445-0411

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

SECOND ZONE 1 RESERVOIR
SAND CANYON AVENUE
IRVINE, CA 92618

TARGET PROPERTY COORDINATES

Latitude (North):	33.688443 - 33° 41' 18.39''
Longitude (West):	117.745902 - 117° 44' 45.25''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	430864.8
UTM Y (Meters):	3727668.2
Elevation:	269 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	5636489 EL TORO, CA
Version Date:	2012
West Map:	5640942 TUSTIN, CA
Version Date:	2012

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principal investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

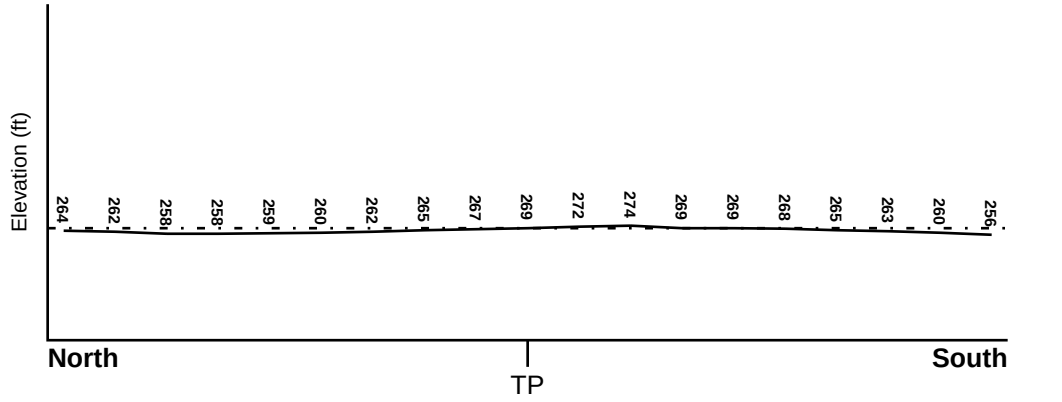
TOPOGRAPHIC INFORMATION

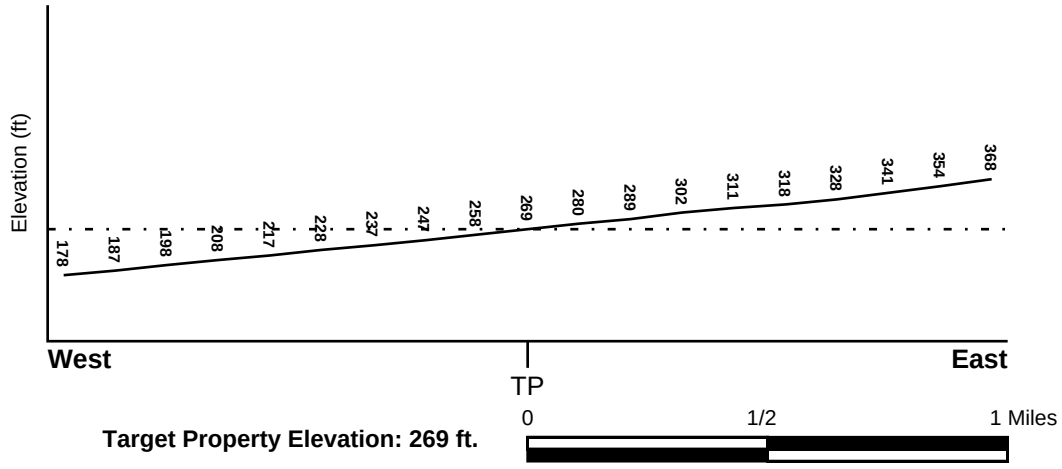
Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General WNW

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES





Target Property Elevation: 269 ft.

0 1/2 1 Miles

Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
06059C0305J	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
06059C0284J	FEMA FIRM Flood data
06059C0292J	FEMA FIRM Flood data
06059C0315J	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
EL TORO	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
F13	1/2 - 1 Mile SW	W
F14	1/2 - 1 Mile SW	WSW

For additional site information, refer to Physical Setting Source Map Findings.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

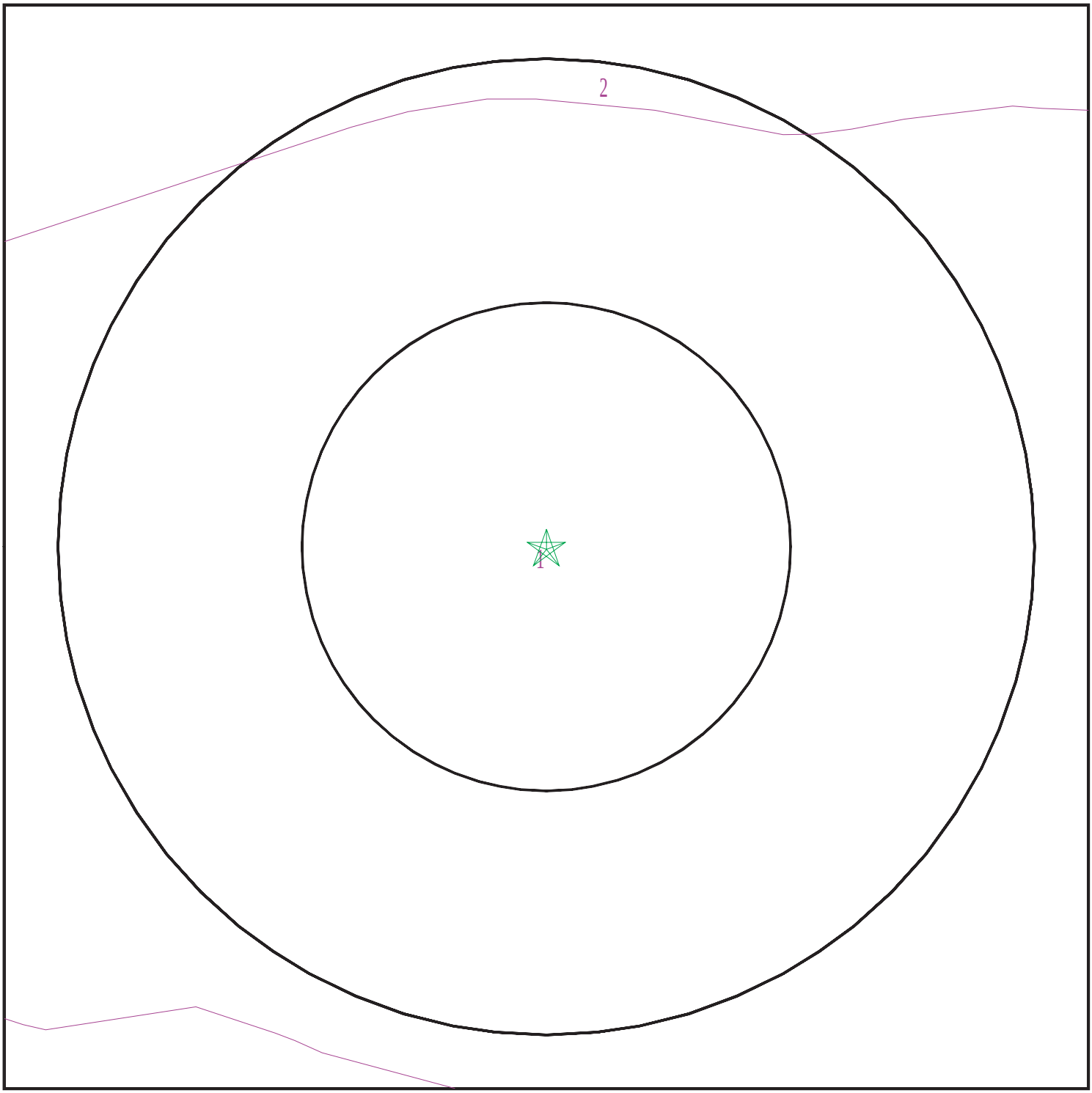
Era:	Cenozoic
System:	Quaternary
Series:	Quaternary
Code:	Q *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratifed Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 4964065.2s



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME:	Second Zone 1 Reservoir	CLIENT:	Bonterra Psomas
ADDRESS:	Sand Canyon Avenue Irvine CA 92618	CONTACT:	Ashley Mccoy
LAT/LONG:	33.688443 / 117.745902	INQUIRY #:	4964065.2s
		DATE:	June 12, 2017 6:10 pm

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: SAN EMIGDIO

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	fine sandy loam	Not reported	Not reported	Max: 42 Min: 14	Max: 8.4 Min: 7.9
2	7 inches	61 inches	stratified gravelly loamy coarse sand to very fine sandy loam	Not reported	Not reported	Max: 42 Min: 14	Max: 8.4 Min: 7.9

Soil Map ID: 2

Soil Component Name: SORRENTO

Soil Surface Texture: loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	11 inches	loam	Not reported	Not reported	Max: 14 Min: 4	Max: 8.4 Min: 6.1
2	11 inches	61 inches	silty clay loam	Not reported	Not reported	Max: 14.11 Min: 1	Max: 8.4 Min: 7.9
3	61 inches	72 inches	stratified loamy fine sand to silt loam	Not reported	Not reported	Max: 14 Min: 4	Max: 8.4 Min: 7.9

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 0.001 miles
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A2	USGS40000136815	1/4 - 1/2 Mile NNE
B3	USGS40000136694	1/4 - 1/2 Mile SSE
C5	USGS40000136804	1/2 - 1 Mile WNW
D8	USGS40000136664	1/2 - 1 Mile SSW
G16	USGS40000137038	1/2 - 1 Mile North

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

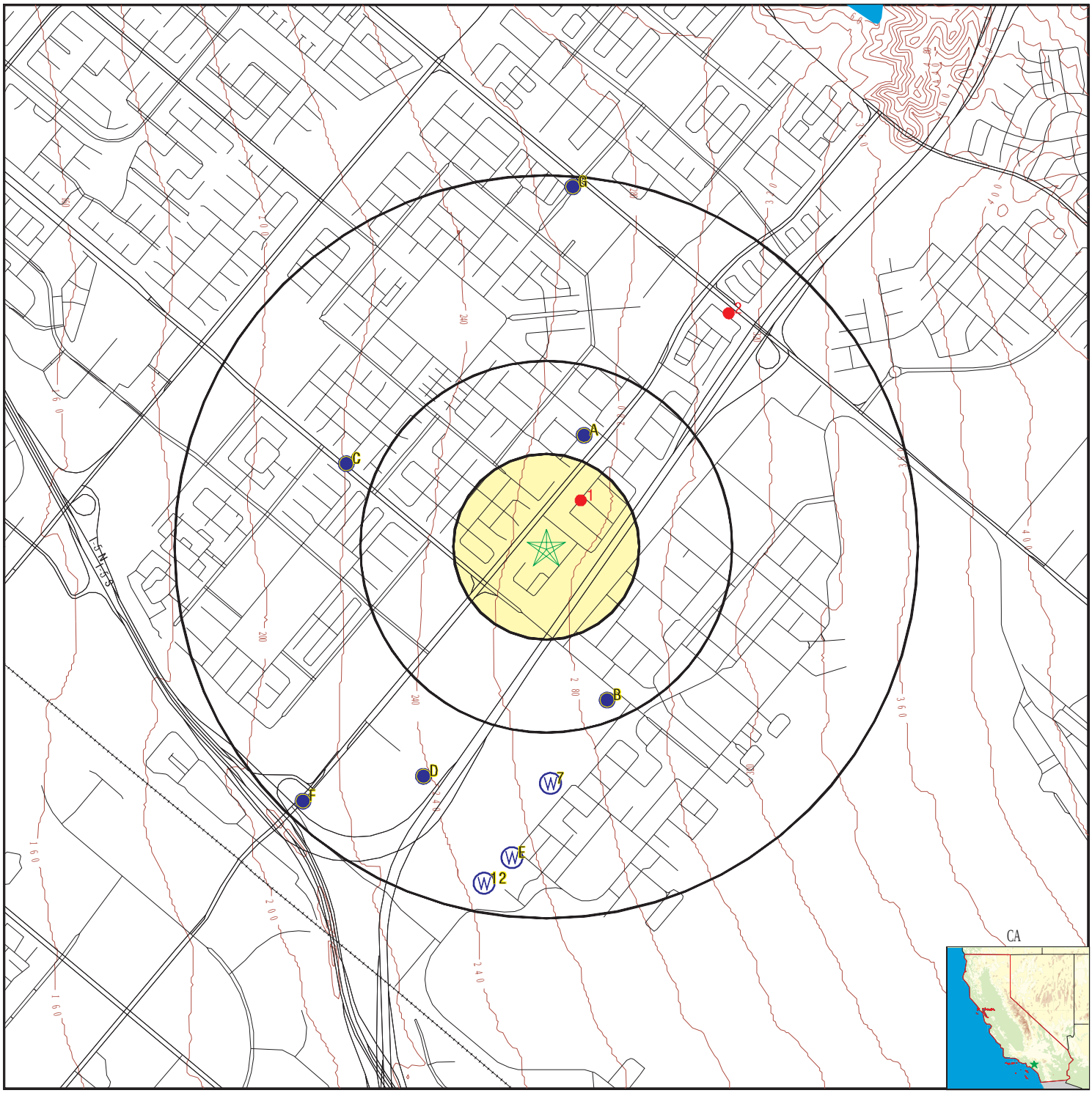
MAP ID	WELL ID	LOCATION FROM TP
A1	CADW60000035063	1/4 - 1/2 Mile NNE
B4	CADW60000010584	1/4 - 1/2 Mile SSE
C6	CADW60000014356	1/2 - 1 Mile WNW
7	CADW60000019124	1/2 - 1 Mile South
D9	CADW60000019125	1/2 - 1 Mile SSW
E10	CADW60000031276	1/2 - 1 Mile South
E11	CADW60000031277	1/2 - 1 Mile South
12	CADW60000015845	1/2 - 1 Mile South
G15	CADW60000019083	1/2 - 1 Mile North

OTHER STATE DATABASE INFORMATION

STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	CAOG11000217991	1/8 - 1/4 Mile NE
2	CAOG11000217988	1/2 - 1 Mile NE

PHYSICAL SETTING SOURCE MAP - 4964065.2s



- County Boundary
- Major Roads
- Contour Lines
- Earthquake Fault Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- HD Closest Hydrogeological Data
- Oil, gas or related wells

SITE NAME:	Second Zone 1 Reservoir	CLIENT:	Bonterra Psomas
ADDRESS:	Sand Canyon Avenue Irvine CA 92618	CONTACT:	Ashley Mccoy
		INQUIRY #:	4964065.2s
LAT/LONG:	33.688443 / 117.745902	DATE:	June 12, 2017 6:10 pm

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
A1		
NNE	**CA WELLS**	**CADW60000035063**
1/4 - 1/2 Mile		
Higher		

Objectid:	35063
Latitude:	33.6928
Longitude:	-117.7446
Site code:	336928N1177446W001
State well numbe:	05S08W32L001S
Local well name:	''
Well use id:	6
Well use descrip:	Unknown
County id:	30
County name:	Orange
Basin code:	'8-1'
Basin desc:	Coastal Plain Of Orange County
Dwr region id:	80238
Dwr region:	Southern Region Office
Site id:	CADW60000035063

A2			
NNE		**FED USGS**	**USGS40000136815**
1/4 - 1/2 Mile			
Higher			

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-334134117443401		
Monloc name:	005S008W32L001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070204	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.692798
Longitude:	-117.7436639	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	270.00
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19280727	Welldepth:	Not Reported
Welldepth units:	Not Reported	Wellholedepth:	830
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 25

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
1986-08-14	136.93		1986-04-30	133.10	
1986-02-12	135.08		1985-11-05	139.44	

Ground-water levels, continued.

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
1985-08-06	139.62		1985-05-06	136.85	
1985-02-11	134.25		1984-10-26	140.47	
1984-08-09	139.92		1984-05-09	138.92	
1984-02-06	133.08		1983-11-04	136.94	
1983-08-09	138.18		1983-05-16	134.09	
1983-02-07	136.58		1982-11-03	141.07	
1982-08-03	141.89		1982-04-28	138.68	
1981-11-09	141.13		1981-07-28	142.47	
1981-05-05	141.71		1981-02-06	143.02	
1980-11-05	150.15		1966-09-12	254.00	
1928-07-28	217.00				

B3
SSE
1/4 - 1/2 Mile
Higher

FED USGS **USGS40000136694**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-334057117443201		
Monloc name:	006S008W05E002S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070204	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.6825206
Longitude:	-117.7431084	Sourcemap scale:	Not Reported
Horiz Acc measure:	Unknown	Horiz Acc measure units:	Unknown
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	Not Reported
Vert measure units:	Not Reported	Vertacc measure val:	Not Reported
Vert accmeasure units:	Not Reported		
Vertcollection method:	Not Reported		
Vert coord refsys:	Not Reported	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	Not Reported
Welldepth units:	Not Reported	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

B4
SSE
1/4 - 1/2 Mile
Higher

CA WELLS **CADW60000010584**

Objectid:	10584
Latitude:	33.6824
Longitude:	-117.743
Site code:	336824N1177430W001
State well numbe:	06S08W05E002S
Local well name:	''
Well use id:	6
Well use descrip:	Unknown
County id:	30
County name:	Orange

Basin code: '8-1'
Basin desc: Coastal Plain Of Orange County
Dwr region id: 80238
Dwr region: Southern Region Office
Site id: CADW60000010584

C5
WNW **FED USGS** **USGS40000136804**
1/2 - 1 Mile
Lower

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-334130117451401		
Monloc name:	005S008W31K001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070204	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.6916869
Longitude:	-117.7547754	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	220.00
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19220716	Welldepth:	Not Reported
Welldepth units:	Not Reported	Wellholedepth:	1660
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 29

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
1986-08-14	114.67		1986-04-30	95.32	
1986-02-12	99.50		1985-11-05	116.95	
1985-08-06	122.13		1985-05-06	111.15	
1985-02-11	95.59		1984-10-26	121.75	
1984-08-09	125.75		1984-05-09	124.11	
1984-02-06	95.15		1983-11-04	107.21	
1983-08-09	111.74		1983-05-13	91.35	
1983-02-07	96.03		1982-11-03	110.50	
1982-08-03	112.60		1982-04-28	96.02	
1982-01-28	96.64				
1981-11-09	109.22				
Note: The site had been pumped recently.					
1981-07-28	114.78		1981-02-06	103.87	
1980-11-04	114.29		1980-08-26	120.63	
1980-06-19	116.12		1971-01-04	159.89	
1970-10-22	193.40		1966-09-12	210.00	
1962-11-01	222.00				

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
C6 **WNW** **1/2 - 1 Mile** **Lower**	**CA WELLS**	**CADW60000014356**

Objectid:	14356
Latitude:	33.6917
Longitude:	-117.7557
Site code:	336917N1177557W001
State well numbe:	05S08W31K001S
Local well name:	''
Well use id:	6
Well use descrip:	Unknown
County id:	30
County name:	Orange
Basin code:	'8-1'
Basin desc:	Coastal Plain Of Orange County
Dwr region id:	80238
Dwr region:	Southern Region Office
Site id:	CADW60000014356

	Database	EDR ID Number
7 **South** **1/2 - 1 Mile** **Lower**	**CA WELLS**	**CADW60000019124**

Objectid:	19124
Latitude:	33.6792
Longitude:	-117.7457
Site code:	336792N1177457W001
State well numbe:	06S08W05M002S
Local well name:	''
Well use id:	6
Well use descrip:	Unknown
County id:	30
County name:	Orange
Basin code:	'8-1'
Basin desc:	Coastal Plain Of Orange County
Dwr region id:	80238
Dwr region:	Southern Region Office
Site id:	CADW60000019124

	Database	EDR ID Number
D8 **SSW** **1/2 - 1 Mile** **Lower**	**FED USGS**	**USGS40000136664**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-334046117450101		
Monloc name:	006S008W06J001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070204	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.6794652
Longitude:	-117.7511643	Sourcemap scale:	24000

Horiz Acc measure:	Unknown	Horiz Acc measure units:	Unknown
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	239.00
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Level or other surveying method		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19270501	Welldepth:	646
Welldepth units:	ft	Wellholedepth:	898
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 17

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
1986-04-29	108.94		1986-02-12	109.28	
1985-11-14	121.55		1985-02-11	104.82	
1984-08-13	133.26		1983-08-22	124.05	
1983-05-10	104.81		1983-02-07	107.58	
1982-01-28	107.26				
1981-07-28	131.60				
Note: The site had been pumped recently.					
1981-02-06	114.44		1980-06-10	131.12	
1979-11-16	144.78		1971-01-04	179.17	
1970-10-22	202.50		1966-09-07	227.60	
1952-07-24	275.50				

D9
SSW **CA WELLS** **CADW60000019125**
1/2 - 1 Mile
Lower

Objectid:	19125
Latitude:	33.6795
Longitude:	-117.7521
Site code:	336795N1177521W001
State well numbe:	06S08W06J001S
Local well name:	’’
Well use id:	6
Well use descrip:	Unknown
County id:	30
County name:	Orange
Basin code:	’8-1’
Basin desc:	Coastal Plain Of Orange County
Dwr region id:	80238
Dwr region:	Southern Region Office
Site id:	CADW60000019125

E10
South **CA WELLS** **CADW60000031276**
1/2 - 1 Mile
Lower

Objectid:	31276
Latitude:	33.6763
Longitude:	-117.7475
Site code:	336763N1177475W001
State well numbe:	06S08W06J000S
Local well name:	''
Well use id:	6
Well use descrip:	Unknown
County id:	30
County name:	Orange
Basin code:	'8-1'
Basin desc:	Coastal Plain Of Orange County
Dwr region id:	80238
Dwr region:	Southern Region Office
Site id:	CADW60000031276

E11
South
1/2 - 1 Mile
Lower

CA WELLS **CADW60000031277**

Objectid:	31277
Latitude:	33.6763
Longitude:	-117.7475
Site code:	336763N1177475W002
State well numbe:	06S08W06R000S
Local well name:	''
Well use id:	6
Well use descrip:	Unknown
County id:	30
County name:	Orange
Basin code:	'8-1'
Basin desc:	Coastal Plain Of Orange County
Dwr region id:	80238
Dwr region:	Southern Region Office
Site id:	CADW60000031277

12
South
1/2 - 1 Mile
Lower

CA WELLS **CADW60000015845**

Objectid:	15845
Latitude:	33.6753
Longitude:	-117.7488
Site code:	336753N1177488W001
State well numbe:	06S08W06R001S
Local well name:	''
Well use id:	6
Well use descrip:	Unknown
County id:	30
County name:	Orange

Basin code: '8-1'
Basin desc: Coastal Plain Of Orange County
Dwr region id: 80238
Dwr region: Southern Region Office
Site id: CADW60000015845

F13
SW
1/2 - 1 Mile
Lower

Site ID: 083000624T
Groundwater Flow: W
Shallow Water Depth: 75
Deep Water Depth: 81
Average Water Depth: Not Reported
Date: 07/28/1998

AQUIFLOW **49780**

F14
SW
1/2 - 1 Mile
Lower

Site ID: 083001308T
Groundwater Flow: WSW
Shallow Water Depth: 71
Deep Water Depth: 76
Average Water Depth: Not Reported
Date: 07/03/1995

AQUIFLOW **39015**

G15
North
1/2 - 1 Mile
Lower

CA WELLS **CADW60000019083**

Objectid: 19083
Latitude: 33.7025
Longitude: -117.7451
Site code: 337025N1177451W001
State well numbe: 05S08W29P001S
Local well name: ''
Well use id: 6
Well use descrip: Unknown
County id: 30
County name: Orange
Basin code: '8-1'
Basin desc: Coastal Plain Of Orange County
Dwr region id: 80238
Dwr region: Southern Region Office
Site id: CADW60000019083

G16
North
1/2 - 1 Mile
Higher

FED USGS **USGS40000137038**

Org. Identifier: USGS-CA
Formal name: USGS California Water Science Center
Monloc Identifier: USGS-334209117443601
Monloc name: 005S008W29P001S
Monloc type: Well
Monloc desc: Not Reported
Huc code: 18070204
Drainagearea value: Not Reported
Drainagearea Units: Not Reported
Contrib drainagearea: Not Reported
Contrib drainagearea units: Not Reported
Latitude: 33.7025199
Longitude: -117.7442194
Sourcemap scale: 24000

Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	266.50
Vert measure units:	feet	Vertacc measure val:	10
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	Not Reported
Welldepth units:	Not Reported	Wellholedepth:	861
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 71

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
1985-05-06					
Note: The well was destroyed (no water level is recorded).					
1985-03-01	106.42		1984-10-26	107.63	
1984-08-13	107.82		1984-05-09	107.86	
1984-02-15	107.74		1983-11-04	108.73	
1983-08-09	110.32		1983-05-16	110.40	
1983-02-07	111.94		1982-11-03	112.70	
1982-08-06	113.24		1982-04-28	113.23	
1981-11-09	115.88		1981-08-04	117.32	
1981-02-06	119.14		1980-10-31	121.55	
1980-02-08	125.29		1979-11-07	126.12	
1979-05-01	126.95		1979-02-05	128.28	
1978-10-25	129.79		1977-10-26	137.80	
1977-03-02	136.70		1976-12-29	145.60	
1976-10-22	140.50		1976-04-30	141.50	
1976-02-27	158.50		1975-06-26	160.60	
1975-05-01	148.20		1975-03-04	149.40	
1974-12-30	152.30		1974-10-25	154.40	
1974-09-03	155.40		1974-07-01	155.70	
1974-05-02	163.80		1974-03-19	157.60	
1974-01-28	159.60		1973-11-02	162.60	
1973-07-09	165.10		1973-05-10	165.50	
1973-03-05	167.30		1973-01-11	170.50	
1972-11-02	174.80		1972-09-06	175.70	
1972-07-11	178.10		1972-05-04	179.10	
1972-03-01	178.10		1971-11-05	185.20	
1971-08-31	189.00		1971-07-14	188.50	
1971-06-14	184.20		1971-05-04	184.50	
1971-04-13	194.30		1971-03-02	188.20	
1970-12-15	188.40		1970-11-03	195.00	
1970-09-30	192.40		1970-09-02	197.30	
1970-07-08	192.70		1970-06-02	192.50	
1970-05-04	193.20		1970-04-02	190.10	
1970-03-09	190.80		1970-02-04	192.70	
1970-01-02	194.60		1969-11-04	198.90	
1969-10-06	200.70		1969-09-03	202.40	
1969-07-01	201.80		1969-06-09	198.70	

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

1
NE
1/8 - 1/4 Mile

OIL_GAS **CAOG11000217991**

District nun:	1	Api number:	05901213
Blm well:	N	Redrill can:	Not Reported
Dryhole:	Y	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Orange	Fieldname:	Any Field
Area name:	Any Area	Section:	32
Township:	05S	Range:	08W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Irvine Plain Core Hole	Wellnumber:	5
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PDH
Site id:	CAOG11000217991		

2
NE
1/2 - 1 Mile

OIL_GAS **CAOG11000217988**

District nun:	1	Api number:	05901210
Blm well:	N	Redrill can:	Not Reported
Dryhole:	Y	Well status:	P
Operator name:	Shell Western Exploration & Production Inc.		
County name:	Orange	Fieldname:	Any Field
Area name:	Any Area	Section:	32
Township:	05S	Range:	08W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Irvine Plain Core Hole	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PDH
Site id:	CAOG11000217988		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
92618	24	0

Federal EPA Radon Zone for ORANGE County: 3

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for ORANGE COUNTY, CA

Number of sites tested: 30

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.763 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	Not Reported	Not Reported	Not Reported	Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish & Game
Telephone: 916-445-0411

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Water Well Database
Source: Department of Water Resources
Telephone: 916-651-9648

California Drinking Water Quality Database
Source: Department of Public Health
Telephone: 916-324-2319
The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

OTHER STATE DATABASE INFORMATION

California Oil and Gas Well Locations
Source: Department of Conservation
Telephone: 916-323-1779
Oil and Gas well locations in the state.

RADON

State Database: CA Radon
Source: Department of Health Services
Telephone: 916-324-2208
Radon Database for California

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

STREET AND ADDRESS INFORMATION